Department of Industrial Engineering and Management

Supplier relational effort in the buyer-supplier relationship

Sanna Nieminen

Aalto University

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Sanna Nieminen

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Abstract

Value is increasingly created in networks of organizations and inter-organizational relationships are in a vital role. Value creation is traditionally managed by the buying company with contracts which determine the rights and responsibilities of the business parties. For example, the supplier has to produce the products or services specified and the supplier is entitled to the agreed compensation. In close strategic buyer-supplier relationships considerable value is also created through actions that are not directly determined by the buyer-supplier contract.

Value creation in business relationships and the role of supplier relational effort in it is in the focus of this study. The research objective is to better understand value creation mechanisms in strategic business relationships. To achieve this objective, the following three research questions are investigated: 1) What kind of relational effort does the supplier make that creates value for the buyer? 2) Why does the supplier make this relational effort? and 3) What is the impact of supplier relational effort?. Social exchange theory is used here as it provides a basis for better understanding and explaining this type of non-contractual value creation.

In answer to the first research question four categories of supplier relational effort were identified: 1) customer-focused operations, 2) customer-focused internal development, 3) active interaction, and 4) joint development. Five factors were identified which explained the relational effort made by the supplier: 1) good strategic fit and matching expectations, 2) a customer -focused organizational culture and clear processes, 3) competence, attitude and motivation on the individual level, 4) the attractiveness of the buying company, and 5) current relationship quality and interaction. In addition, supplier relational effort was found to have a positive impact on how good or well-performing the actors perceive the buyer-supplier relationship and also on sales volume in the buyer-supplier relationship.

Keywords buyer-supplier relationships, value creation in business relationships, relational effort, social exchange, attractiveness, relationship quality

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Tiivistelmä

Arvo luodaan enenevässä määrin organisaatioiden muodostamissa verkostoissa ja siellä yritysten väliset yhteistyösuhteet ovat erittäin oleellisessa roolissa. Ostava organisaatio on perinteisesti ohjannut arvonluontia sopimusten avulla määritellen osapuolten oikeudet ja vastuut. Sopimuksessa määritellään esimerkiksi se, että toimittajan tulee tuottaa määritellyt tuotteet tai palvelut ja niitä vastaan toimittaja saa sovitun korvauksen. Tiiviissä strategisissa toimittajasuhteissa merkittävä määrä arvoa luodaan myös sellaisten toimintojen kautta, joita ei ole sopimuksella suoranaisesti määritelty.

Tässä tutkimuksessa tarkastellaan arvonluontia yritysten välisissä suhteissa ja toimittajan vapaaehtoisen panostuksen roolia siinä. Tutkimuksen tavoitteena on lisätä ymmärrystä arvonluonnin mekanismeista strategisissa toimittajasuhteissa. Tavoitteen saavuttamiseksi tutkimusta ohjaavat seuraavat kolme tutkimuskysymystä; 1) mitä sellaista vapaaehtoista panostusta, joka tuottaa lisäarvoa ostavalle yritykselle, toimittaja tekee, 2) miksi toimittaja panostaa ja 3) mikä on toimittajan panostuksen vaikutus. Sosiaalisen vaihdannan teoriaa käytetään tutkimuksessa viitekehyksenä, sillä se auttaa ymmärtämään ja selittämään tämän tyyppistä ei-sopimukseen perustuvaa arvonluontia.

Tuloksena ja vastauksena ensimmäiseen tutkimuskysymykseen tunnistettiin neljä kategoriaa toimittajan vapaaehtoiselle panostukselle; 1) asiakassuuntautunut toiminta, 2) asiakassuuntautunut sisäinen kehittäminen, 3) aktiivinen vuorovaikutus, ja 4) yhteinen kehittäminen. Viisi tekijää, jotka selittävät miksi toimittaja panostaa, tunnistettiin; 1) hyvä strateginen yhteensopivuus ja yhtenevät odotukset, 2) asiakassuuntautunut organisaatiokulttuuri ja selkeät prosessit, 3) osaaminen, asenne ja motivaatio yksilötasolla, 4) ostavan yrityksen houkuttelevuus ja 5) nykyisen suhteen laatu ja vuorovaikutuksen taso. Lisäksi liittyen panostuksen vaikutukseen huomattiin, että toimittajan vapaaehtoinen panostus vaikuttaa positiivisesti siihen, miten hyväksi toimijat kokevat suhteen. Toimittajan vapaaehtoinen panostus vaikutti positiivisesti myös myynnin määrään ao. liiketoimintasuhteessa.

Avainsanat toimittajasuhteet, arvonluonti liiketoimintasuhteissa, vapaaehtoinen panostus, sosiaalinen vaihdanta, houkuttelevuus, yhteistyösuhteen laatu

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PREFACE

This has been an interesting and challenging learning journey. It actually started already decades ago. I got interested in purchasing during my Master studies in the 80's and I had the great opportunity to learn the lessons also in practice at Metso procurement in the 90's. During the last decade I have been teaching and studying purchasing management.

There are many very important persons around me who helped to make this thesis come true. I would like to thank Professor Kari Tanskanen for his extremely competent and consistent supervision; he was always there for discussions and he had this incredible ability to guide me through even the most challenging phases of my scientific work. I would also like to thank all the members of the Logistics Research Group at Aalto University. It was great to have the opportunity to work with you. A special thanks goes to Riikka Kaipia for her valuable support and help during this journey. I also would like to thank Professor Michael Manning and Professor Veli-Matti Virolainen for their encouraging pre-examination statements. Michael Freeman's professional and efficient work helped me to refine the English of this thesis to a new level. The informants in the companies put a great effort with the inspiring attitude into the discussions were had. Thank you, your contribution to this thesis was extremely valuable.

In addition, a big thanks to my colleagues and dear friends at JAMK Logistics; your support has been tremendous and you believed so strongly that I would do this that I had no other choice than to continue to the end.

I am lucky to have so many friends and a loving family. I don't know if you can understand just how important you are to me – in the past, now and in the future. You make my life a good life. Thank you for being here. My big sister Tuula has shown me the art of working hard with a positive attitude and the art of giving support to another. Working hard and helping each other was something we learned already at home. My Mum is special to me – thank you for everything. Lasse and Otto: the amount of your love is enormous and you show it every day. I can never thank you enough for your support and the effort you have put into helping me on this journey. There were moments I was ready to give up but you did not let me. Thank you and love you.

Jyväskylä, 31.10.2011
Sanna Nieminen

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1 INTRODUCTION

1.1 Value creation in business relationships

Global resources play an important role in today's world where the supply of products, services, and competences is multi-institutional (Prahalad & Krishnan 2008). It is not necessary to own all the requisite resources, but it is essential to find the best resources from the global base. Value is created in networks of organizations. Due to this development the significance of purchasing has increased and it has become more and more versatile and complex. The proportion of purchased goods and services in manufacturing companies is increasing and this has created a business environment where purchasing has to be managed as an integrated part of strategic business management. The ability to manage a wide supply network effectively is required for better value creation and to support good long-run business performance. Through effective supply management companies can ensure that they will find superior suppliers to work with and that they will be able to develop a competitive and sustainable business relationship with their suppliers. (Kraljic 1983; Ellram & Carr 1994; van Weele & Rozemeijer 1996; Ellram et al. 2002; van Weele 2010)

The importance of successful long-term relationships in business-to-business markets has been widely recognized and accepted. It is generally agreed that a good long-term relationship is a great resource for developing the sustainable competitive advantage of the organization (Jarillo 1988; Håkansson & Ford 2002; Gadde et al. 2003; Liker & Choi 2004; Powers & Reagan 2007; Cordon & Vollman 2008).

Business relationships affect the nature and the outcome of companies' actions and are a potential source of efficiency and effectiveness for both partners (Gadde et al. 2003). Good business relationships can provide better products and services more cost-efficiently and with shorter delivery times. It is also a fact that no company can survive alone today. Learning through relationships is crucial in the battle for the future (Kale & Singh 2007; Möller & Halinen 1999). To add the supply management point of view, Carr and Pearson (1999) found that a strategic purchasing function is

essential to the success of the firm and that strategically managed long-term relationships with selected key suppliers can lead to the improved financial performance of the firm.

The ultimate reason for two companies to engage in a business relationship is to work together in order to create value for both of them (Walter et al. 2001). Walter et al. (2001) examined value creation in buyer-seller relationships from the supplier's perspective and found that both direct and indirect functions of customer relationships contribute to supplier perceptions of value. Direct value creators are the functions of volume, profit and safeguard, and the indirect value creators are the functions of innovation, market, scout and access.

Ulaga (2003) studied value creation in business relationships from a customer perspective. He found eight main value drivers in manufacturer-supplier relationships: product quality, delivery, time-to-market, price, service support, supplier know-how, personal interaction and process cost. If the buying company personnel understand the drivers for value creation in business relationships in general, it is easier for them to assess how a supplier adds value in a specific relationship. Existing relationships can be profiled based on the eight drivers and used as benchmarks for relationships with alternative suppliers. Value creation in business relationships has been further discussed in relation to e.g. competencies and capabilities, switching costs, and the relationship life cycle (Möller & Törrönen 2003; Liu et al. 2005; Eggert et al. 2006; Möller 2006; Wagner et al. 2010).

Social exchange theory opens up another perspective on value creation in business relationships. According to the social exchange theory both parties put effort into the relationship in order to create value, if they perceive the other party as attractive (Mortensen et al. 2008; Hald et al. 2009; Harris et al. 2003; Blau 1986; Homans 1958). Additional value can be created through relational effort by the supplier as a result of this attractiveness. The present research is based on social exchange theory, with special focus on supplier relational effort as a voluntary action in value creation in the business relationship. Supplier relational effort is defined as follows:

D1: Supplier relational effort is effort that is dedicated to a specific buyer with a view to creating value and it is not contractually determined.

Although buyer-supplier relationships have also been increasingly studied from the social exchange theory perspective (Narasimhan et al. 2009; C. Zhang et al. 2009; Griffith et al. 2006; Kingshott 2006; Kern & Willcocks 2000), the actual content of supplier relational effort and the underlying mechanism and the factors affecting it have not been researched. Under-

standing of how supplier relational effort affects value creation in a business relationship is also limited.

1.2 Research objectives and questions

Value creation in business relationships and the role of supplier relational effort in this process is the focus of this research. The research objective is to better understand value creation mechanisms in business relationships. The role of supplier relational effort is important for value creation in a business relationship. Consequently, by identifying the different types of effort and the mechanism behind these in the buyer-supplier relationship we will be better equipped to create additional value together with our business partner. The outcome of this research will provide new understanding and knowledge for enhancing the buyer-supplier relationship. Although buyer-supplier relationships have recently also been studied from the social exchange point of view, no research so far has been published on the actual content of supplier relational effort or the mechanism behind it. Yet supplier relational effort is in a key position when considering exchange in a business relationship. To fill this research gap supplier relational effort is studied in depth in this dissertation. Three research questions were formulated on the basis of the gap identified in the literature.

First, there is the need to identify supplier relational effort on different levels of activities. In buyer-supplier relationships, interaction occurs on different levels and in different areas between companies, e.g. in research and development, in logistics and in production. This interaction is partially controlled by contracts, but suppliers also put different amounts of relational effort and resources into different relationships. The first research question concentrates on identifying the different types of relational effort made by suppliers in business relationships by exploring strategic buyer-supplier relationships in the electronics industry. The first research question is

1. *What kind of relational effort does the supplier make that creates value for the buyer?*

Identifying such supplier relational effort is one thing while understanding the mechanism behind it is another thing altogether. With the second research question the mechanism is studied and the factors affecting supplier relational effort are explored. The second research question is

2. *Why does the supplier make this relational effort?*

It has been stated that the ultimate purpose for companies to engage in business relationships is to create value by working together (Walter et al. 2001). In an existing business relationship, does supplier relational effort necessarily lead to additional value creation? The third research question explores this question further. The third research question is

3. *What is the impact of supplier relational effort?*

The unit of analysis is the buyer-supplier dyad. The aim is to develop substantive theory in this field based on the empirical findings and the existing formal theory.

2 LITERATURE REVIEW

Although behaviour and decisions in business relationships are clearly driven by economic actions, they are strongly embedded in social relations (Granovetter 1985). Business relationship management can be reviewed through transaction cost economics (TCE) as well as through social exchange theory (SET). The main goal of building the right set of strategic business relationships can be reached if a firm is able to retain activities where it has a comparative advantage and move other activities out to the most efficient suppliers, thereby lowering transaction costs (Jarillo 1988). Transaction cost economics (TCE) explain the structure of a firm and the extent to which it is integrated vertically (Williamson 1998). TCE assumes that firms aim at maximizing profits, which also involves the minimization of costs. Williamson (1998) argues that firms minimize their total costs, i.e. costs comprising both production and transaction costs. Under some circumstances transaction costs may be lower if the transaction takes place in an open market, while in other circumstances transaction costs will be lower if managers coordinate the transaction. TCE has been applied in the field of purchasing and supply chain management, e.g. to explain outsourcing and contracting issues (Williamson 2008).

Table 1 summarizes and compares some of the key elements of both TCE and SET (Kingshott 2006). In SET the focus is more on building relationships than on minimizing transaction costs, as it is in TCE. The conceptual origin of SET is in sociology while TCE draws on economics. Another essential difference between SET and TCE is the governance mechanism, which is based on trust in the SET view and on legal contracts in the TCE view. Supplier relational effort is not based on, nor can be explained by, legal contracts. It is not based on a purely economic view either. It is assumed that SET will better be able to explain the phenomenon of supplier relational effort due to the fact that it explains relationship building by other than contractual mechanisms. SET will be discussed more in detail in the next section.

Table 1. Relationship management from different perspectives

Relational dimension	Social exchange theory	Transaction cost economics
Managerial philosophy and focus	Build relationship Focus on inputs	Minimize transaction costs Safeguard assets
Conceptual origins	Sociology	Economics
Underlying assumptions	Moral obligations between actors Inherent reciprocity Interdependence through socialization	Bounded rationality Individuals act opportunistically Need for uncertainty reduction Risk neutrality
Governance	Trust	Contractual/legal
Mechanisms	Relational norms Bilateral inputs required	Hierarchical
Managerial benefits/ burdens	Greater flexibility Interactive and adaptive Higher efficiency	More partner control Greater internalized certainty Relational specifications in advance

(Adapted from Kingshott 2006)

This literature review is in three parts and discusses 1) social exchange theory (SET), 2) value creation in business relationships, and 3) SET applied to buyer-supplier relationships.

2.1 Social exchange theory

The behaviour and decisions in buyer-supplier relationships are driven by economic actions but they are also strongly embedded in social relations (Granovetter 1985). Transaction cost economics focuses more on explaining the economic drivers in behaviour while social exchange theory focuses on social relations. SET is discussed here in order to consider this theoretical framework as a landscape in which the phenomenon of supplier relational effort can be included.

2.1.1 Social exchange and rational choice

Social theory identifies and explains the behaviour of social systems. In order to understand social systems, the actions and interactions of actors like people and organizations are observed. There are two kinds of things to be noted: things we observe, meaning, how actors behave, and things we

explain, meaning, how the interdependent behaviour of actors produces system behaviour. Social behaviour is an exchange of goods, both material goods and non-material goods, such as feelings and symbols of approval and prestige (Blau 1986; Homans 1958; Heath 1976; Calhoun et al. 2007; Homans 1992; Cook & Emerson 1987; Chadwick-Jones 1976). Consequently, the individual actors in a buyer-supplier relationship are observed and, based on their behaviour, the system behaviour in the buyer-supplier relationship can be explained.

The social exchange theory focuses on identifying the effects of interdependent actions on social system behaviour. It starts from the simple social process between individuals out of which more complex social processes are formed (Blau 1986). The basic rationality assumption is that people are purposive actors who optimize their behaviour (Simon 1978). Where a person has a set of potential actions he will choose the one that provides the best outcome. A so called operant conditioning relationship subsists between the actor and his environment. Whatever the action is, there will be a response from the environment. If the response is positive the actor is likely to repeat the behaviour. The actor also learns from past experience and based on that experience and learning s/he tries to maximize positive responses and minimize negative responses. From the exchange balance point of view it has also been observed that persons who give much to others also try to get much from them, and that persons who get much from others are also under pressure to give much to them. (Homans 1958)

If there is an increase in the extinction, satiation or cost of one behaviour it will probably increase the emission of some other behaviour. Another thing to consider is that the more a person gets, the less valuable any further unit of that value is to him, and thus he will less often emit the behaviour reinforced by this value. (Homans 1958)

The process of influence between actors and cohesiveness are interesting phenomena. Cohesiveness means “anything that attracts people to take part in a group”. Actors’ behaviour in a group is influenced by the principle that the more valuable the activities are that the actors benefit from, the more valuable are those they must give. If the actor is emitting behaviour that the others in the group do not find rewarding, these others will suffer in producing sentiment and activity. But if the actor has found their sentiment and activity rewarding and if he wants to keep getting them, he must make his own behaviour more rewarding and valuable to the others. Another feature related to cohesiveness seems to be that the more cohesive a group is, the greater is the change that members can make in the behaviour of other members. (Homans 1958)

Profit thinking can also be applied in the social exchange environment. Profit can be said to be reward (value) less cost. Exchange profits can be used when evaluating different behaviour in the social exchange environment. When applying distributive justice equal profits are aimed at. An actor tends to maximize his own profit and at the same time tries to make sure that no one in his group makes more profit than he does. If the profit tends to reach the maximum, then the actor's behaviour changes less. (Homans 1958)

The social structure also has an influence in exchange. For example, in Blau's (1986) description of sixteen agents in a federal law-enforcement agency it was found that a small number of highly competent agents exchanged advice to obtain prestige with a large number of other less competent agents. The less competent agents exchanged the advice in pairs and in trios on more equal terms (Blau 1986).

2.1.2 Voluntary actions and expected rewards

Basic social processes have their origin in primitive psychological processes: feelings of attraction between individuals and the desire to obtain various kinds of rewards. Social attraction can be either intrinsic or extrinsic. Intrinsic attraction refers to the positive feelings one gets and extrinsic attraction refers to the expected benefits to be gained. A person who is attracted to others is interested in proving that he is attractive to them as well. The processes of social attraction lead to processes of social exchange. (Blau 1986)

If a person needs something that the other has to offer but he has nothing the other needs, he has basically four options: (1) he may force the other; (2) he may obtain the help he needs from another source; (3) he may find ways to get along without such help; or (4) he must subordinate himself and comply with the other's wishes, which means the other receives power as a reward. (Blau 1986)

Social norms define, for example, the expectations of subordinates and their evaluations of their superior's demands. The fair exercise of power leads to approval of the superior and vice versa. The amount of resources subordinates have influences their approval of their superior's behaviour so that the greater the resources the easier it is to approve the superior's demands and/or behaviour. (Blau 1986)

Unspecified obligations and trust go hand in hand. The following definition is used here:

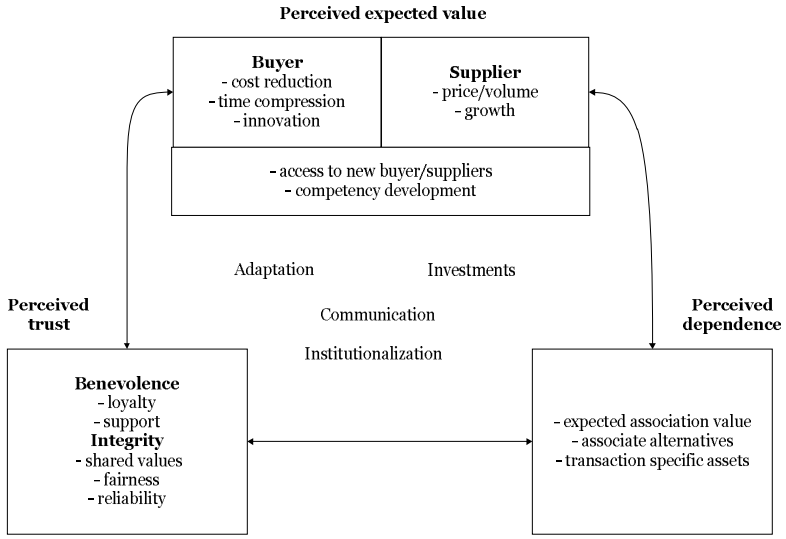
D2: Social exchange refers to voluntary actions of individuals that are motivated by the returns they are expected to bring – and typically actually bring from others.

Social exchange differs from economic exchange in several ways. In social exchange the obligations are not specified, if compared e.g. with an economic exchange like a mortgage, where the obligations are clearly defined. Social exchange relies solely on the general assumption that when one person does another a favour some future reward will be available. Because there is no way to assure an appropriate return for the favour, trust is needed. Trust is built step by step, and therefore social exchange also normally starts with small steps. Feelings of personal obligation, gratitude and trust are present in social exchange while in pure economic exchange they are not (Blau 1986). Here, supplier relational effort will be studied in an industry context where economic and social exchanges occur hand in hand. Supplier relational effort is also based on unspecified obligations and trust.

2.1.3 Supplier relational effort in the buyer-supplier relationship

It was stated above that supplier relational effort is based on unspecified obligations and trust. Yet the question remains as to why the supplier is willing to make relational effort. Attractiveness provides an alternative approach to managing business relationships as it is based on the creation of voluntary motivation and commitment between the relationship partners (Mortensen et al. 2008). The supplier is willing to make relational effort in a buyer-supplier relationship if the supplier considers the buyer attractive. If the supplier is very satisfied with the buyer and with the relationship, and if the supplier gains a lot of value from the relationship, most probably there is also attraction between the supplier and the buyer. This motivates the actors to make extra effort in the buyer-supplier relationship. Hald, Gordon and Vollmann (2009) state that "in order to improve value creation and value transfer in buyer-supplier relationships it is not enough to optimize and coordinate management and control systems". Instead, developing the relationship also requires mutual attraction, and the importance of being attractive to key suppliers appears to be on the increase. Again, if we are attractive as a buying company the supplier will make extra effort in form of relational effort. What, then, makes us attractive? Hald et al. (2009) created a conceptual model of attraction in the buyer-supplier relationship (Figure 1). Attraction includes a versatile mix of expected value, trust and dependence. All three components should be taken into account when analyzing and managing attraction in a relationship. Four mechanisms were introduced for jointly influencing the perceptions of expected value, trust and dependence: (1) investments in the relationship to create transaction-specific ties; this in turn increases switching costs and ties the partners more closely together, (2) product, process or business adaptation leading

to better performance and further to increased trust and dependence, (3) intensive two-way communication, especially repeating the company goals and expectations, and (4) institutionalization of the top management vision and company culture where supplier and customer relationships are highly appreciated and valued.



(Hald et al. 2009)

Figure 1. Conceptual model of attraction in buyer-supplier relationships

Another model of attraction, its determinants, and its consequences has been presented by Harris et al. (2003) as a result of a study of legal professionals. They identified familiarity as a necessary condition for attraction to develop. Familiarity between individuals can be gained through geographical proximity, functional proximity and repeated exposure. They also described the lens through which attraction is viewed: socialization, similarity, compatibility and knowledge about the alternatives affect perceptions of attractiveness. By a deeper understanding of the determinants of attraction it is possible to notice the role and impact of attraction throughout a relationship. Important insights can arise concerning how, and why, the nature of a relationship changes over time (Harris et al. 2003). A process and maturity model for attractiveness in relationships, developed by Mortensen et al. (2008), shows that attractiveness is not a static approach but that it changes according to the relationship stage. The attraction between companies in a business relationship has been discussed further by several authors (Olsen & Ellram 1997; Fiocca 1982; Dwyer et al. 1987; Cordon & Vollman 2008; Ellegaard et al. 2003; Christiansen & Maltz 2002). The role

of attraction was also studied in the present research as one element explaining supplier behaviour in the buyer-supplier dyads.

2.2 Value creation in the buyer-supplier relationship

2.2.1 Relational value

Business relationships are an important unit of analysis for explaining supernormal profit returns. The concept of relational value offers a useful theoretical lens through which value-creating linkages between organizations can be examined and explored (Dyer & Singh 1998; Dyer & Hatch 2006). The concept thus offers an interesting view on relationship management. The following definition of relational value is used here:

D3: Relational value is the value created through the interrelated activities of the actors: in the present context these are buyer and supplier.

Relational value creation includes activities such as efficient participation in and management of joint product and business process development projects (Möller 2006). It is difficult to assess the cost of creating value as value creation emerges from the combined activities of the supplier and buyer. This makes it difficult for the buyer to assess supplier value production potential in advance and for the supplier to evaluate the buyer's potential value. The production of relational value is a thus complex issue and managerially challenging (Möller 2006). Further, value production systems with different goals require different competences from the supplier and the customer. Möller and Törrönen (2003) presented a framework where they connect specific capabilities to different types of value production. They used three different value production types: core-value production, value-adding relational value production and future-oriented value production.

Kim et al. (2010) conducted a study on inter-organizational cooperation in buyer-supplier relationships from the perspectives of both buyer and supplier. The results showed that switching costs and inter-organizational trust were significant determinants of cooperation for buyers whereas technological uncertainty and the reciprocity of the relationship were significant determinants for the suppliers. Goal consistency significantly affected inter-firm cooperation according to both buyers and suppliers.

The relevant factors and critical elements of supplier development in buyer-supplier relationships have been studied (Krause 1997; Krause & Ellram 1997; Krause 1999). Factors like inter-firm communication effort, the buying firm's competition in the market, the support given to the buying firm

by the top management, and the importance of purchased inputs to the buying firm were significant in affecting supplier development activities. In a more recent study Krause et al (2007) found that buyer commitment and social capital accumulation with key suppliers can improve buying company performance. Social capital can be defined as follows:

D4: Social capital is the ability of actors to secure benefits by virtue of membership in social networks or other social structures (Portes 1998).

Krause et al. (2007) have sought to motivate researchers to look at the embedded social dimensions of the relationship. They state: "As cooperation and collaboration between buyers and suppliers have increased, the performance of these relationships, and the fact that there are socially embedded dimensions should be of interest to researchers."

The concept of "Sources of Supplier Value" (SOSV) concerns the value the supplier can gain in the buyer-supplier relationship. SOSV includes the characteristics of customers that suppliers need, want, and prefer (Ramsay & Wagner 2009). In their study, Ramsay and Wagner (2009) aimed to describe supplier needs, wants, and preferences as well as to find out their impact on buyer attractiveness. They identified elements related to buyers' offerings, behaviours and characteristics that suppliers regarded as important. The following sources of supplier value were identified based on both the literature review and the field study:

- overall profit
- revenue elements
- cost elements
- sales potential
- payment format
- supplier learning opportunities
- appropriately trained staff
- good inter-organizational staff relationships
- personal preferences
- personal meetings
- contact stability
- long-term interactions
- roles and responsibilities
- customer attentiveness
- receptiveness to supplier ideas
- trustworthiness
- risk sharing
- forecast reliability
- financial probity
- supplier independence/power
- buyer dependence/power
- customer-led innovation
- supplier-led innovation support
- market information
- reputation

As a conclusion two interesting hypotheses were introduced by Ramsay and Wagner (2009): (1) the greater the supplier value offered by a buyer, the more likely any given supplier is to select or retain that buyer as a customer; and (2) the greater the supplier value offered by a buyer, the quicker, more enthusiastic and complete will be the response of any given supplier to requests from that buyer for modifications to supplier behaviour. At the same time one has to be careful not to generalize the findings too widely across different types of companies. This caveat leads to the third hypothesis (3): the distribution of sources of supplier value preferences displayed by suppliers varies with respect to customer type, product type, relative size of supplier and customer, and industry.

If the aim is to improve the relationship and relationship performance, different control mechanisms are available. Liu et al. (2010) studied four different control mechanisms: coercive power, non-coercive power, contracts and relational norms in different types of relationships. Their study took existing relationship quality into account with the help of a quality matrix and examined the use of different control mechanisms on these different relationship quality levels. They found that the partners use a relatively low level of coercive power on any level of relationship quality, but also that the use of non-coercive power increases gradually as relationship quality improves. That is, control mechanisms became more flexible, harmonious, and friendly as relationship quality improves. Liu et al. (2010) concluded "as the level of relationship quality improves, the extent of the use of non-coercive power and relational norms increases, and informal control mechanisms cannot replace formal control mechanisms whatever the level of relationship quality is". Li et al. (2010) studied long-term buyer–supplier relationships to find out the antecedents leading to the adoption of formal control, social control, or both. They also studied the nature of the relationship between formal control and social control, asking whether they are substitutes or complements. They found that, in China, formal control and social control may be substitutes in domestic buyer–supplier relationships, but that they may be complements in international relationships.

Supplier relational effort can be compared to the concepts of voluntary actions, non-coercive power, relational norms and social control mentioned above. The present research explores and seeks to explain the phenomenon of supplier relational effort further in order to be better able to understand it and the mechanism behind it. With this enhanced understanding it will be possible to encourage greater relational effort on the part of the supplier in the relationship, and thereby improve the business relationship, performance and value creation. However, in order to be able to foster the buyer-

supplier relationship, we need to understand the main factors affecting the behaviour of both parties in the relationship.

2.2.2 Relationship quality

We can assume that the better the relationship, the better value creation in the relationship. What, then, is a good relationship? How can the quality of the relationship be assessed? Relationship quality can be described as the overall depth and climate of the business relationship (Johnson 1999). Another definition of relationship quality says that it is an overall assessment of the strength of a relationship and the extent to which it meets the needs and expectations of the parties (Smith 1998). Su et al. (2008) refer to supply chain relationship quality as the degree to which both parties in a relationship are engaged in an active, long-term working relationship. Dorsch et al. (1998) considered relationship quality as a higher-order concept consisting of trust, satisfaction, commitment, minimal opportunism, customer orientation and ethical profile. The following definition is used here:

D5: Relationship quality is the degree to which both parties in a relationship are engaged in an active, long-term working relationship and the extent to which it meets the needs and expectations of the parties.

Relationship quality is an important prerequisite for a successful long-term relationship (Bejou et al. 1996). According to Naudé and Buttle (2000), the most common attributes of relationship quality are the level of trust and the mutual integration of needs. Also, the fact that the relationship should yield a profit is essential. One way to evaluate the relationship is to assess relationship performance, meaning that buyer–supplier exchanges are assessed from the relationship viewpoint rather than from the perspective of one actor only. O'Toole and Donaldson (2002) tested a set of relational performance measures and assessed their relevance in managing buyer-supplier relationships. Relationship performance was divided into a financial and a non-financial dimension. The non-financial factors included speed of response, product quality, benefits comparison and lead times. These factors would act as a measure of the operational effectiveness of the relationship. Another set of non-financial factors included stability, satisfaction, and joint value-added projects, all of which can be seen as strategic benefits of long-term interaction. The financial factors in turn were dependence-switching, interdependence, cost sharing, risks of abuse of confidence and information sharing, long-term profitability, process, return on investment, bought volume and running costs. The top three measures for relationship performance were flexibility, lower costs and stability.

What affects relationship quality? Dependence, flexibility, continuity expectations, and relationship age, for example, increase the urge to integration of the distributor towards the supplier (Johnson 1999). Level of trust as well as the mutual integration of needs was found to be the most essential factors determining relationship quality in a study conducted by Naudé and Buttle (2000). They concluded nevertheless that there is no one explanation for a good relationship. Views differ as to what determines a good quality relationship, and the actors should take this into account when planning and acting in their supply chain relationships. There are usually several factors that influence the quality of the relationship and these should be identified by the actors. Such factors include e.g. the type of industry in question and the prevailing economic climate, which can influence the level both of investment and of asset specificity with respect to a given relationship. Other factors influencing the quality of the relationship may be the age of the relationship as well as the key players or decision makers in the relationship. Huntley (2006) defined and measured the quality of buyer-seller relationships in business-to-business markets, and linked it to profitable customer outcomes**.** By so doing, the study established a link between the qualitative soft relational elements of the relationship and the quantifiable profitable hard outcomes. The cornerstones of a good relationship seem to be relational bonds based on high ethical standards with honest, accurate communication, and mutual investments. Both trust and commitment are positively associated with relationship quality. For buyers it is fundamental to find relationships that offer quality solutions to meet their product and service needs. As part of a good relationship, buyers also appreciate good cooperation and collaboration from the seller, meaning that sellers work with their customers in order to cooperatively design integrated product/service offerings that solve customer problems. Thus, relationship quality is positively associated with actual sales and recommendation intention. Further, goal congruity is positively associated with trust, commitment and relationship quality, which means in practice that customers value goals that are closely aligned with those of suppliers. This points to the importance of regular communication concerning common values with the emphasis on demonstrating how the seller's solutions support the mission of the buying company and create a win-win situation.

Powers and Reagan (2007) also discussed the factors which would make the buyer-supplier relationship a good one. Their study was based on input from buyers who evaluated a particular supplier. They added another dimension - the stage of relationship development – to the discussion. What they found was that in the first stage – partner selection – the most important factors for a successful relationship were mutual goals and adapta-

tion. Correspondingly, in the second stage – defining the relationship purpose – the most important factor was cooperation. In stage three – setting relationship boundaries – mutual goals and trust were the main factors. In the fourth stage – creating relationship value – adaptation was the key factor, and in stage five – relationship maintenance – these were again mutual goals and adaptation. A buyers' perspective was taken in Claycomb's and Frankwick's (2010) study, where they also included the phases of relationship development in their examination. They investigated the relationship characteristics of relationship-specific investments and uncertainty, and found evidence that effective information exchange and conflict resolution mechanisms influence the level of relationship-specific investments and buyer uncertainty during the development of the relationship. However, they noted that the patterns of the associations between the interaction mechanisms and relationship characteristics were different in different development phases. In addition the seller's reputation had a significant meaning for the buyer when it was a question of fostering the relationship. Storbacka et al. (1994) introduced a relationship profitability model developed from the customer relationship management perspective. The model illustrates how service quality affects customer satisfaction and how customer satisfaction affects relationship length and longevity, and how they in turn affect the profitability of the customer relationship. Relationship profitability was defined as relationship revenue minus relationship costs.

We are used to concerns about customer satisfaction, but in a strategic collaborative buyer-supplier relationship we should also consider supplier satisfaction as an essential factor affecting relationship quality. One key factor to ensure and to improve the quality of the buyer-supplier business relationship is a satisfied supplier. Essig and Amann (2009) define supplier satisfaction as "a supplier's feeling of fairness with regards to buyer's incentives and supplier's contributions within an industrial buyer-seller relationship". They argue that supplier satisfaction indicates the quality of the buyer-seller relationship from supplier perspective. They also proposed a measurement tool of supplier satisfaction; the supplier satisfaction index. This index consists of three dimensions: (1) strategic, (2) operative, and (3) accompanying. The strategic dimension comprises the indicator "intensity of cooperation". The operative dimension comprises the indicators "order" and "billing/delivery", and the accompanying dimension the indicators "communication", "conflict management", and "general view". The implications of the supplier satisfaction survey were that (1) potential areas of improvement to strengthen the competitive position of the case company were found, (2) the importance of the case company's purchasing department became clear, and (3) dialogue between suppliers and the case company

was facilitated. All in all, supplier satisfaction and its systematic and regular assessment may help to improve the development of the business relationship.

Tikkanen, Alajoutsijärvi and Tähtinen (2000) raised an interesting issue in their discussion of the concept of satisfaction in industrial markets. They suggested that a more holistic perspective has to be taken on the measurement and management of satisfaction. It is not enough to use the same methods that are used in consumer markets owing to the fact that industrial companies usually have relatively few customers. It does not make sense to utilize comprehensive quantitative methods; instead versatile qualitative methods are more useful. It is more important to know the satisfaction perceptions of key decision makers within the key customer company than to know some average satisfaction ratings. Analyzing and managing qualitative information in order reliably to make some academic or managerial recommendations can present a challenge in this respect. Traditionally, managers and academics have required some objective facts and figures to support the findings. Tikkanen et al. (2000) applied their ideas about the concept of satisfaction in industrial markets in a case study. We can conclude the discussion on relationship quality by stating that in a good business relationship value is created that benefits both companies' business. Table 2 summarizes the literature reviewed in this section on value creation in business relationships.

Table 2. Summary of the literature on value creation in business relationships

Author(s) and year	Approach	Relationship context	Conceptual origin	Research
Bejou et al., 1996	Determinants of relationship quality	Consumers using financial services	Relationship quality, relationship marketing	Empirical – Survey - artificial neural network analyses - 734 phone interviews
Claycomb's and Frankwick's, 2010	Relationship development – buyer's perspective	Buyer-seller in business-to-business	Interaction/network theory	Model testing – survey - 174 members of the Institute for Supply Management
Dyer & Hatch, 2006	Knowledge sharing and relation-specific capabilities	Supplier – car manufacturer	Strategy management, network theory, relational view	Empirical –survey - 42 US-based suppliers in car industry
Dyer & Singh, 1998	Cooperative strategy and sources of inter-organizational competitive advantage	Business-to-business	Relational view	Theoretical
Essig and Amann, 2009	Supplier satisfaction	Buyer-supplier relationships in aviation industry	Supply management, supplier satisfaction	Empirical – survey – 148 suppliers of one buying company
Huntley, 2006	Relationship quality and actual sales and recommendation intention	Buyer-seller in business-to-business	Relationship marketing	Empirical – 18 executive interviews – survey by phone to 203 customers
Johnson, 1999	Inter-firm relationship as a strategic asset	Buyer-seller relationships in industrial machinery and equipment distribution industry	Strategy management, inter-firm relationship management	Empirical – survey – 177 questionnaires answered
Kim et al., 2010	Determinants of inter-organizational cooperation	Buyer-supplier relationships - Korean telecommunication service provider and its suppliers	Resource dependency, transaction cost economics and social capital	Empirical – survey – 100 buyers and 98 suppliers
Krause, 1997	Supplier development – practices and outcomes	Buyer-supplier relationships in different industries	Supplier development	Empirical – survey - 527 responses from purchasing executives
Krause, 1999	Supplier development – antecedents	Buyer-supplier relationships in different industries	Transaction cost economics, supplier development	Empirical – survey – 527 responses from purchasing executives
Krause & Ellram, 1997	Supplier development – critical elements	Buyer-supplier relationships in different industries	Supplier development	Empirical – survey – 96 responses from buying firms

Author(s) and year	Approach	Relationship context	Conceptual origin	Research
Li et al., 2010	Formal and social control in long-term relationships	Buyer-supplier relationships in China	Formal and social control mechanisms	Empirical – interviews and survey - 580 responses
Liu et al., 2010	Control mechanisms in buyer-supplier relationships	Manufacturer-distributor relationships in Chinese household appliance industry	Relationship quality	Empirical – survey - 251 responses from distributors and 251 from manufacturers (paired)
Möller, 2006	Role of competences in value creation	Buyer-supplier relationships	Value creation, relationship marketing, relationship management	Theoretical
Möller and Törrönen, 2003	Suppliers' value creation potential	Supplier-customer relationship	Joint value creation, relationship management	Theoretical
Naudé and Buttle, 2000	Assessing relationship quality	Relationships along supply chain	Relationship management	Theoretical + empirical – 40 executives as respondents
O'Toole and Donaldson, 2002	Relationship performance dimensions	Buyer-supplier relationships in engineering, electronics and telecommunication in UK	Relationship management	Empirical – 7 interviews and survey with 200 industrial buyer respondents
Powers and Reagan, 2007	Factors influencing successful relationships	Buyer-seller relationships	Relationship management	Empirical – 300 responses from US purchasing managers
Ramsay & Wagner, 2009	Sources of supplier value	UK supermarkets – their SME suppliers	Purchasing and supply management	Empirical – interviews in 14 supplying SMEs
Smith, 1998	Similarity, relationship management and quality	Buyer-seller relationships in Canada	Relationship management, similarity-attraction paradigm	Empirical – survey – 128 responses from purchasing professionals
Storbacka et al, 1994	Profitability of relationships	Customer relationships	Relationship marketing, service quality	Theoretical
Tikkanen et al, 2000	Relational perspective to satisfaction in industrial markets	Buyer-seller relationship and connected networks in Finnish software industry	Relationship marketing	Empirical – case study – 18 interviewees

2.3 SET applied to the buyer-supplier relationship

In this chapter the literature review continues by looking at the recent studies where SET has been applied in explaining behaviour in buyer-supplier relationships. This will link our discussion so far on SET and value creation in business relationships. This part of the review will serve as a stepping stone towards the empirical part of the research where supplier relational effort is studied with the aim of better understanding the mechanisms of behaviour and value creation in the buyer-supplier relationship.

Although purchasing and supply management is clearly driven by economic actions, it is also strongly embedded in social relations (Granovetter 1985). The combination of economic actions and social relations has been a challenging area for research. In recent years SET has been applied in several studies for gaining a better understanding of buyer-supplier relationships and the drivers behind the actions therein. Narasimhan et al. (2009) interestingly applied SET in order to better understand the managing of the lock-in situation in supply chains. A buyer-supplier relationship is in a lock-in situation when, for all intent and purposes, one party is heavily dependent upon the other party. The underlying basic assumption is that building cooperation and coordination over time improves the business relationship in terms of increased efficiency and effectiveness - an assumption also supported by Heikkilä's (2002) study on efficiency and customer satisfaction in supply chains.

An opportunistic pricing strategy by the supplier can lead to higher returns if the buyer is unable to find a substitute product, but at the same time cooperative pricing can motivate the buyer to stop investing in developing a substitute product or solution, which may in fact generate higher long-term returns for the supplier. This leads to an assumption that "in a lock-in situation the optimal pricing strategy is one in which the supplier does not take opportunistic advantage of its buyer" (Narasimhan et al. 2009). Non-opportunistic behaviour by the supplier signals a reward for the buyer which may lead the buyer not to initiate actions to reduce dependence; this leads to the second assumption: "In a lock-in situation the optimal investment intensity of the buyer should decline over time and the buyer would remain dependent on the seller" (Narasimhan et al. 2009).

The managerial implications derived from the findings above can be summarized in the following three guidelines. 1) The supplier should follow a pricing policy which signals to the buyer the supplier's intent to engage in

a long-term relationship. 2) Proactive investments by the buyer can act as a long-term relationship enhancing mechanism where the buyer's probability of being able to escape a lock-in situation influences the supplier to behave in a non-opportunistic way. 3) The supplier should pursue operational efficiency improvements as these help to sustain a long-term relationship with the buyer. Cost savings from e.g. efficient operations, economies of scale and learning should be used to support an optimal pricing strategy (Narasimhan et al. 2009). Narasimhan et al. (2009) explained the behaviour of the buyer and supplier in a lock-in situation by reference to SET. In sum it can be stated that one party acting opportunistically can lead to relationship termination. In a long-term relationship a strategy to decrease opportunism was shown to be useful both for the buyer and for the supplier. The buyer can benefit from the strengths and skills of the supplier, from improved quality and process performance, and from continuous cost reduction. This is a good example of the typical struggle in everyday business life: how to be cooperative and competitive at the same time.

Another interesting study where SET was applied in relationship management was that by Zhang et al. (2009), who studied how buyer cooperative actions influence a supplier's willingness to invest in technology that would benefit the buyer. Willingness is understood here as a supplier's informal, non-contractual commitment. Three co-operative actions were considered: buyer communication, buyer assistance and supplier involvement. It was found that buyer cooperative actions increase the supplier's willingness to invest in technology. The authors also studied what kind of impact relational stress has in this context. Relational stress can be experienced by the supplier due to e.g. conflicting or too demanding expectations or requirements on the part of a buyer. Relational stress can constrain a buyer's attempts to increase the informal, non-contractual commitments of suppliers, which is an important element in gaining relational rents. Relational stress increased the positive effect of buyer assistance, but at the same time decreased the effectiveness of buyer communication. The effect of supplier involvement was not significantly influenced by relational stress. These findings can help supply chain members, both buyers and suppliers, to better understand and better manage simultaneous cooperation and relational stress. The authors suggested that further research be done to develop a framework that would incorporate the contingent factors critical to the adoption of cooperative actions (Zhang et al. 2009).

Griffith et al. (2006) see supply chain relationships as containing both economic and social elements. They found that in supply chain relationships, the perceived procedural and distributive justice of a supplier's poli-

cies enhance the long-term orientation and relational behaviours of its distributor. This leads to decreased conflict and increased satisfaction, with a positive influence on the distributor's performance. Procedural justice refers to the process and the perceived fairness of that process. Distributive justice refers to the perceived fairness of the decision outcome. It seems to work so that if one supply chain partner treats its partner fairly - in terms of processes and reward allocation - the partner reciprocates and adopts attitudes and engages in behaviours that strengthen the relationship. This research outcome is another motivation for focusing on social means how one is treated in relationship management, although the economic outcome of the relationship is of course always important as well. The overall message demonstrates the usefulness of SET when applied to supply chain relationship management: “once long-term orientation and relational behaviours develop in a supply chain relationship, partners are more willing to make short-term concessions to their partner as the attitude and behaviour provide a belief that over time the concessions will be reciprocated” (Griffith et al. 2006). Supplier relational effort can be assimilated to the short-term concession mentioned above.

Current and future expectations and obligations between suppliers and buyers are critical relational building elements that encourage nurturing social exchange in relationships (Kingshott 2006). Managers should better understand the factors to be taken into account when trying to build and nurture a long-term business relationship. How can social exchange relationships be nurtured? Kingshott (2006) studied the psychological contract as a means to impact trust and commitment within supplier-buyer relationships. The concept of the psychological contract refers to the individual's belief that certain promises have been made by the other party. The results showed evidence of how managers who adopt a relational orientation are able to increase trust and commitment in the relationship. The psychological contract provides managers with an alternative mechanism to help increase the level of psychological and social bonding within the relationship, and lead to better relational outcomes.

Criticisms of the recent buyer-supplier relationship literature have been presented by Emberson & Storey (2006). They argue that greater understanding is needed on human and organizational behaviour in collaborative working arrangements in order to manage such relationships successfully. This, again, encourages the use of SET to explain some aspects of the phenomenon. Relationships are affected by other corporate agendas, and there is always a risk that corporate policies will override even a well-performing relationship arrangement. In changing circumstances continued managerial

support cannot always be guaranteed. The study showed how collaborative practices were at risk in situations where people were moved to other posts or when alternative priorities swept away the arrangement in favour of "bigger" ideas. In reality, differing individual and organizational perspectives exist, meaning that a continuous process of negotiation and renegotiation is a fact in many buyer-supplier relationships. In order to promote successful collaborative buyer-supplier relationships, research should take much fuller account of these realities (Emberson & Storey 2006).

SET was also applied in a study exploring the management of IT outsourcing relationships (Kern & Willcocks 2000). The authors argue that the economic point of view is not enough: exchanges also have to be understood from the individual's point of view. This is partly guided by contracts, but includes voluntary efforts as well. The authors refer to this dimension as the behavioural dimension. IT outsourcing is a good example where operations, decisions and relationship management are mainly driven by economic actions, but social relations and aspects also need to be considered. Kern & Willcocks (2000) conceptualized a framework to capture some of the key constructs and properties of the buyer-supplier relationship. Interaction plays an important role in the relationship and there are several important areas for interaction in addition to the traditional areas of product and financial exchange. The behavioural aspects in this model include commitment, cooperation, expectations, satisfaction, conflict, dependency, power and trust. These are aspects which are not easy to manage by contracts alone, but they nevertheless affect the relationship.

SET has been used also in studying the role of power and influence in alliance performance (Muthusamy & White 2006), where it has been argued and empirically shown that alliance performance is related to the extent the partners can mutually influence each other in a relational manner. Another interesting setting for the application of SET in economic versus social exchange was the marketing of locations for building new premises for manufacturing companies. Evidence was presented confirming and specifying the importance of social involvement as an attribute that affected managers' satisfaction with, and commitment to, a location (McKee & G. Wang 2006). Several further interesting articles have been published on the idea of using SET as a framework for better understanding the challenges in relationship management. Some of these discuss relational capital as an explanation for the behaviours in relationships. The definition followed in the present research is:

D6: Relational capital is the cumulative trust, experience, and knowledge that is created in the relationship (Krause et al. 2007; Lawson et al. 2008; Cousins et al. 2006; Yang et al. 2008).

Although SET has been applied in earlier buyer-supplier relationship studies, the theory continues to have much to offer in this field of research. A summary of the literature utilizing the social exchange view can be found in Table 3.

Table 3. Summary of the literature where SET has been applied to relationship management

Author(s) and year	Approach	Relationship context	Conceptual origin	Research
Cousins et al., 2006	Formal and informal socialization in supply chains	Buyer-supplier relationships	Relational capital	Empirical; survey of 111 manufacturing org's, buyer view
Cropanzano and Michell, 2005	SET and conceptual difficulties	Workplace relationships	Social exchange theory	Theoretical
Emberson & Storey, 2006	Collaboration in relationships	Buyer-supplier relationships	Business relationship literature	Empirical: case study; 4 cases with multiple views
Griffith et al., 2006	Procedural and distributive justice in relationships	Supplier-distributor relationships	Social exchange theory	Empirical; survey of 290 distributors
Kern & Willcocks, 2000	IT outsourcing	Outsourcing relationships	Social exchange theory and social contract theory	Empirical: case study; 12 cases with both views
Kingshott, 2006	Psychological contracts in relationships	Buyer-supplier relationships	Social exchange theory	Empirical; survey of 434 distributors
Krause et al., 2007	Supplier development, commitment and social capital	Buyer-supplier relationships	Social capital	Empirical; survey with buyer and supplier views
Lawson et al., 2008	Social capital on buyer performance improvement	Buyer-supplier relationships	Social capital	Empirical; survey of 111 procurement executives
Muthusamy & White, 2006	Mutual influence on alliance performance	Alliances	Social exchange theory	Empirical; survey of 179 alliances
Narasimhan et al., 2009	SET and lock-in situations in supply chain	Buyer-supplier relationships	Social exchange theory	Economic modeling, behavioural experiments
Yang et al., 2008	Relational stability	Supply chain alliances	Relational capital	Empirical; survey of 105 manufacturing firms, buyer view
Zhang et al., 2009	Relational stress and cooperative actions	Buyer-supplier relationships	Social exchange theory	Empirical; 3 annual surveys; 2012 buying situations

2.4 Summary and motivation for the research

Value creation in an organization increasingly occurs in networks and in cooperation with other organizations. Value creation is generally managed by the buying company with contracts which determine the rights and responsibilities of the parties. For example, the supplier has to produce the products or services specified and the supplier is entitled to the agreed compensation. In close strategic buyer-supplier relationships a considerable amount of value is created through actions that are not directly determined by the contract. SET provides a basis for better understanding and explaining this type of value creation. According to SET, the parties in social exchange create value and exchange value with each other (Blau 1986). This type of value creation is voluntary and it is based on perceived attractiveness and on expectations of future rewards. This SET-based value creation in buyer-supplier relationships has received more and more attention recently, but very little empirical research on the underlying mechanisms and factors affecting it has been done. In order to gain a deeper understanding of the SET-based value creation mechanism in the buyer-supplier relationship, it is important to understand both the supplier's and the buyer's efforts on behalf of the relationship as well as the factors that promote those efforts. This research focuses on the supplier's effort in the buyer-supplier relationship, although both supplier and buyer perspectives are studied.

3 METHODS AND DATA

3.1 Research approach

This research was designed to study the phenomenon of supplier relational effort in buyer-supplier relationships. The aim was to collect real-world data and information and to extend the managerial theory on the buyer-supplier relationships. A combination of grounded theory and case study approaches was used. The grounded theory approach was used for the field data gathering and for discovering theoretical constructs using a hierarchical structure of categories (Corbin & Strauss 2008). The grounded theory approach was applied in the research process, as it has been presented by Corbin and Strauss (2008) and as employed by several others (Isabella 1990; E. H. James & Wooten 2006; Maitlis & Lawrence 2007; Ashforth et al. 2007; Jäntti 2003; Kalliomäki-Levanto 2009; Gioia et al. 2010; Corley & Gioia 2004; Locke & Golden-Biddle 1997) . The multiple case study method was used to develop the theoretical propositions based on the empirical data (Eisenhardt & Graebner 2007).

The grounded theory method (GTM) is a systematic, inductive, and comparative approach for carrying out an inquiry in order to construct theory (Charmaz & Bryant 2010). GTM is actually a family of methods rather than a single strictly defined method. However, it has some features that distinguish it from other methods: 1) theoretical sampling, 2) constant comparison of data and theoretical categories, and 3) focus on the development of theory via the theoretical saturation of categories rather than substantive verifiable findings (Charmaz & Bryant 2010). GTM encourages the researcher to remain constantly involved with the data and analysis. The research process is an iterative process where the analysis starts as soon as the first pieces of data have been gathered. GTM is also a challenging method for the researcher and requires the ability to see what is essential in the data. The method requires the researcher to maintain an open mind with respect to different explanations, but as Dey (2003) note: "An open mind does not imply an empty head".

Mello and Flint (2009) encouraged researchers in the field of logistics to utilize the grounded theory approach, suggesting that "there are a number

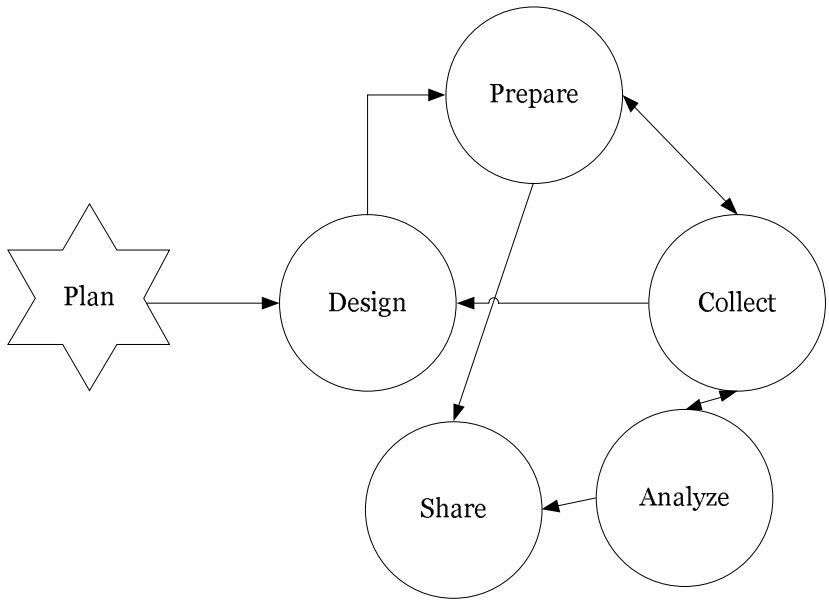
of areas of logistics where problems involving complex social interaction, or where little formal theory exists, could be beneficially researched using grounded theory". Procedures of grounded theory could help researchers to gain a more holistic and deeper understanding of the phenomena of interest than might be enabled by the more traditional quantitative methods. Such an understanding is essential in order to construct a foundation for theory-building. This grounded theory approach means that data and theory are constantly compared and reflected upon throughout the iterative phases of data collection and analysis.

Good qualitative researchers have a natural curiosity leading them to study worlds that interest them and to which they otherwise might not have access. They also enjoy playing with words and meanings, making order out of apparent disorder, and thinking in terms of complex relationships (Corbin & Strauss 2008). For them, doing qualitative research is a challenge and they bring themselves into the process. They enjoy the mental challenge of working with data and they are not afraid to draw on their own experience when analyzing their materials (Corbin & Strauss 2008). In my role as a researcher these characteristics all apply: I am deeply interested in the buyer-supplier relationship and curious about what is happening in the relationship and why. My professional background includes ten years in industrial purchasing and supply management as a practitioner and another ten years in teaching purchasing and supply management to engineering students.

According to Eisenhardt (1989), the case study is a research strategy focusing on understanding the dynamics present in a single setting. Case study results can have high impact due to the richness of the data and due to the real-life organizational setting (Eisenhardt & Graebner 2007). Case studies emphasize the rich, real-world context in which the phenomena occur and the theory-building cycle runs between the case data, the emerging theory and the extant literature. This can lead to new and creative insights, and the development of new theory, and it can have important validity for practitioners. Through triangulation with multiple data collection sources the validity of the research can be ensured (Voss et al. 2002). It was considered paramount in the present research to anchor it in a real world situation and to approach the supplier's relational effort with the help of grounded theory and multiple case study methods, so as to yield the richest possible data. Through this research design the aim was to build a new managerial theory for the field of purchasing and supply management.

This research was designed to explore the supplier's relational effort in three buyer-supplier dyads consisting of a buying company and its three

suppliers. The mechanisms behind the supplier's relational effort and the outcome of the supplier's relational effort in these three dyads were to be explored as well. Multiple cases were used here in order to build new pieces of theory to fill in the gaps in the existing literature. Eisenhardt (1989) also presents a process of building theory from case study research that comprises the following eight steps: 1) getting started, 2) selecting cases, 3) crafting instruments and protocols, 4) entering the fields, 5) analyzing data, 6) shaping hypotheses, 7) enfolding literature and 8) reaching closure. According to Yin (2009), case studies are the preferred method when "how" and "why" questions are being asked, when researcher has little control over events, and when the focus is on a contemporary phenomenon in a real-life context. Yin (2009) illustrates the case study research as a linear but iterative process (Figure 2). By following the systematic case study protocol it is possible to attain important strengths of theory development like novelty, testability and empirical validity. All this requires a very close linkage between the existing theory and the empirical evidence. These principles of both GTM and the multiple case study method are well suited and provided an excellent frame for this research process. GTM was used in analyzing the data and in generating the categories. The case study method was used for the development of propositions.



(Yin 2009)

Figure 2. Doing case study research: a linear but iterative process

The purpose of the research is theory building in order to identify and describe the phenomenon, including the key variables and linkages between the variables. The purpose is also to explain why the linkages exist and what the patterns behind the phenomenon are. For these purposes the research structure should include few focused case studies, in-depth field studies, multi-site case studies and/or best-in-class case studies. (Handfield & Melnyk 1998; Voss et al. 2002)

Several tactics have been used in this study to ensure the quality of the research design. The most commonly used criteria are construct validity, internal validity, external validity and reliability of the research design (Yin 2009). In Table 4 the tactics applied in this study are described. For construct validity, different sources of evidence were used, a transparent chain of evidence was established, and the draft report was reviewed by the key informants. For internal validity, explanation building was done and rival explanations were investigated. For external validity, replication logic was used. For reliability a proper and relevant research design based on grounded theory and case study methods was used consistently.

Table 4. Tactics used to ensure the quality of the research

Criteria	**Tactics applied in this research**	**Phase of research in which tactic occurred**
Construct validity	Four sources of evidence were used interviews, observations, documents and archival data	Data collection
	Transparent chain of evidence was established	Research design, data collection and analysis
	Key informants reviewed the draft report	Composition
Internal validity	Explanation building was done and rival explanations were investigated	Data analysis
External validity	Replication logic was used: three dyads were studied	Research design
Reliability	Proper and relevant research design was done	Research plan
	Research design and methods were followed consistently	Data collection and analysis
	Case study database was developed for all dyads	Data collection and analysis

Corbin and Strauss (Corbin & Strauss 2008) describe six conditions that foster the construction of "quality" research. The first condition is methodo-

logical consistency. This researcher has followed the methods described here consistently using the relevant procedures as designed. The second condition is that the researcher has clarity of purpose. This research is part of a larger research project on sourcing and service operation concepts in which tools for continuous competitiveness for manufacturing companies are developed. The present study, focusing on the development of the supplier relationship, is well positioned within this wider research context. The research objective became very clear in the early stages of planning, and even though the research focus evolved along the way and became narrower still, the overall objective remained clearly in focus throughout. The third condition is to have self-awareness as a researcher. This researcher has been well aware of her biases and assumptions at all times during the research process. A research journal – in the form of a diary - has been kept to note reactions and feelings along the way and the researcher's own assumptions and ideas have also been noted in memos so as to be able objectively to go back and see where the final findings and propositions originated. The researcher also had discussions with her supervisor as well as with other professionals in academia and industry to test the validity of the study. None of the findings are exclusively based on the researcher's intuition or assumptions; instead, strong evidence for all the findings is present in the research data. The fourth condition is that the researcher should be trained in how to do qualitative research. This researcher studied and practised the chosen qualitative research methods during the research process, going strictly "by the book" (Eisenhardt 1989; Eisenhardt & Graebner 2007; Yin 2009; Corbin & Strauss 2008). The fifth condition is that the researcher has a "feeling" or sensitivity for the topic, for the participants, and for the research. This researcher was able to step into the shoes of the participants due to her background in purchasing and supply management. This resulted in a combination of things that felt familiar and things totally new: working in buyer-supplier relationships was familiar, but the context was wholly novel. The researcher herself has worked in the paper machine manufacturing industry while the research was conducted in the electronics industry. A sixth condition is that the researcher must be willing to work hard. This the researcher has done: hundreds of hours have been spent sitting, thinking, analysing and writing. There have been dozens of iterative rounds in the analysis, and hundreds of memos have been written. During the most intense period of analysis and writing the researcher worked for about 80 hours per week for several weeks. In sum as a researcher I agree with the statement made by Whittemore et al. (2001): "Elegant and innovative

thinking can be balanced with reasonable claims, presentation of evidence, and the critical application of methods."

In the following sections the case selection, case companies, data collection and analysis process are discussed more in detail.

3.2 Case selection

"For a given set of available resources, the fewer the case studies, the greater the opportunity for depth of observation" (Voss et al. 2002). Three cases – buyer-supplier dyads - were studied in-depth in the empirical part of this study. The unit of analysis was the buyer-supplier dyad and the context was the electronics industry. The perspectives of both supplier and buyer in all three dyads were included in the data gathering. The dyads were constituted from one buying company and its three suppliers.

The buyer-supplier dyads were selected on the grounds that they were the most likely to illuminate the phenomenon. In other words the first two dyads were selected from among buyer-supplier relationships where the supplier's relational effort was highly visible. The third dyad was selected to obtain comparative data on a relationship where the relational effort was not so visible. Due to the theory-building aim of the research, replication logic was used in the case selection. First, two dyads were selected with the aim of yielding similar results, and the third dyad was selected to produce contrary results but for predictable reasons (Eisenhardt 1989; Yin 2009; Voss et al. 2002). This "polar type" was chosen in order to observe contrasting patterns in the data (Eisenhardt & Graebner 2007). Other factors considered when the dyads were selected were the length the relationship and the importance of the relationship for the buying company. The buying company was the same in all three dyads but the suppliers were three different companies.

The buying company was selected for this study due both to their active cooperation with the suppliers and to the importance of cooperation in the interface between the buying company and the suppliers. In addition, the buying company was well motivated to develop their purchasing and supply management, and therefore offered a fruitful platform for the study. The three supplier companies were selected in consultation with the buying company representatives. The researcher presented the research plan to the buying company sourcing and procurement staff members in an internal meeting and discussion entered into about possible suppliers. The final selection of the suppliers was done through informal discussions with the buying company senior management. In the first phase, two representative

suppliers were selected, and in the later phase, one additional supplier was included in order to provide rich comparative data for the analysis. In all three dyads the buyer-supplier business relationship had existed for more than five years and the sales volume in all cases was important for the buying company. The products purchased in these dyads could be characterized as strategic products, that is, they were high-tech, high-volume products manufactured according to customer specifications. Suppliers of such products cannot be changed in the short term without considerable efforts, risks and costs (Kraljic 1983; van Weele 2010). The dyads were selected to include buyer-supplier relationships where the amount of supplier relational effort would "make a difference", meaning that the supplier's relational effort is significant and important. The first two dyads were assumed to include a significant amount of supplier effort and therefore as promising for the deep exploration of the phenomenon. The third dyad was selected to deepen the analysis, and it also provided an excellent set of comparative data for the analysis.

3.3 Case company descriptions

The research was conducted in the electronics industry. The buying company delivers innovative products and services for environmental and industrial measurement purposes. The group headquarters is in Finland, but the company has operations and offices in several countries around the world. The same buying company is represented in all three dyads studied. The buying company in these dyads will be referred to henceforth as MSys (Measurement Systems provider).

The field work for the research was done from March 2010 to August 2010. MSys was going through an efficiency program including major organizational change. A new sourcing strategy was also in an implementation phase during the time of the research. MSys implemented a new ERP system in May 2010, also as part of the efficiency programme.

The first supplier company (EMS1) is an electronic manufacturing service (EMS) provider with a focus on the global industrial and medical business. The operating model is designed to take care of the total product life cycle. EMS1 is a global company with its headquarters in Switzerland. One of the production facilities is situated in Finland about 60 km from MSys's Finnish operations. The engineering services unit of EMS1 in Finland is located close to MSys. EMS1 has one production unit in Slovakia. MSys interacts mainly with the Finnish and Slovakian units. EMS1 has a global key account manager for this relationship who is Finnish and located in Finland. The

key contact persons at MSys had worked for EMS1 earlier and therefore they knew the people at EMS1 and the company well. The people at EMS1 also knew their MSys main contacts well.

A number of major changes had taken place at the EMS1 site in the recent past. Some production units had been run down and significant re-organization had been implemented. In the Finnish production unit there had been a reduction of personnel during 2010. EMS1 offers a global production network for their customers. This makes it possible for the Finnish production unit to specialize in producing the more difficult special products and prototypes while the production units in lower cost countries can produce products for the mass market at more competitive prices. In this way EMS1 aims to provide the flexibility of a small local unit along with the global production network of a big group.

The second supplier company (EMS2) is a vertically-integrated electronics manufacturing service provider for electronics, plastics and box-build assembly. EMS2 is a tier-2 supplier with its main customers in Europe and USA. The company specializes in technology-driven products and they are not in the consumer product business. The medical industry is one of their important customer segments. The EMS2 factory serving MSys is located in Malaysia. MSys and EMS2 have been in a business relationship for over 20 years. EMS2 started as a components manufacturer for MSys and now delivers finished products. EMS2's main business with MSys currently includes a limited number of products with high volume. This manufacturing of finished products was transferred to EMS2 few years ago. These products include standard components but the assembly process is demanding and the finished products are very delicate.

Production in EMS2 is located in Malaysia, which currently is an increasingly competitive manufacturing market, owing, for example, to recent economic development in China, where salaries have been rising. One specific benefit due to this location is that EMS2 has been well able to answer the typical year-end high demand for these products in December due to the fact that there are no Christmas holidays in Malaysia. The relationship is affected by various cultural issues. These are not emphasized here, in but they are included in the analysis where they crop up in the research data. Asian peoples are more accustomed than Finns to negotiating about prices. Asian populations and organizations are also more used to working in a very competitive environment than is the case in Finland. EMS2 has manufacturing units in Asia, ownership in Switzerland and an international top management team. This creates a combination of low cost manufacturing and reliable supply. At least partly for these reasons MSys was ready to

transfer its confidential product and manufacturing technology to EMS2. The competence of the Swiss owners in contractual and confidentiality issues was a significant prerequisite for the transfer.

The third supplier company (EMS3) is a contract manufacturer and service provider of electro-mechanic products, with a special focus on serving manufacturers in the energy and well-being industry. The company headquarters is located in Finland, where they also have three production units. One of the Finnish production units was to be closed in 2010 and their production transferred to their Estonian production unit. EMS3 also has a production unit in India. The account manager is the EMS3 key contact person in this relationship and he is located in the company headquarters. He is Finnish. EMS3's headquarters and one of its production units are located fairly close to MSys in Finland. There have been several personnel changes during the past 2 years among the key persons: a new account manager, business director and CEO have started at the EMS3 location.

EMS3's strategy is to manufacture small and medium size series with high flexibility to serve customer special needs. MSys products have been manufactured in two of the Finnish production units. Electronics are manufactured in a Finnish unit located several hundred kilometres from MSys, and mechanics products are manufactured in the other Finnish production unit located close to MSys. In 2010, MSys products from the Finnish electronics production unit were transferred partly to EMS3's Estonian production unit and some products were transferred to other suppliers. EMS3 also provides test equipment engineering and manufacturing services for MSys. One of the Finnish production units specializes in serving a big customer in another industry at the customer's site and do not deliver anything to MSys. The customer base in the Finnish units has traditionally mainly been Finnish, while the Indian production unit has global customers.

The products manufactured at EMS3 are partly very challenging to make, and alternative suppliers are not easy to find. Product transfers are also challenging. The business relationship between EMS3 and MSys has existed for more than 15 years.

This relationship was under pressure during the research field work when MSys transferred some of their products from their Finnish electronics production unit to EMS3's competitor. EMS3 had planned to transfer these products to the Estonian production unit and they had done a significant amount of preparative work for the transfer. People at EMS3 felt that the information about the transfer had come from MSys as a total surprise and "too late".

Table 5 summarizes additional characteristics of the dyads, including the length of the relationship, the geographical distance between the operations of MSys and the supplier, type of production series, and how well the key persons knew each other.

All these companies are doing business in a very competitive market. At time of the research the industry had been experiencing a rather severe recession, although some signs of a recovery could be seen here and there. The recovery started to cause problems in component availability. MSys has traditionally not been very vulnerable to economic fluctuations.

Table 5. Characteristics of the dyads

	MSys-EMS1	**MSys-EMS2**	**MSys-EMS3**
Length of the relationship	~5 years	~25 years	~ 20 years
Distances between the supplier's and buyer's operations	mainly short	long	relatively short
Production series	Small and medium size	Mass production	Small and medium size
How well all the key persons knew each other	Well	Fairly well	Not very well
How long had the supplier informants been working in this dyad (average)?	~2 years	~3 years	~6 years

3.4 Data collection

In the data collection the principle of triangulation was followed by using and combining the different data collection methods to study of the same phenomenon (Voss et al. 2002). In this research the data collection methods included in-depth qualitative interviews, direct observations during company visits and company meetings as well as informal discussions with company personnel and the utilization of both company internal documents and the public archival data. Table 6 shows a detailed list of the data sources, including the audience for whom the information was created.

Table 6. Data inventory

Data type	Quantity	Original data source	Original intended data audience
Interviews	20	Informants	Researcher - analysis in this study
Minutes of meetings including action point lists	3	Chairman of the meeting	Meeting participants
Customer survey results	1	EMS Business Director	EMS's CRM people
Presentation for executive meeting	1	EMS Business Director	Executive meeting participants
Spend report from ERP system	1	Global Sourcing Manager, MSys	Company internal follow-up
Company presentations	3	Sourcing Managers, MSys	Company personnel
Annual reports	2	Web site	Shareholders, customers and other possible interest groups
Company web sites for figures and presentations	4	Company communications	Customers, shareholders and other possible interest groups
Case study	1	Technical University of Denmark (Betz 2010)	Management students
Observational data	11 events	Researcher participation and field notes	Researcher - analysis in this study
Memos with interview quotations	746 memos 425 pages	Researcher	Researcher - analysis in this study
Research journal	1 journal 13 pages	Researcher	Personal use and record keeping

Most of the empirical data were gathered through the 20 semi-structured in-depth qualitative interviews conducted in both the supplier and buyer companies. 14 interviews were face-to-face interviews and six interviews were conducted via conference call. The researcher's supervising professor participated in four face-to-face interviews. Qualitative interviews are useful when you need to find out something which cannot be answered simply or briefly. Instead, the answers will probably lie behind the interviewee's

explanations, examples or descriptions of the experiences in question (H. J. Rubin & I. Rubin 2005). Qualitative interviews are especially useful where the objective is, e.g. to understand experiences, describe social processes and understand our working lives. With in-depth interviews it is possible to gain rich insights into the research issue, and they also enable detailed iterative discussions of complex topics (Burgess 1986; Kvale 2008). Some common key characteristics of in-depth qualitative interviews are: 1) projects using qualitative interviews build on a naturalistic, interpretive philosophy, 2) qualitative interviews are extensions of ordinary conversations, and 3) the interviewees are conversational partners (Rubin & Rubin 2005). The conversational partnership aspect was emphasized in the present study. The researcher and the interviewee develop a relationship - a conversational partnership - that influences the interviewing process. The emotions and the personality of the interviewer affect the interview situation. The interviewer needs to be able to handle anxiety and fatigue, as a relaxed interviewee makes for a thoughtful, rich interview. To achieve this objective, some aspects of the interview situation were considered in advance: 1) being interviewed can confirm the interviewee's status; 2) people might talk openly in order to be helpful in solving a problem; 3) the interviewee might believe that the interviewer will use the stories to help others; or 4) they might want to tell "their side of the story". All in all, trust is an essential element in the interviewing situation and the interviewer should try to build trust in all circumstances. Courteous and ethical behaviour is highly important in a conversational partnership (Rubin & Rubin 2005).

Although the emphasis was on qualitative in-depth interviewing, all the informants were asked to answer three assessment questions using a quantitative scale. This provided the supporting quantitative data for the analysis. The interview guide was designed for the first interview and was used as a guideline by the interviewer. The aim was nevertheless to stay open to anything that might come up and not to dictate the conversation with a strict predetermined set of questions. Unstructured interviews have been demonstrated to yield the densest data (Corbin & Morse 2003). The interview guide included open questions, themes for discussion and the three quantitative assessment questions. The open questions and the themes evolved in the course of the data collection from interview to interview due to the iterative nature of the research. The data collection and analysis were done concurrently and iteratively. The analysis started immediately after the first interview. The interview guide can be found in Appendix 1.

In strategic supplier relationships, in particular, interaction occurs on many different levels and areas between the companies, for example in re-

search and development, in logistics and in production. Therefore the informants also represented different levels and areas of business operations. Access to the case company was approached through MSys's head of sourcing, who was responsible for the company's global sourcing management. He named the main MSys informant for each dyad as soon as a dyad was selected. The MSys main informant suggested the main informant from the supplier company. These key informants were asked to suggest further informants for informal discussions in order to obtain the most representative informants possible for exploring the phenomenon. This procedure followed the idea of purposeful sampling (Kumar et al. 1993). Among the interviewees were representatives from different levels and areas: from operations to senior management and from purchasing and sales to manufacturing and engineering (see Table 7). Four of the interviews conducted at MSys concerned more than one of the dyads. One of these MSys interviews was conducted at the beginning and focused on the general context. Three MSys interviews were done in the later phase of the field work with the aim of asking the informants to compare two or three dyads of interest, while still following the interview guide. These informants were actively involved in these two or three dyads. One MSys informant was interviewed twice. The number of interviews, their length, and the number of transcribed pages for each dyad are presented in Table 8. The total length of the recordings was over 16 hours and the total number of transcribed pages was 380. It should be noted that some interviews at MSys concerned more than one dyad and therefore the totals cannot be calculated by summing the columns in Table 8.

Table 7. Interviews conducted in chronological order

Interview no	Company	Position of interviewee	Dyad(s) in focus
1	MSys	Senior Manager, Sourcing Operations	1,2 and 3
2	MSys	Senior Manager, Sourcing Operations	1
3	MSys	Sourcing Manager, Operations	2
4	EMS1	Manager, Customer Focus Team, CRM	1
5	EMS1	Project Manager	1
6	EMS1	Production team superior	1
7	EMS1	Account Manager	1
8	EMS2	Key Account Manager	2
9	EMS2	Business Unit Manager	2
10	EMS2	General Manager	2
11	EMS3	Key Account Manager	3
12	EMS3	Customer Contact Person	3
13	EMS3	Business Director	3
14	MSys	Purchaser	1 and 3
15	MSys	Senior Manager, Sourcing Operations	1 and 3
16	EMS2	Production Manager	2
17	EMS2	Director of Business Development	2
18	MSys	Production Manager	2
19	EMS3	Assistant Customer Support	3
20	MSys	Head of Global Sourcing	1,2 and 3

Table 8. Interviews conducted for data collection

	No of interviewees from MSys	No of interviewees from EMS	Total length of the interviews	No of pages transcribed
MSys-EMS1	4	4	7h 7min	173
MSys-EMS2	4	5	7h 57min	161
MSys-EMS3	4	4	6h 7min	164
Total	6*	13	16h 23 min*	380*
*) 4 interviews concerned more than 1 dyad, thus total cannot be calculated by summing the columns				

In addition to interviews the researcher used observations to collect data. She visited the case companies 11 times during the six-month data collection phase. In addition to the interviews she participated in five company meetings, and she had several informal discussions with company personnel. On all those occasions, observations were actively made and documented in field notes. The field notes were refined into memos including descriptions and possible explanations, and discussion related to the observations. At the beginning of the data collection period the observations were more descriptive in nature, such as when one observes a social situation and tries to record as much as possible, asking oneself the general question "What is going on here?"(Spradley 1980). In the later phases of the data collection the observations were more focused and selective.

In addition to interviews and observations, company internal documents from the case companies were utilized. The collection of documents included minutes of meetings, presentation materials from meetings, customer survey results, action point lists, and company presentation materials. Public archival data, including e.g. annual reports and press releases, were also gathered and used.

3.5 Analytic process

The analytic process followed the grounded theory approach as presented by Corbin and Strauss (2008) and as employed by several others (Isabella 1990; James & Wooten 2006; Maitlis & Lawrence 2007; Ashforth et al.

2007; Jäntti 2003; Kalliomäki-Levanto 2009). The most essential characteristic of the analytic process was that the data and theory were constantly compared and reflected on throughout the iterative phases of the data collection and analysis. The analytic process is illustrated in Figure 3.

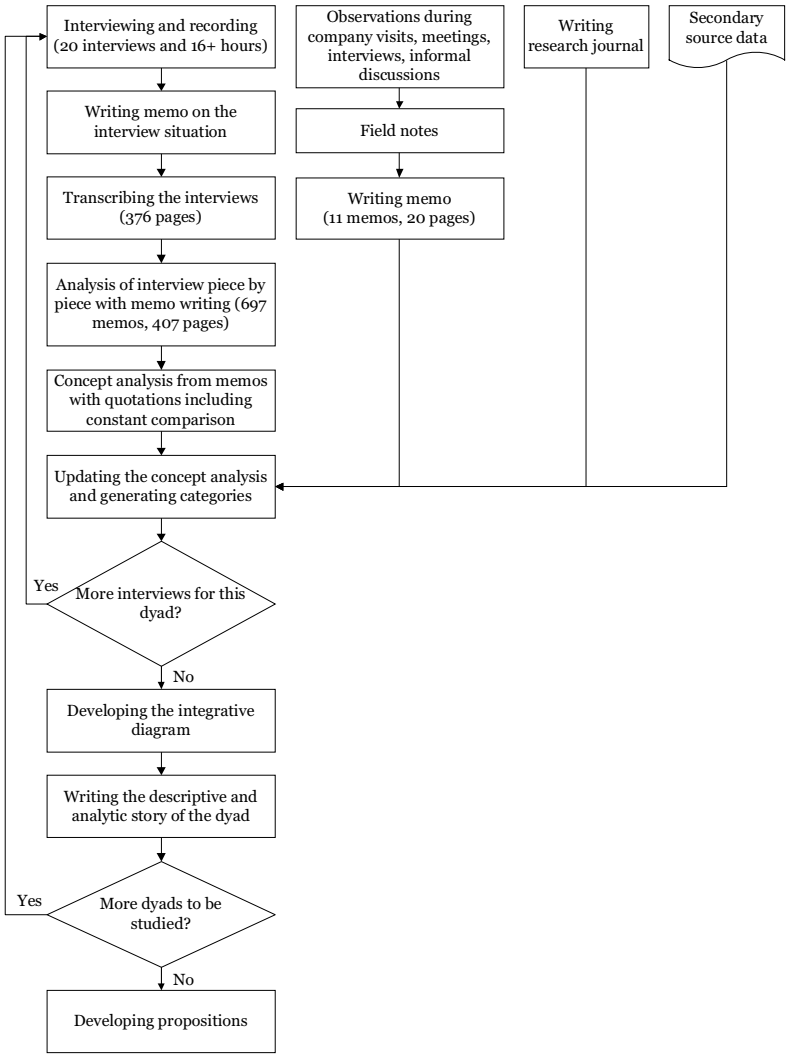


Figure 3. Analytic process

The analysis started right after gaining the first access to MSys. The data collection in the field was done during a six-month period starting in March 2010 and finishing in August 2010. The analytic process was intense and

iterative during the same period of time. In the beginning phase of the analysis different analytical tools were tried out and the most appropriate tools for this researcher and for this research were chosen. Analytic tools are devices to promote interaction between the researcher and the data, which in turn enables the researcher to understand the possible meanings present in the data (Corbin & Strauss 2008). Analytic tools were chosen to probe the data, to stimulate conceptual thinking, to increase sensitivity and to work out alternative interpretations of the data as well as to enhance the free flow of ideas. The analytic process is illustrated in
Figure **3**. Memo writing became the first main analytical tool for the researcher. Memos are a specialized type of written record that contains the products of the researcher's analyses (Corbin & Strauss 2008). In this research memos were written after each occasion and the researcher returned to the memos regularly. The second main tool comprised the lists of the evolving concept and categories, which were posted on the wall for category generation. The third main tool was an evolving integrative diagram organizing the concepts and categories to illuminate the relationships between them. The purpose of the memos, lists and diagrams was to facilitate the analytic process.

The analytic process started with the memo writing right after the first interview. The atmosphere, observations and upcoming ideas were written down and interpreted in memos. The next step was the transcription of the first interview. 15 out of 20 interviews were transcribed by the researcher and five transcriptions were made by a research assistant. The interview was then analysed piece by piece. For every piece of data in the transcription a memo was written to analyse the data for concepts and to generate categories. The generation of categories is described in more detail in chapter 4 . After that the researcher went back to the transcription and memos and prepared the first concept analysis for the dyad MSys-EMS1. Iteratively, all the other interviews for the dyad MSys-EMS1 were analysed the same way and after each round the concept analysis for the dyad MSys-EMS1 was updated. Then, the first integrative diagram was drawn for dyad MSys-EMS1. The purpose of the integrative diagram is to link the categories around a core category and to refine and trim the results into a theoretical construction (Corbin & Strauss 2008). For the MSys-EMS2 and MSys-EMS3 interviews the same iterative analysis process was applied. Purposeful sampling was used by constantly comparing data retrieved from informants with the iterative approach; the data collection, analysis and looking for new informants all happened iteratively (Kumar et al. 1993). The saturation effect was followed during the iterative process. The saturation effect

meant in this context that fewer and fewer new relevant concepts were popping up in the interviews. It was decided to restrict the number of interviews to 20 in total. After all the interviews had been analysed a descriptive and analytical story about each case was written. All the research data were utilized in this phase and the data were also analysed for context and processes. After that a cross-case analysis was conducted and the propositions were developed. Due to all this intense work with the research data (interviews, observations, transcribing, memo writing, listing, drawing) the researcher became very familiar with the data.

During the data analysis the categories and concepts along with their dimensions and properties were developed. Theoretical sampling was used as a method to discover the concepts evolving from the data. Theoretical sampling is a method of data collection where the concepts derive from the data (Corbin & Strauss 2008). It is done in order to discover the relevant concepts instead of testing or verifying predetermined concepts. Theoretical sampling is cumulative in nature, each new data collection event building upon the previous data collection and analysis and contributing to the next data collection and analysis. Many reflective discussions with both academics and practitioners helped the researcher to test the concepts and to proceed with the research. The challenge in this kind of qualitative analysis is to know and to decide when to finish. Theoretical sampling should continue until all the categories are saturated, meaning that no new or significant data emerge and that all the categories are well developed regarding their dimensions and properties (Corbin & Strauss 2008). The analysis was finished when the analytical story was compact and it “felt right”.

Atlas.ti software was used in the data analysis for storing the materials, memo writing and linking the memos to quotations. Other software like MS Word, PowerPoint, Excel, Visio and Zotero were used for creating different research documents and databases. All the research material was stored and organized electronically. However, the analytic process also included many manual phases with numerous sketches and notes.

4 CATEGORY GENERATION AND RESULTS

The process of generating the categories and the results of the category generation will be described in this chapter in detail in order to provide transparency and to convince the reader that a proper systematic, inductive, and comparative analysis has been conducted and that the categories result from the analysis. The analysis was guided by several ideas. We need to interpret our data in order to analyze it, but analysis can go beyond interpretation. We try to create conceptual tools to classify and compare the important and essential features of the phenomena we are studying. This means a process of abstracting from the immense detail and complexity of our data those features which are most salient for our purpose (Dey 2003). When generating categories we need to "keep our eye on the ball" and remember that the categories have to relate to an appropriate analytic context. At the same time the categories have to be rooted in relevant empirical material. In generating categories we need to think systematically and logically as well as creatively. (Dey 2003)

Dey (2003) named several resources through which categories can be generated. In this research the categories were generated on basis of inferences from the data, the initial research questions, the substantive, policy and theoretical issues, and imagination, intuition and the researcher's previous knowledge. Developing the categories involved both much looking forward towards the overall results of the analysis and much looking back at the data.

In practice, categorizing means the transfer of bits of data from one context (the original data) to another (data assigned to the category) (Dey 2003). In the present instance, the categories were developed through an iterative analytic process, where an interview was transcribed by the researcher and memos were written for every relevant "unit of meaning" in a transcript. The relevant unit of meaning may have been a couple of words, a sentence or a whole answer in the interview. The relevant unit of meaning was conveyed by the content rather than the form. Memos were used here

as a specialized type of written record that contained the outcome of the analyses (Corbin & Strauss 2008). The purpose of the memos was to facilitate the analytic process by thinking, writing and challenging one's creativity to find similarities with and differences from the previous data and findings and to think further about all the different alternative explanations. In the memos, the data and earlier experience were combined in the analysis. In total, 758 memos were written during the research process. A research journal describing the chronological progression of the research was kept throughout the process. 746 memos analysed the interview transcripts piece by piece and 11 memos documented and analysed the observations made during the company visits, meetings, interviews and informal discussions. A total of 459 pages of written memos were included in the analysis. In addition, during the research process the researcher wrote several learning memos on the basis of peer discussions, meetings with her supervising professor, the GT course and the IPSERA conference. In summary

Table **9** the numbers of different types of memos and the numbers of pages they occupy are presented. Atlas.ti software was used for storing the transcripts and for writing the memos, which enabled the linking of the memos and quotations.

Table 9. Summary of the memos written during the research process

Memo type	No of memos	No of pages
Memos with quotations analyzing the interview transcripts piece by piece	746	425
Average no of memos and no of pages per interview	37	21
Memos analyzing the observations	11	21
Research journal	1	13

After one interview transcript had been analyzed and all the memos related to that interview transcript written, the next step in creating categories was to go back to the memos with the quotations and to analyze them for concepts and categories. The evolving concepts and categories were listed on the basis of the analysis of the first interview. This iterative analysis with transcription, memo writing and analysis performed for generating concepts and categories was done for each interview separately, and the list of concepts and categories was developed as a result of each round. Constant comparison was central throughout the analytic process. The lists evolved after each round and the lists with concepts and categories were posted on the wall to better see "the big picture". Manual writing and drawing were

done in many phases to make room for creativity. Most of the manual notes and sketches were later refined into memos and other electronic documents. The concepts evolved and developed during the process described above and finally lead to categories for both supplier relational efforts as well as for the factors affecting supplier relational effort. Table 10 and Table 11 illustrate the evolving concepts from the initial 1st order concepts through 2nd order concepts leading to the categories. The tables do not include the complete lists of the concepts but they show some representative examples.

Table 10. Evolving concepts for supplier relational effort

Some examples of 1st order concepts	**2nd order concepts**	**Category**
Quick and flexible response to e.g. delivery inquiries Ensuring component availability Flexible and logical change management Prioritizing e.g. production capacity Support for customer in ERP change situation Customer dedicated team responsible for Buying Company relationship Sensitivity on what's happening – "looking behind the numbers" Quick corrective actions – constant control Back-up plans "Stretching" in demanding situations Marketing support for the customer Expediting Taylor-made reporting based on customer needs	Customer-focused organization People work with a customer focus Quick and effective response to customer demand Customer-specific development initiatives from daily operations Proactive actions Reporting Significant amount of competent human resources assigned to buying company	Customer-focused operations
Internal process development based on customer needs Ensuring and developing the quality in-house Acquisitions for wider service offering Efficiency improvements - initiatives coming through customer teams - to improve business with specified customer Technology choices based on customer desire Skilled manpower - multi-task Taylor-made processes for serving customer needs Investment decisions with customer focus Proactive technology improvements CRM programme Customer satisfaction survey and process ICT systems and applications to serve customer needs Training of staff members for e.g. new products or testing Redesign of processes due to customer ERP change Regular production line audits based on customer specification Developing the purchasing at supplier site	Customer-focused internal development Key persons communicate customer needs internally Frequent open discussions with buying company about needs and ideas on all levels Customer satisfaction survey driving internal development process Common action point lists for follow-up and communication	Customer-focused internal development
Helping the customer in forecasting Communicating the forecast	Lot of "doing together" Very active interaction and open discussions on all	Interaction

Some examples of 1st order concepts	2nd order concepts	Category
Regular meetings for e.g. quality assurance and engineering services Supplier top management involvement in relationship "Getting to know the customer" - separate budget for e.g. visits Proactive interaction Open approach in conflict management Business reviews Open discussions Visits Shared minutes of meetings and action point lists Unofficial meetings and discussions Regular proactive actions - coming challenges are communicated and discussed together Participation in training arranged by customer	levels More formal interaction – information systems for sharing information Mainly via e-mail and phone – little open discussion Visits Regular meetings	
Common projects e.g. product transfers Design change initiatives Shortening of the lead times in prototyping Development of documentation Generating new business ideas together with the customer Contract management - renewal Product development together with the customer VMI development Sourcing for customer Cost-down -development projects together with the customer	Planning the future together Product development together with the customer Lowering costs – development projects Developing manufacturability Process development	Joint development

Table 11. Evolving concepts for factors affecting supplier relational effort

Some examples of 1st order concepts	2nd order concepts	Category
Congruent visions, strategies and objectives Key customer position and key supplier position Global business - local presence Active communication and sharing of visions and strategies Congruent timing of strategic actions Awareness of the competitive position Competitive context	Strategic fit Matching expectations	Strategy and objectives
Customer focused organization Global key account manager Training for team working and customer focused operations Customer focus visible in supplier's operations in all levels Global sales function Efficient internal communication at supplier site Clear responsibilities and processes Good operations management E-reporting and on-line information sharing procedures	Customer-focused organization Customer-assigned teams Clear processes and roles	Organizing
Competence Commitment Motivation Interest Total responsibility Experience in own production, products and processes Experience in customer business, products, processes and people Active communication of customer needs at supplier site done by supplier representative Customer focus visible in individual's operations in all levels Supplier people know customer people Supplier people know customer company and products Interactional skills Humble attitude – effort is part of duty – no need to question Positive attitude and spirit	High motivations to serve the customer Good understanding of the big picture High interest to develop on all levels Positive attitude to challenges	Competence, attitude and motivation on the individual level

Some examples of 1st order concepts	2nd order concepts	Category
Key customer Significant sales volume Growth potential in business with the customer Growing sales trend in the past Lot of deliveries Wide variety of products and services Big quantities to be delivered Continuity of business Attractive industry sector ”Opportunity to grow and succeed together” Adequate product and service portfolio Global business a common interest Adequate size customer New product and service opportunities	Large and increasing sales volumes “Caring customer” Easy and open communication Easy-going cooperation	Attractiveness of the customer
Tight relationship Trust, fairness and openness Active interaction involving numerous individuals Good cooperation- positive spirit - reciprocity ”Doing together” ”Things work well” Both are making the effort – reciprocity Frequent visits Common history e.g. product transfers Learning through common history Easiness of interaction Quick responses Regular meetings and action point lists Top management involvement	Common history with successes People know each other well Easy and open interaction Lot of interaction in different forms “Doing and developing together”	Relationship and interaction

Following this iterative process, recommended by Corbin and Strauss (Corbin & Strauss 2008), the researcher browsed back and forth between the data and the emerging concepts and categories. The analysis was done concurrently with the data collection. As soon as concepts such as "customer-focused internal development" and "quick response" began to emerge from the data, the researcher noted them and used them to organize new incoming data. The emerging themes were listed as concepts, and then higher level categories were developed based on the most significant concepts occurring in the analysis. In this way, for example, concepts like "active communication", "regular meetings" and "visits" were finally organized under a category labelled "interaction". 20 rounds altogether – one round for each interview – of this time-consuming iterative analysis were performed very consistently and in a highly disciplined manner. The researcher became very familiar with the data during the intense period of field work and analysis. The researcher also had the privilege of being able to dedicate her solely to this research project during this period, enabling her fully to focus on and at the same time to preserve the research environment for creative and open-minded thinking and exploration.

The iterative analytic process for generating categories was first done for dyad MSys-EMS1, then for dyad MSys-EMS2 and finally for dyad MSys-EMS3. In all cases the former categories were noted in organizing the new data, but the concepts continued to be explored with an open mind. After the analysis of the first dyad an integrative diagram was drawn. The integrative diagram helped to illustrate the relationships and to discover logical problems during the analytic process. The first versions of the integrative diagram included the factors affecting the supplier's relational effort, the types of supplier relational effort and the outcome of the supplier's relational effort. After the analysis of dyad MSys-EMS2 and that of dyad MSys-EMS3 the integrative diagram was further developed. The final version of the integrative diagram emerged out of a significant number of previous versions, and it represented the summary of the research results (

Figure **5** in Chapter 5).

The category generation process resulted in the following categories for supplier relational effort: 1) customer-focused operations, 2) customer-focused internal development, 3) interaction, and 4) common development. The most representative quotes from the interviews for each of these categories are presented in Table 12.

Based on the analysis, the factors affecting supplier relational effort were categorized as follows: 1) strategy and objectives, 2) organizing, 3) compe-

tence, attitude and motivation on the individual level, 4) attractiveness of the buying company, and 5) current relationship and interaction. The most representative quotes for these categories are presented in Table 13. The content of the categories will be discussed in more detail in the following chapters.

Table 12: Representative quotes – the supplier's relational effort

Category 1: Customer-focused operations	
Customer-focused organization	"[EMS1] has a relatively good key account model where they actively build our…, they are proactive, they want to understand our strategy, they want to adjust their own strategy in the key account model according to that [our strategy]…" (MSys informant)
People work with a customer focus, also taking into account the wider context and business objectives	"It's my duty to make sure that all the effort or changes is made to the product, to the customer… if a competitor comes after the [MSys] product and they can offer a better deal then [MSys] will lose some part of the market share and we lose as well at the end of the day. So to me continuous improvement is very important so that we can continue doing business with [MSys] and [MSys] of course can keep their market share and both parties win at the end of the day. " (EMS informant) "The reason why we want to put an effort into this customer account… we see that [MSys] suits us well and we see that if we make the effort and if we take good care of this customer account we will have a good opportunity to grow together and it will benefit both of us." (EMS informant)
Quick and effective response to customer demand	"We have the kind of internal network that whenever and whoever receives a questions from [MSys] and whatever it concerns we will answer within hours not days. Because normally someone is really waiting for the answer it mustn't take long at our site to answer." (EMS informant)
Customer-specific development initiatives from daily operations	"I've always believed that you have to make improvements on a day-to-day basis. If you have achieved 98% or 95% productivity you still have to go and improve on that, because the market is so competitive. If you don't start working today you don't have a better future. You have to reduce the time spent. You need to increase productivity. You need to reduce the scrap factor. You need to reduce the yield loss so that you are up to the market and… So for me we have to improve [productivity] and then we can give a discount at the end of the day to [MSys]. [MSys] can definitely make more money or they can maintain their market share." (EMS informant)
Proactive actions	"… then, of course, there are a lot of these quality and development issues where we try to be very active on the assumption that it will benefit both of us in some phase…" (EMS informant) "… what I see is that [EMS staff members] do quite a lot of manual work to correct our forecast. It's a kind of development work which is unpaid and they do it voluntarily… Of course it saves their time and effort as well if they do it properly and deliveries run better and we are more satisfied. But it is kind of extra which others do not do…" (MSys informant)
Reporting	"… it[reporting] is actually based on needs… So far whatever information we've been asked for we have prepared a report about it. It's kind of the extra…" (EMS informant)

Significant amount of competent human resources assigned to buying company	”In principle – what I do – it hasn’t been sold to customer – because what I do is that I make sure the customer account gets what it expects and I develop it so that we will be able to offer the type of services they need…” (EMS informant) Observations from several meetings. (Researcher)
Category 2: Customer-focused internal development	
Customer-focused internal development	”We have [internal development] projects aiming at improving production efficiency, but we approach it so that we take one customer team at a time and we consider what we can do here specifically for this customer.” (EMS informant) “We also set internal targets on improvements that we want to reach, we know that we are under constant cost pressure, we know that in the end of the day [MSys] is asking us for costs down that we have to achieve. What we do during the year we make regular efforts to get our costs, manufacturing costs down, to get leaner, so that by the end of the year it is not a situation where we have to haggle to give [MSys] a cost down, but it’s actually something we have achieved that we can say ok this is what we have achieved over the year, this is what we can give you. This goes into the cost of the components that you are buying as well as in getting production times down while maintaining quality.” (EMS informant)
Key persons communicate customer needs internally	”… in meetings [with MSys] we gather comments and information and we have our [internal] weekly Customer Focus Team meetings where we browse through the comments and feelings registered during the week; now the customer is dissatisfied with these and these issues and now we get thanks for these and these issues…” (EMS informant)
Frequent open discussions with buying company about needs and ideas on all levels	”… one of the things is that we have a common plan – we go for it. There are lots of things related to the plan… different meetings and discussions with them [MSys personnel]. But more importantly we have generated the plan together, we go for it, we update it and we follow where we are…” (EMS informant) “The processes… we have made development efforts… we have a process engineering team in place which regularly looks into the manufacturing processes and gives feedback to [MSys].” (EMS informant)
Customer satisfaction survey driving internal development process	“We do a customer satisfaction survey process every year with each of our customers and generally we get them back all of them and we look at them very carefully to see what kind of feedback we get. It’s on a scale 1 to 10, the rating 10 being the best and then there is an area for comments and we look at what kinds of comments we get, positive and negative, and for a score below an acceptable level then we will actually institute corrective action to address whatever issues are raised by the customers and bring our customer satisfaction level with that particular customer back to an acceptable level.” (EMS informant)
Common action point lists for follow-up and	Observations from several meetings and company internal documents

communication	
Category 3: Interaction	
Lot of "doing together"	"[Cooperation is] tight and active… on the operational level also cooperation is really good. It's kind of doing together – and on both sides there is no problem that things wouldn't have been done… I'm very happy to have a customer account like this – the things work enormously well with them…" (EMS Informant)
Very active interaction and open discussions on all levels	"I have had - already for a long time – a weekly phone meeting with my contact person at the supplier site and we browse through certain acute issues, problems, clarifications, as well as delivery plans… there has been a clear benefit…" (MSys informant) "… there is really a lot of cooperation going on – some of us meet [MSys] people probably every day and in addition to that we even have a couple of people from our R&D unit working inside [MSys] engineering… So we have contacts very far and wide…" (EMS informant) "Yet we were still capable of working together to achieve a result, to reach a conclusion in fairly short time. That's why I say we have a very straightforward way of working with each other and at the end of the day it yields results. You have to be capable to it. I mean if you are not capable to going straight to the point then you might have a problem but we here actually think that it's the right way to do things." (EMS informant) "So what happened was we worked together very openly, we applied the open approach, we let them review, we do the evaluation per their request, what kind of setting, what evaluation they want us to do, we shared the data, we shared what has been going wrong, what are the changes in terms of process, if have, or what other changes there is. So we share all about this and finally we also share with them our finding and eventually because of this open approach we're finally able to more or less come to a conclusion and find out where the root causes are." (EMS informant)
More formal interaction – information systems for sharing information	Observations from meetings and company internal documents
Mainly via e-mail and phone – little open discussion	"There are fewer face-to-face meetings today than there used to be… issues are asked and answered mainly via e-mail and the phone…" (EMS informant)
Visits	"… we have done kind of PR work here… we have visited them [EMS company] and they [EMS personnel] have visited us [MSys]…" (MSys Informant)
Regular meetings	"… so we [MSys and EMS personnel] have these weekly meetings and then meetings related to different themes - like quality meetings… then they [EMS personnel] visit us for example to tell our R&D people about manufacturability…" (MSys In-

	formant)
Category 4: Joint development	
Planning the future together	"… [Planning the future together] is on a fairly good level and it is done from our CEO level downwards and the same thing at their [EMS's] site. Both CEOs are committed to regular half-year sparring to ensure we are going in the right direction…" (MSys Informant)
Product development together with the customer	"Last year [EMS] participated very heavily in the development of a new [component] and… it was very positive… as a matter of fact they used their own time, time of their sourcing and time of their cooperation partner - we did not receive any invoice for it. We developed a totally new model of the [component] together." (MSys informant)
Lowering costs - development projects	"We are also actually working together with our sourcing team to try to find a better source, a better price so that both parties can at the end of the day benefit from it in terms of bringing down the product cost. So that we can share a better profit at the end of the day." (EMS informant)
Developing manufacturability	"… very many of our people [MSys] visit them [EMS] in the proto phase or in the manufacturing phase… to see how the products are manufactured and to develop production together… " (MSys Informant)
Process development	"… in the case where some [manufacturing] process stage is inconvenient or e.g. employee's arm gets sore due to some working method they [supplier personnel] very actively develop some sort of aid and then they suggest it to us and we evaluate it here and if it is good we allow them to make the change…" (MSys Informant)

Table 13: Representative quotes - factors affecting the supplier's relational effort

Category 1: Strategy and objectives	
Good fit Matching expectations	"… they [EMS1] are proactive, they want to understand our strategy, they want to adjust their own strategy… In my opinion it is a company which has a clear strategy in relation to us…" (MSys informant) … the reason why we put effort on this account… we see that it [MSys] fits well for us and if we put the effort and if we do the right things we have a good opportunity to grow together and both of us benefit… I guess no one in business makes an effort without expecting some return in some time frame. … we expect and are waiting for [MSys] business to grow, [MSys] has something special that fits in very well with us… we know this and we have analyzed what kind of suppliers they have today… They also see that we fit in with them, their needs… Some businesses will be consolidated in the future and by putting our best effort into this account we might be the one to whom the business will be consolidated… there is a big difference – it [business] either grows some or it declines dramatically." (EMS informant)
Category 2: Organizing	
Customer-focused organization	Observations and company documentation
Customer-assigned teams	"We have assigned these customer focus teams to key customer accounts and [MSys] is absolutely one of the top ones there." (EMS informant)
Clear processes and roles	"… if I think how it is to work and interact with [EMS1]… it's very easy. The [EMS1] contact persons are "on the same wavelength" – they get it right away… and in my opinion they have provided us with a clear picture of how they work. I have a clear picture of how they take care of our account." (MSys informant)
Category 3: Competence, attitude and motivation on the individual level	
High motivation to serve the customer	"It's my duty to make sure that all the effort or changes is made into the product, to the customer…" (EMS informant) "It's an honor to be able to serve the customer." (EMS informant)
Good understanding of the big picture	"The reason why we want to put an effort into this customer account… we see that [MSys] suits us well and we see that if we make the effort and if we take good care of this customer account we will have a good opportunity to grow together and it will benefit both of us." (EMS informant)

High interest to develop on all levels	” … [Planning the future together] is on a fairly good level and it is done from our CEO level downwards and the same thing at their [EMS's] site. Both CEOs are committed to regular half-year sparring to ensure we are going in the right direction…” (MSys Informant) ”The [MSys] service and product portfolio –we have good competence and good opportunities there to develop our own operations further as well.” (EMS informant)
Positive attitude to challenges	Observations from meetings and discussions
Category 4: Attractiveness of the customer	
Large and increasing sales volume	“**…**the scale and the scope of the businesses are big and very interesting. Our business relationship is [EUR] per year right now and there is potential for that to be 2- 3 times bigger if we can move forward with some of the other initiatives we are looking at. So there is definitely the size of the customer with a lot of growth potential still…” (EMS informant) “…we expect and are waiting for [MSys] business to grow, [MSys] has something special that fits in very well with us… we know this and we have analyzed what kind of suppliers they have today… They also see that we fit in with them, their needs… Some businesses will be consolidated in the future and by putting our best effort into this account we might be the one to whom the business will be consolidated… there is a big difference – it [business] either grows some or it declines dramatically.” (EMS informant)
“Caring customer”	“… the fact that [MSys] understands that its supplier has to make a profit as well in order to be successful in the long term. With [MSys] we have, what I would say, is a customer who is reasonable in their demands. It is not that [MSys] only says do whatever you want - [MSys] knows exactly what they want, but [MSys] understands the business and has reasonable demands. They are tough but they are reasonable.” (EMS informant)
Easy and open communication	“We know a lot of people there [at MSys]. There is a great inter linkage on all levels between engineers and quality and senior executives. We just know each other very well and it makes it easier to pick up the phone and do business together and solve problems when they come up. And I think it really is a spirit of long-term partnership that we have between [MSys] and [us]. It's one of the best we have and that's good for both sides and hopefully they value that as much as we do.” (EMS informant) “But the thing is that as a partnership we work very closely, the lower level work very closely and the upper level management works very well as well. And it's a kind of no hidden agenda where there is a very open book, all these kinds of things where we share information so that we can enjoy a better relationship, including both parties and it's a win-win situation.” (EMS informant)

Easy-going cooperation	"It is really goal-oriented. We don't lose a lot of time lingering in the past and that is – beat managing problems, being managing changes in the production line that we have to do, increasing or decreasing production capacity. So I think it is – I see it as an easy way to work when it comes to how the work has to be done. It is not easy work that has to be done but the way we work together is fairly easy, fairly straightforward. We have a team in place here as well as in [MSys] that understand each other very well, they get along very well." (EMS informant)
Category 5: Relationship and interaction	
Common history with successes	"… there have been significant product transfers… we transferred a really significant amount of items from one supplier to another and it required a lot of work from them to run up the production… It was a challenging project – for both of us… but we made it work… I think they have managed well with the cooperation and development work considering the challenges along the way…" (MSys informant)
People know each other well	"We know a lot of people there [at MSys]." (Supplier informant) "I know a lot of people there [at Supplier]." (MSys informant) Observations from meetings and discussions
Easy and open interaction	"We know a lot of people there [at MSys]. There is a great inter linkage on all levels between engineers and quality and senior executives. We just know each other very well and it makes it easier to pick up the phone and do business together and solve problems when they come up. And I think it really is a spirit of long-term partnership that we have between [MSys] and [us]. It's one of the best we have and that's good for both sides and hopefully they value that as much as we do." (EMS informant) "But the thing is that as a partnership we work very closely, the lower level work very closely and the upper level management works very well as well. And it's a kind of no hidden agenda where there is a very open book, all these kinds of things where we share information so that we can enjoy a better relationship, including both parties and it's a win-win situation." (EMS informant)
Lot of interaction in different forms	Observations from meetings and discussions, company internal documents
"Doing and developing together"	Observations from meetings and discussions "…very many people from us [MSys] visit them [Supplier] in the proto phase or in the manufacturing phase… to see how the products are manufactured and to develop production together… " (MSys Informant)

In appendices 2, 3 and 4 the three dyads are explored in detail. The storyline in the dyad explorations has been organized according to the categories. Each dyad is described in rich detail, starting from an exploration of

what kind of supplier relational effort exists in the dyad. Supplier relational effort is categorized as mentioned above. The factors affecting supplier relational effort are discussed in next part of the explorative story following the categorization. Finally the impact of supplier relational effort is described for each dyad. The storyline of the exploration of the dyads is illustrated in Figure 4. The dyad explorations will further open up the different categories for better understanding, and they also act as a good platform for the theory development to follow.

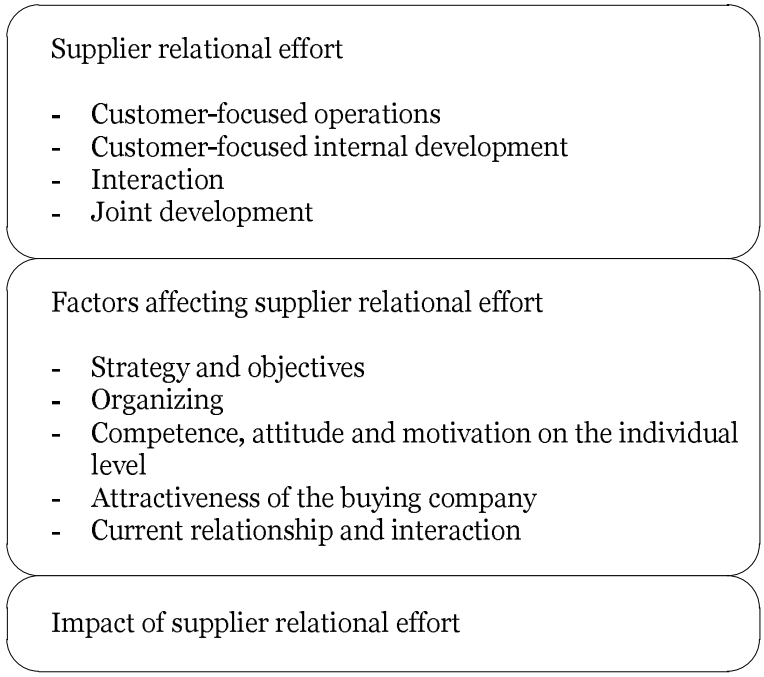


Figure 4. Dyad exploration storyline

5 THEORY DEVELOPMENT

In this chapter, the three dyads will be discussed and compared further in order to develop theory. Propositions based on the research findings will be presented. First, the supplier's relational effort will be discussed in order to answer the first research question "What kind of relational effort does the supplier make that creates value for the buyer?"(Chapter 5.1). Then, the factors affecting the supplier's relational effort will be discussed and propositions will be formulated in order to answer the second research question "Why does the supplier make relational effort?"(Chapter 5.2). In chapter 5.3 , the impact of the supplier's relational effort will be discussed and further propositions will be formulated. This theory development chapter will be concluded with the summary of the results.

5.1 Supplier relational effort

The amount of the supplier's relational effort was assessed by the informants in each dyad. According to MSys, EMS1 was making the most effort (5.2 on the scale of 1-7), EMS2 was making the second most effort (3.8) and EMS3 was making the least effort (2.2). The supplier informants gave higher assessments of the amount of supplier relational effort than the MSys informants. The biggest difference in the assessments between MSys and the supplier was in the dyad MSys-EMS3, where MSys gave a score of 2.2 and EMS3 a score of 5.6. The high score given by EMS3 may reflect the high amount of operational issues that had to be solved and high motivation to serve the customer in operational issues. At the same time MSys did not see much development taking place in the relationship and saw that a lot of effort was spent on operational work. Also, based on the other evidence in the research data, EMS1 was making the most supplier effort, EMS2 the second most, while EMS3 was making the least effort in the relationship. Supplier relational effort in the three dyads is summarized in Table 14. Only the most significant examples of relational effort in each category are listed and compared. In the following sections the supplier's relational effort in these three dyads will be compared in more detail.

Table 14. The supplier's relational effort in the dyads

Supplier's relational effort	MSys-EMS1	MSys-EMS2	MSys-EMS3
1. **Customer-focused operations**			
1.1. Customer-focused organization	x	x	x
1.2. People work with a customer focus, also taking into consideration the wider context and business objectives	x	x	x
1.3. Quick and effective response to customer demand	x	x	
1.4. Customer-specific development initiatives arise out of daily operations	x	x	
1.5. Proactive actions - several examples	x (visible to both companies)	x (less visible to MSys)	
1.6. Reporting	x (incl. Tailored reporting based on customer request or own initiative)	x (formal reporting)	
1.7. Significant amount of competent human resources assigned to MSys	x		

2. Customer-focused internal development	Highly visible on all levels	Visible especially on the operational level	Very few examples on any level
2.1. Key persons communicate customer needs internally	x (actively)	x	
2.2. Frequent open discussions with MSys on all levels about needs and ideas	x		
2.3. Customer satisfaction survey drives internal development process		x	
2.4. Common action point lists for follow-up and communication	x (actively used)	x	
3. Interaction			
3.1. Lot of "doing together"	x		
3.2. Very active interaction and open discussion on all levels	x		
3.3. More formal interaction – information systems for sharing information		x	
3.4. Mainly via e-mail and phone - little open discussion			x
3.5. Visits	x (on all levels)	x (management)	
3.6. Regular meetings	x (frequent, for different functions)	x	

4. Joint development	x - Visible and active on all levels - Positive spiral with "doing together"	x - Some examples but more independently executed	
4.1 Planning the future together	x	x	
4.2 Product development together with the customer	x	x	
4.3 Cost down –development projects	x	x	
4.4 Developing manufacturability	x	x	
4.5 Process development	x	x	
Amount of Supplier relational effort assessed by informants			
Average Scores (scale 1-7) of all informants in the dyad	5,6	4,5	4,1
Average Scores (scale 1-7) of MSys informants	5,2	3,8	2,2
Average Scores (scale 1-7) of EMS informants	6,0	4,9	5,6

5.1.1 Customer-focused operations

In all the dyads the supplier had personnel assigned for taking care of the MSys relationship. In all the dyads the supplier company had a customer-focused organization and the overall attitude and atmosphere in the supplier companies was customer-oriented. On the strategic level the supplier companies were interested in developing the relationship with MSys and a lot of effort was observed in all cases. The operational personnel of the supplier companies seemed to be very customer-oriented as well. They were willing and able to put effort into serving the customer and they were able to respond quickly. Thus, in this meaning, effort at customer-focused operations was visible in each dyad.

But there were also notable differences between the dyads in customer-focused operations. In the dyad MSys-EMS1 and MSys-EMS2 the operational personnel tended to think about the relationship and business in the relationship from a wider perspective. They thought about the connections between their work and overall business development in the relationship. They noticed the importance of the customer relationship as a part of their own company's business success. This seemed to be one of the drivers of high effort on behalf of the customer. Their effort included quick and professional response, proactive actions as well as constant efforts to develop business operations. In the dyad MSys-EMS3 the operational staff was also willing to put an effort into serving the customer in daily business operations. But they did not express concern about the wider business context. They were concentrated more on fulfilling their daily duties and they did not talk about development efforts or their future expectations of this relationship.

There was also a noticeable difference in the attitudes taken by the operational personnel in a changing customer demand situation. In dyads 1 and 2 the discussion emphasized the different efforts – direct effort as well as development efforts in order to better react to customer demand in the future - they would make to meet changing customer demand, whereas in the dyad MSys-EMS3 the discussion focused more on how challenging and troublesome they experienced changing customer demand to be. In the dyad MSys-EMS3 a lot of effort was put into actions related to the expediting of deliveries. This might partly explain the difference in flexibility which the customer had noticed; in the dyad MSys-EMS1, the supplier was far more flexible in their operations than the supplier in the dyad MSys-EMS3. This difference may also be related to the rigidity of the operations management

procedures and systems in the case of both supplier and MSys. Hence, even when individuals in supplier companies are willing and able to "do their best" and to "stretch themselves to serve the customer well" the result of that effort can differ due to other factors. The service level experienced by MSys was best in MSys-EMS1, somewhat lower in the dyad MSys-EMS2 and lowest in the dyad MSys-EMS3.

If we compare the proactivity of the suppliers in these dyads, proactive efforts on the part of the supplier were clearly evident in the dyad MSys-EMS1. The supplier informants actively participated e.g. in correcting forecasting and in monitoring inventory levels and materials availability. The need for proactive actions as well as the results of such actions were communicated mainly in the regular meeting. Proactive efforts were also visible in the regular and active interaction with the customer.

In the dyad MSys-EMS2 the supplier company described several different types of proactive effort. The MSys informants took a slightly different view in some cases and, according to some examples, the actions in question were more reactive than proactive in their nature. This may also reflect the challenge of long distances, where it is more difficult for the supplier to make their internal efforts visible to the customer. In the dyad MSys-EMS2, the MSys informants also described positive development in terms of recent supplier proactive actions.

In the dyad MSys-EMS3, proactive actions were mainly related to the expediting of deliveries. This is not really the type of effort sought in this study, as it is related more to daily business routines where the aim is to be able to deliver on time no matter who the customer is. The need for constant expediting may indicate that the processes and operations are not well managed, and thus the need for control is considerable. In the dyad MSys-EMS3, the amount of proactive actions in the form of supplier relational effort was minimal.

Reporting is included as one type of relational effort in this category. In MSys-EMS1 a lot of tailor-made reporting is done based on customer demand and also based on the supplier's own initiative. The supplier company is very competent in providing customized reports on customer demand, and basically they report anything the customer wants. EMS1 carries out a customer satisfaction survey. However, they also thought that the informal meetings would be good situations for open feedback as such meetings allow the supplier to react immediately instead of once a year, hence their view that informal situations are more efficient in developing customer satisfaction than an annual customer satisfaction survey.

In the dyad MSys-EMS2, a lot of formal reporting occurs due to the challenges associated with manufacturing a delicate product. Performance indicators are also in use and communicated. The supplier company is competent in reporting and they also use performance indicators in the management and development of their business operations. The supplier's reporting appears to be functioning well according to the agreed procedures.

In the dyad MSys-EMS3, there was no reporting that would be actively monitored and used in the management or development of business operations or the relationship.

In the MSys interviews the importance of a committed and competent contact person was highly emphasized. There were examples where a change of a supplier contact person had significantly improved the customer focus.

5.1.2 Customer-focused internal development

Customer-focused internal development was one category of supplier effort found in this study. There were big differences between the dyads in the effort made in this category. Most of this kind of effort was seen in the dyad MSys-EMS1, where a customer-focus was highly present in all discussions and actions. The supplier company in the dyad MSys-EMS1 had already been practising a customer-focus in their operations for several years. Despite several organization changes along the way a customer focus was again a very important driver of all the company's operations and development efforts. This was noticeable in both the interviews and observations. A customer focus was highly present on the strategic level of development plans and visions as well as on the operational level of development actions. Both the global key account manager and customer focus team manager were interacting closely with the customer and they were the important links between the customer's expectations and the efforts at bringing a customer focus to bear in the company's internal development. In this dyad both of these contact persons were highly competent and motivated, and played a central role in the overall development of the relationship. In the dyad MSys-EMS1, all the supplier interviewees were well aware of the customer's importance and its connection to the various internal development efforts already made and those planned for the future. In sum, in the dyad MSys-EMS1, it was concluded that the people at MSys were interacting actively with their supplier's people, including face-to-face, which is a context where it is also natural to discuss problems, expectations and development ideas in informal situations. In the dyad MSys-EMS1, MSys and the supplier used action point lists in their regular meetings to support continuous

development efforts. There is a good understanding of the importance of competitiveness in the market, and this leads to internal efforts to run operations more efficiently and effectively.

In the dyad MSys-EMS2, internal development efforts were discussed a lot in the interviews both on the strategic and operational levels. There is a clear will to develop the business and its operations continuously. Many development efforts relate to customer needs and expectations. The supplier company controls quality and efficiency with their internal KPIs, which are also a tool for finding issues for continuous development and improvement. The requirement of competitiveness was stressed on many occasions. Different internal development efforts have been made and planned in order to be more competitive. In the dyad MSys-EMS2, the supplier company has established a customer relationship programme in order to develop their key customer relationships. The aim is to increase market awareness as well as to better understand the customer's business and to get to know the company, processes and people. It is about "getting to know each other on all levels – getting to know the customer". This is a bigger challenge in a relationship like this where the geographical distance between the buyer and the supplier is very long. In this case it is the supplier who is putting the effort into enhancing the systematic development of the relationship.

The supplier in the dyad MSys-EMS2 has put a lot of effort into internal development and the main driver is the requirement of competitiveness. The indirect impact of a customer focus was present and this was well understood. There were fewer regular meetings and face-to-face contacts in the dyad MSys-EMS2 than in the dyad MSys-EMS1, which leads to situation where there are fewer natural arenas for free discussion on development needs, ideas, and initiatives.

In the dyad MSys-EMS3, the supplier's effort in this category differed widely from that in the dyad MSys-EMS1 or dyad MSys-EMS2. On the strategic level discussions had occurred and EMS3 was positive but careful about future possibilities. Not many internal development efforts were mentioned in the discussions, and the motivation and desire for customer-focused internal development seemed to be missing.

5.1.3 Interaction

In the dyad MSys-EMS1, the interaction between the companies is very active. Both companies coordinate their interaction and "do things together" actively. They have regular meetings under different themes and action point lists are used in order to agree, communicate and achieve common goals. The interaction in meetings is active and open discussion is support-

ed. The supplier company participants were well prepared for the joint meetings. During the research period, people from these companies met each other at least once a week. The distances between the main locations are relatively short and participation in meetings is therefore quite easy to arrange. In sum, many different people from MSys visited the supplier and vice versa. Manufacturing staff members from the supplier company had also visited MSys to get to know the people, company and products better.

In the dyad MSys-EMS2, the interaction included quite a lot of formal information sharing and more formal interaction procedures than in the dyad MSys-EMS1. The companies had agreed specifically on the process and content of this kind of information sharing. The supplier strictly obeyed what had been agreed and they were interacting actively as agreed, but they were not acting very spontaneously or proactively. The interaction was maybe more formal in its nature in this dyad than it was in the dyad MSys-EMS1. On the other hand on the management level the relationship was described as professional, goal-oriented and consisting of two proactively involved parties. There were some differences in how the interaction was experienced by different individuals.

All this might be due to the long distance between the companies and to the demanding assembly and the nature of the delicate product, which requires systematic and strict reporting procedures. Information systems and information sharing applications are in use in this interaction. People also visit each other despite the long distance. The supplier company has budgeted money for travel as a part of their CRM programme. During the research period several visits were made by the people at MSys and vice versa. On the operational level they have weekly conference calls.

The differences between the dyads MSys-EMS1 and MSys-EMS2 can be summarized as follows: in the dyad MSys-EMS1, the interaction included more face-to-face meetings, which created a platform for open discussions and for “doing together”. The interaction in MSys-EMS1 was more active and more informal in its nature than that in MSys-EMS2.

In the dyad MSys-EMS3, there was active interaction on the operational level and it was fluent between the parties. There had been no face-to-face meetings on the operational level recently. All the interaction happened via phone or e-mail and it was of the “question and answer” type of short dialog undertaken to meet the companies’ respective daily responsibilities. There were no natural situations for open discussions in that phase. On the strategic level there had been some informal meetings for discussions concerning future prospects. Some meetings between key accounts had been arranged due to the need to resolve urgent issues. No other visits were arranged dur-

ing the research periods. The informants also indicated that all the regular meetings had ended. Hence, in the dyad MSys-EMS3, interaction between the companies was present but it mainly concerned operational day-to-day issues or it occurred due to problems. The amount of interaction engaged in for any further purposes was minimal.

5.1.4 Joint development

In the dyad MSys-EMS1 joint development is evident on all levels of both organizations. It was a positive spiral where active interaction and active "doing together" lead to joint development efforts as well.

In the dyad MSys-EMS2 development is done more independently in the supplier company. Although EMS2 is very customer- and development-oriented, their development efforts and actions are nevertheless quite independent of MSys. However, a number of joint development efforts are made as well. The progress of development actions is communicated between the companies. In the dyad MSys-EMS2 development efforts are suggested and monitored together more than they are actually made together. Thus joint development is more intense in the dyad MSys-EMS1 than in the dyad MSys-EMS2.

In the dyad MSys-EMS3, there has been discussion on the strategic level for possible joint development efforts. On the other levels there are only minimal signs of such efforts. The informants did not show enthusiasm for joint development.

Component availability was discussed in all cases and seemed to be a real challenge in a market situation where the economy had started to recover from the recession. During the recession component manufacturing capacity had fallen so that when demand started to rise again component delivery times lengthened and the component buyers started to worry. This could lead to overlarge orders, and there was also the risk of a bullwhip effect in the market at that moment. It was noticeable that while all the informants in this study were concerned about component availability, the solutions discussed mostly concerned how to achieve more precise and longer forecasts, longer delivery times and bigger buffer stocks. There was very little discussion related to any other developmental possibilities that might improve the efficiency of the supply chain, e.g. shorter lead times, modularity of products or co-operation with customer sales or with end-customers. The development of the supply chain as a whole was not widely discussed in the interviews or meetings.

The findings discussed above can be summed up in the following proposition, which also provides an answer to the first research question, viz.

"What kind of relational effort does the supplier make that creates value for the buyer?"

Proposition 1. *Supplier relational effort that creates value for the buyer includes customer-focused operations, customer-focused internal development, active interaction and joint development.*

The comparison of the dyads illustrates the fact that supplier relational effort can differ significantly from one strategic supplier relationship to another. From the MSys perspective the interesting question is why. We will continue development of the theory and try to answer this question by explaining the factors affecting supplier relational effort.

5.2 Factors affecting supplier relational effort

It can be further summarized that in the dyad MSys-EMS1 the level of supplier relational effort was high. In the dyad MSys-EMS2 the level of supplier relational effort was moderate and in the dyad MSys-EMS3 the level was low. To continue the analysis, the factors affecting supplier relational effort in the three dyads is presented in Table 15. The same table also summarizes relationship performance. Propositions 2-8 are formulated on the basis of cross-case analysis, comparing the level of supplier relational effort, the factors affecting that effort and relationship performance. Table 15 summarizes the factors affecting supplier relational effort and relationship performance and also indicates the corresponding proposition number.

Table 15. Factors affecting the supplier relational effort and relationship performance

	Dyad MSys-EMS1 – high level of supplier relational effort	Dyad MSys-EMS2 – moderate level of supplier relational effort	Dyad MSys-EMS3 – low level of supplier relational effort	
1. Strategy and objectives	Good fit Matching expectations	Relatively good fit Some contradictory expectations	Poor fit Potential exists in both companies	**Prop 2**
2. Organizing	Customer-focused organization Customer-assigned teams Clear processes and roles	Customer-focused organization Customer-assigned teams Clear processes and roles	Customer-focused organization Customer-assigned persons Somewhat confusing processes	**Prop 3**
3. Competence, attitude and motivation on the individual level	High motivation to serve the customer Good understanding of the big picture High interest on all levels in developing Positive attitude to challenges	High motivation to serve the customer Understanding of the big picture Interest in developing	High motivation to serve the customer	**Proposition 4**
4. Attractiveness of the customer	Customer is highly attractive for many reasons, e.g. large and increasing sales volume and future business potential "Caring customer" with reasonable demands Easy and open communication Easy-going cooperation	Customer is highly attractive for many reasons, e.g. big sales volume and future business potential "Caring customer" with reasonable demands Fairly easy and open communication	Customer is highly attractive for many reasons, e.g. sales volume and future business potential	**Proposition 5**

	Dyad MSys-EMS1 – high level of supplier relational effort	Dyad MSys-EMS2 – moderate level of supplier relational effort	Dyad MSys-EMS3 – low level of supplier relational effort	
5. Relationship and interaction	Common history with successes People know each other well Easy and open interaction Lot of interaction in different forms "Doing and developing together"	Long shared with successes Major conflict was solved successfully Cultural differences Long distance Regular interaction with emphasis on formal proceedings	Long shared history Disappointments have occurred Little interaction outside daily operational issues	**Proposition 6**
Assessment of the relationship "How good or well functioning is this relationship?"				**Proposition 7**
Average Scores (scale 1-7) of all informants in the dyad	5.6	4.8	4.1	
Average Scores (scale 1-7) of MSys informants	4.7	3.7	3.2	
Average Scores (scale 1-7) from Supplier informants	6.4	5.5	4.8	

	Dyad MSys-EMS1 – high level of supplier relational effort	Dyad MSys-EMS2 – moderate level of supplier relational effort	Dyad MSys-EMS3 – low level of supplier relational effort	
Importance of supplier relational effort "How significant is the supplier's relational effort for MSys?" Average Scores (scale 1-7) of all informants In the dyad Average Scores (scale 1-7) of MSys informants Average Scores (scale 1-7) of Supplier informants	5.6 5.7 5.5	5.2 5.2 5.2	4.6 4.0 5.1	
The trend of sales volume in dyad 2009 compared to 2007	10-15 % increase	0-5 % decrease	0-5% decrease	**Prop 8**

5.2.1 Strategy and objectives

In the dyad MSys-EMS1 the companies showed good strategic fit. The concept of strategic fit was used by the interviewees, and is defined here as follows:

D7: Strategic fit is a situation where the strategic plans and expectations of the organizations are in alignment and the resources and capabilities of the organizations are adequate for implementing the strategic plans.

The concept of strategic fit has been widely discussed in the literature. Venkatraman (1989) presented a conceptual framework for strategic fit in strategy research. The framework offers six different perspectives on strategic fit; fit as moderation, fit as mediation, fit as matching, fit as gestalts, fit as profile deviation and fit as covariation. The concept of strategic fit as used by the interviewees is closest to Venkatraman's fit as matching. The supplier company had a clear strategy and objectives and they were actively communicated to the customer as well as internally. In the dyad MSys-EMS1, all the informants seemed to be well aware what the overall objectives of the relationship were and they seemed to know why they should work together or why they should make an effort. The strategic plans and expectations of the supplier and MSys were matching and the resources and capabilities of the organizations were perceived as adequate to implement their respective strategies.

In the dyad MSys-EMS2 the companies had taken a big step few years ago when a challenging manufacturing task had been transferred to the supplier. This product transfer had been a good learning lesson for both companies. Now on the strategic level active discussion was in progress about potential new business, with the supplier company especially positive about the future and eager to expand its business with MSys. MSys's attitude to the joint expansion of business in the future was more moderate.

In the dyad MSys-EMS3, there was a mismatch between the supplier's expectations and the customer's expectations. The strategic business fit was not good at the moment of the research. This contradiction seemed to cause a lot of confusion in the relationship, although both companies saw the potential for joint operations in the future.

Proposition 2 summarizes the findings concerning the role of strategic fit and matching expectations as factors affecting supplier relational effort.

Proposition 2. *Good strategic fit and matching expectations between the buyer and supplier companies enhance supplier relational effort in buyer-supplier relationships.*

5.2.2 Organizing

In all cases the supplier company had a customer-focused organization where the MSys account had a team of people assigned to them. The people working for the MSys account had other customers as well, but in all cases MSys seemed to be the biggest customer for the team and received the most attention from the team members. The account managers as well as the other contact persons at the supplier's site were an important link between the customer and the supplier's own staff members. A contact person acts in the interface and it requires a high level of competence to keep the customer happy; employees at the interface have to understand and manage the big picture, and they have to have good organizing skills and good social skills to be able to interact effectively. The roles, responsibilities and processes internally as well as between the companies should be well defined to ensure effective and efficient interaction and operations. In this sense the dyads MSys-EMS1 and MSys-EMS2 were better off, even if all three supplier companies were customer-focused.

Proposition 3 summarizes the findings here.

Proposition 3. A *customer-focused organizational culture and clear processes enhance supplier relational effort in buyer-supplier relationships.*

The following definition of organizational culture is used here:

D8: Organizational culture is the set of values, beliefs, assumptions and symbols that define the way in which a company conducts its business (Barney 1986; Deal & Kennedy 2000).

In a customer-focused organizational culture the organizational culture includes a strong customer focus. In other words the importance of the customer is acknowledged.

5.2.3 Competence, attitude and motivation on the individual level

Competence, attitude and motivation on the individual level were found to be very important factors influencing the amount of supplier relational effort in the relationship. There are, of course, differences between individu-

als and in all the present cases there were some individuals whose competence, attitude and motivation were truly first rate. These individuals were seen as important creators and facilitators of a well functioning and developing relationship. Such individuals are needed on all levels of the organization. In all three dyads the motivation to serve the customer was high. There were some differences in competence, especially in understanding and taking into account the bigger picture of the relationship and business. There were also differences in attitudes towards continuous development and "doing together".

The individuals in the dyad MSys-EMS1 were the strongest in competence, attitude and motivation with respect to developing the relationship through different kinds of efforts. Those in the dyad MSys-EMS2 were also strong in this category whereas those in the dyad MSys-EMS3 were not as strong as their counterparts in other two dyads.

Proposition 4 summarizes these findings.

Proposition 4. *The competence, attitude, and motivation of the supplier's personnel affect supplier relational effort in buyer-supplier relationships.*

5.2.4 Attractiveness of the customer

MSys was considered an important and attractive customer in all three cases. MSys was among the top customers and had been nominated a key customer or strategic customer in all the supplier companies. The characteristics of an important and/or attractive customer mentioned in all the dyads included a current large sales volume, growth potential and good strategic fit as well as good product fit. In dyads MSys-EMS1 and MSys-EMS2 easy and open communication with MSys was also emphasized. They also described MSys as a "caring customer" with reasonable demands. In the dyad MSys-EMS3, these things were not stressed.

Proposition 5 summarizes the findings here.

Proposition 5. *The attractiveness of the customer enhances supplier relational effort in buyer-supplier relationships.*

The research findings here very strongly supported the basic idea of SET: perceived customer attraction explained the supplier's motivation to make a relational effort.

5.2.5 Relationship quality and level of interaction

In all three dyads the companies had a long shared buyer-supplier history. In dyads MSys-EMS1 and MSys-EMS2 the companies had worked together through some challenging project transfer projects. The projects had been demanding, but together the companies had succeeded in them. Success experiences of these kinds strengthen the relationship and motivate further efforts and willingness to take up challenges. In the dyad MSys-EMS1, the cooperation was also easy-going and the communication open, and many people knew each other well. In the dyad MSys-EMS2 geographical distance and cultural differences created some challenges for interaction, and it was not as easy to do things together as much as it was in the dyad MSys-EMS1. However, communication was reported to be easy-going and open most of the time. In the dyad MSys-EMS3, shared success stories were lacking and for the supplier recent experiences had been disappointing. When the quality of the current relationship was assessed by the informants the ranking was 1) dyad MSys-EMS1, 2) dyad MSys-EMS2 and 3) dyad MSys-EMS3 in that order.

Proposition 6 summarizes the findings on these issues.

Proposition 6. *Current relationship quality and the level of interaction affect supplier relational effort in buyer-supplier relationships.*

5.3 Impact of supplier relational effort

The informants were asked to assess the quality of the relationship. They were asked: "How good or well functioning is this relationship?" Based on all the answers the dyad MSys-EMS1 had the best relationship (5.6), followed by the dyad MSys-EMS2 (4.8) and, in third place, the dyad MSys-EMS3 (4.1). The supplier informants' assessments of the relationship were higher in all cases than the MSys informants' assessments of the same relationship. Hence the suppliers tended to assess the relationship more positively than MSys. However, the ranking of these relationships remained unchanged when the answers given by the MSys interviewees were compared across the three dyads.

The informants were also asked to assess the importance of the supplier's relational effort. They were asked: "How important is the supplier's relational effort for MSys?" The dyad MSys-EMS1 gave the highest rating (5.6 on average), the dyad MSys-EMS2 the second highest (5.2) and the dyad MSys-EMS3 the lowest (4.6). In the dyads MSys-EMS1 and MSys-EMS2 the average scores of the MSys informants and from EMS informants for the

importance of the supplier's relational effort were relatively close to each other. In the dyad MSys-EMS3, the EMS informants gave a higher score (5.1) than the MSys informants (4.0).

Another indicator relating to the impact of supplier relational effort studied here is the sales volume in the dyad and how has it developed. If we compare the suppliers' sales to MSys in these dyads in 2007 and 2009, we see that sales increased by 10-15% in the dyad MSys-EMS1, but it decreased slightly in the other two dyads (0-5%). This is just one indicator; other factors affected sales during the study period, especially the recession, which might have hit in the different product categories differently.

The impact of the supplier's relational effort can be discussed further on the basis of the other research evidence, i.e. interviews, open discussions and observations. In the dyad MSys-EMS1, the supplier's informants assessed the relationship on the operational level as of very high quality, and they were very positive about how well the relationship was working on a daily basis. They were a little too modest in their assessment of their effort when compared against MSys's assessment of the same effort. They were also realistic and a little concerned about the resources available for making an effort. The representatives of the strategic level of management and of engineering services were also very positive about the relationship, although they had some concerns about the transparency of the "bigger picture" and about the limited time resources available for innovative discussions. In their assessment MSys stated that the relationship had become a lot better during the past six months and they were willing to give even higher ratings if the situation continued along this path. Thus, according to the assessment, the trend in the development of the relationship in the dyad MSys-EMS1 was positive. Business had been growing, which is also a sign of a developing business relationship. In the dyad MSys-EMS1, all the informants were positive about the relationship and saw that a lot of meaningful supplier relational effort exists. The trend in the development of the relationship was positive and future prospects were also positive in this dyad.

In the dyad MSys-EMS2, most of the informants from both companies were positive about the relationship; MSys was significantly less satisfied with the relationship on the strategic level. The supplier's informants were quite consistent and positive in their assessments while at MSys views differed more. However, the average scores were very positive. Both companies were mainly positive about the trend in the development of the relationship. Some differing views were expressed on development prospects in the long-term. In the dyad MSys-EMS2, both companies had experienced a

major conflict situation the previous year, but the conflict had been resolved and the expectations for future cooperation were positive, especially in the supplier company.

In the dyad MSys-EMS3 the operational level assessments differed significantly between MSys and EMS3. On the operational level MSys gave lower scores than EMS3 for relationship quality. On the strategic level problems in the relationship were seen in both companies and the ratings were in line with each other. The trend in the development of the relationship at the moment was seen as negative in both companies. One reason was probably the recent withdrawal of products from EMS3 at short notice. The amount of business had been declining as well and no new products had been transferred to this supplier lately.

In the dyads MSys-EMS1 and MSys -EMS2, many positive outcomes due to development effort, such as more competitive products and improvements in processes, were evident. In the dyad MSys-EMS3, competitiveness had not developed satisfactorily.

In the dyad MSys-EMS1, in particular, the business environment in the relationship felt safe, facilitating interaction and open discussion. People had learned to know each other, the other company, and their business, products and processes. It was easier to communicate and to work together. The way of working had become more easy-going and operations more efficient. Problem solving had become more effective and quicker. Both quick responses and actions were possible, and relational costs were lower. This was also partly true for the dyad MSys-EMS2, despite some conflicting views.

In the dyads MSys-EMS1 and MSys-EMS2, there were also indications that the supplier companies had learned a lot during their history with MSys and that this had enabled them to develop their overall business as well. In the dyad MSys-EMS3, the outcome was far more modest.

How much these outcomes were affected by the supplier relational effort is hard to determine. However, significant differences in supplier relational effort in the different dyads were highly evident. On the basis of this research there seems to be a positive correlation between supplier relational effort and positive outcomes, both affecting the relationship and shared business. This in turn indirectly affects the overall performance of both companies.

The following propositions summarize the findings concerning the impact of supplier relational effort.

Proposition 7. *Supplier relational effort has a positive impact on how good or well-performing the buyer-supplier relationship is perceived by the actors.*

Proposition 8. *Supplier relational effort has a positive impact on sales volume in the buyer-supplier relationship.*

The results are summarized in Figure 5. The numbers in the figure refer to propositions 1 to 8. According to the results, the quality of the current relationship is a factor affecting the amount of supplier relational effort engaged in. At the same time the quality of the relationship is affected by the amount of supplier relational effort. This is the situation in reality in the business environment: a good quality relationship encourages the supplier to make relational effort, which in turn further enhances the relationship. It is a positive spiral which at its best can lead to a constantly improving relationship. A large current volume of sales can also be a factor facilitating supplier relational effort. This is part of the attractiveness of the customer, and it further increases the amount of supplier relational effort. This effort can then lead to a further increase in sales volume. So, also in the case of sales volume, a positive spiral can occur where the increasing sales volume enhances the effort leading to further increase in sales.

5.4 Summary of the results

The research findings are summarized in Figure 5. In the middle of the figure we can see the different categories of the supplier's relational effort; customer-focused operations, customer-focused internal development, interaction and joint development (Proposition 1). On the left part of the figure we can see the factors affecting the supplier's relational effort. They can be summarized in form of the following propositions.

Proposition 2. Good strategic fit and matching expectations between the buyer and supplier companies enhance supplier relational effort in buyer-supplier relationships.

Proposition 3. A customer-focused organizational culture and clear processes enhance supplier relational effort in buyer-supplier relationships.

Proposition 4. The competence, attitude, and motivation of the supplier's personnel affect supplier relational effort in buyer-supplier relationships.

Proposition 5. The attractiveness of the customer enhances supplier relational effort in buyer-supplier relationships.

Proposition 6. Current relationship quality and the level of interaction affect supplier relational effort in buyer-supplier relationships.

The right side of the figure illustrates the impact of the supplier's relational effort which is summarized in form of the following propositions 7 and 8.

Proposition 7. Supplier relational effort has a positive impact on how good or well-performing the buyer-supplier relationship is perceived by the actors.

Proposition 8. Supplier relational effort has a positive impact on sales volume in the buyer-supplier relationship.

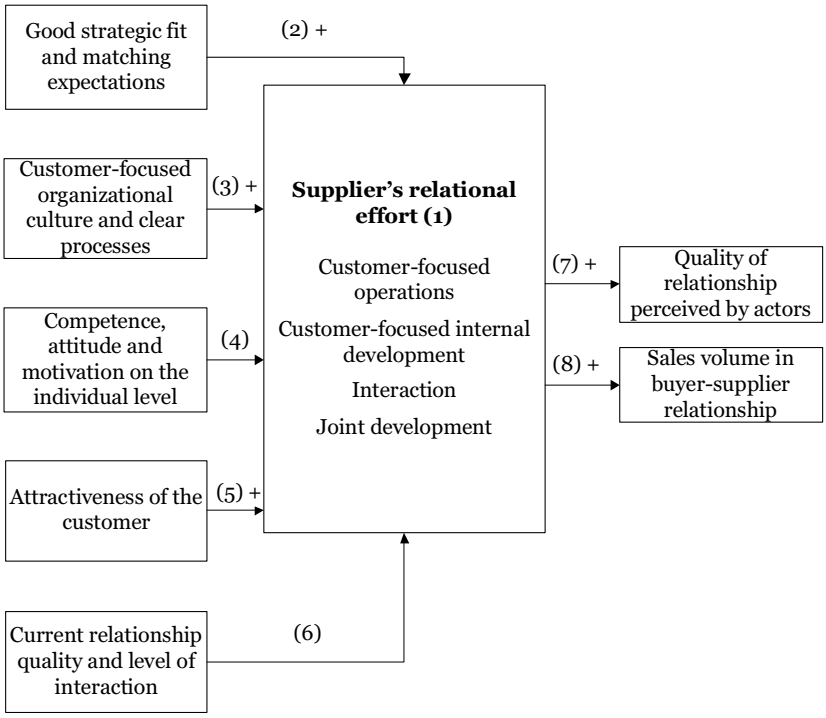


Figure 5. Summary of the results

6 DISCUSSION AND CONCLUSIONS

Supplier relational effort was studied in three buyer-supplier dyads from both buyer and supplier perspectives. The research findings indicate the existence of different types of supplier relational effort in buyer-supplier relationships. Four categories of supplier relational effort were identified: customer-focused operations, customer-focused internal development, interaction, and joint development. The main factors affecting supplier relational effort were also determined and supplier relational effort was observed to have a positive impact on the buyer-supplier relationship. A summary of the results is presented at the end of chapter 5 .

In this chapter the results of the research are discussed and conclusions drawn. First, the results are discussed in relation to the existing theory and the gap in theory which this research was designed to contribute to filling, after which the managerial implications are discussed. This chapter also includes discussion about the limitations of the study and suggestions for further research.

6.1 Contribution to theory

Social exchange theory seeks to explain the behaviour of social systems. Basic social processes lie in primitive psychological processes where feelings of attraction between individuals and the desire to gain various kinds of rewards are the drivers. SET has been applied in the relationship management literature to explain the voluntary motivation and commitment that is often observed between relationship partners. Attractiveness has been used as one explanatory factor for a successful business relationship. Value creation mechanisms in business relationships are also discussed in the recent literature. However, supplier relational effort has not so far been discussed thoroughly, although it is an essential part of the buyer-supplier relationship and of value creation in that relationship.

A large body of evidence has been adduced to explain why good business relationships are important (Kraljic 1983; Jarillo 1988; Ellram & Carr 1994; van Weele & Rozemeijer 1996; Ellram et al. 2002; Håkansson & Ford 2002; Gadde et al. 2003; Liker & Choi 2004; Powers & Reagan 2007; Cordon &

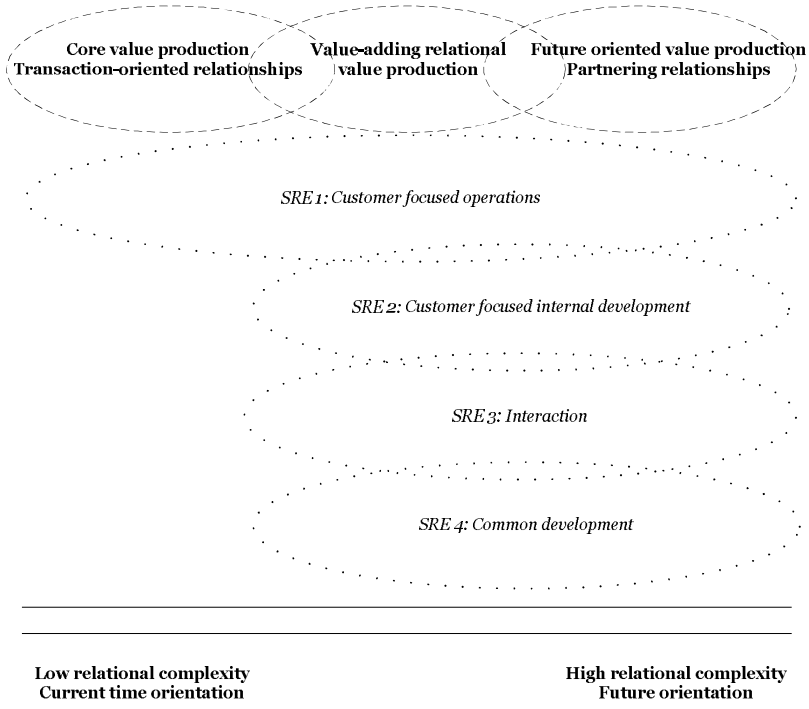
Vollman 2008; van Weele 2010). There are also many different views on what is and what makes a good business relationship (Bejou et al. 1996; Naudé & Buttle 2000; Huntley 2006; Goffin et al. 2006; Powers & Reagan 2007; Claycomb & Frankwick 2010; O'Toole & Donaldson 2002; Essig & Amann 2009; Ramsay & B. A. Wagner 2009; Krause 1999). Value creation mechanisms in business relationships are also discussed in the recent literature (Walter et al. 2001; Möller & Törrönen 2003; Ulaga 2003; Möller 2006; Wagner et al. 2010), and the SET view has also been applied in the relationship management literature (Cousins et al. 2006; Griffith et al. 2006; Kern & Willcocks 2000; Kingshott 2006; Muthusamy & White 2006; Narasimhan et al. 2009; C. Zhang et al. 2009).

This study makes a theoretical contribution by exploring the phenomenon of supplier relational effort in buyer-supplier relationships. These findings extend the current buyer-supplier relationship literature by providing new insights into the development of the buyer-supplier relationship. By exploring the potential of supplier relational effort and the mechanism behind it this study deepens understanding of the cooperative relational determinants in the buyer-supplier relationship. This research was a focused in-depth study of the relationships between a buyer, MSys, and its strategic suppliers. SET was used to gain a better understanding of the dyadic buyer-supplier relationship. In strategic relationships, value is created in interaction and it involves a notable amount of unspecified obligations. According to SET, drivers of social processes are feelings of attraction between individuals and the desire to gain various kinds of rewards. The importance of attractiveness and reciprocity were also central in explaining supplier relational effort. Hence this study makes a further theoretical contribution to the dynamics of strategic buyer-supplier relationships. Through a better understanding of supplier relational effort and the mechanism behind it in buyer-supplier relationships the study also makes a theoretical contribution to the understanding of value creation mechanisms in buyer-supplier relationships. These results can be utilized in developing buyer-supplier relationships to enable better value creation. The research questions will guide the discussion.

1) *What kind of relational effort does the supplier make that creates value for the buyer?*

As the result of the dyadic explorations four categories of supplier relational effort were identified: 1) customer-focused operations, 2) customer-focused internal development, 3) interaction and 4) joint development. Studies can

be found in the existing literature which take the relational view (Dyer & Singh 1998; Möller & Halinen 1999; Möller & Törrönen 2003; Möller 2006; Li et al. 2010; Y. Liu et al. 2010; Kim et al. 2010). The present research complements and extends the findings of those studies. The supplier relational effort categories found in this study accord well with Möller's (2006) framework, which presents various types of value production. This framework had been modified from Möller & Törrönen (2003). The different supplier relational effort categories found in this study complement Möller's framework by providing the model with concrete content (Figure 6).



Adapted from Möller (2006)

Figure 6. Supplier value production and supplier relational effort

This combined framework provides a good platform for further discussion on the topic of supplier relational effort in value creation. Customer-focused operations are essential in all business relationships where customer-specific operations are implemented. Even where relational complexity is low, the level of customer service in fulfilling orders can be affected by the amount of customer-oriented effort. The importance of customer-focused operations increases as the level of relational complexity increases due to

the fact that support from all levels in the organization is needed. Customer-focused internal development is essential in seeking to increase value creation. This in turn entails focus on e.g. developing efficiency, processes and competitiveness. Interaction as supplier relational effort is present in all relationships but the importance of active interaction increases as relational complexity increases. At its best the interaction is "doing together" and "developing together" instead of daily e-mails with questions and answers. The more we move to the right in

Figure 6 the more important active and versatile interaction becomes on all levels; for example, business reviews become more and more important. Pro-active actions can also be quite different in different relationships; these can take the form of the expediting of orders in exchange-oriented relationships whereas in future-oriented partnering relationships they may concern investment in future technology. Joint development obviously also becomes more important when moving towards complex strategic relationships. Reporting also varies in different types of relationships, from standard reporting concerning e.g. quality and production to business reviews discussed in executive meetings. Hence, the findings of this study concerning the first research question – "What kind of relational effort does the supplier make that creates value for the buyer?" - , are a good continuation of the current theory on relational value in business relationships. The exploration of supplier relational effort in these three dyads provided a good and thick description of the phenomena in a real-life industrial context.

2) *Why does the supplier make relational effort*?

Propositions 2-6 summarize the findings related to this research question. Recently, social exchange theory has been increasingly applied in explaining behaviour in buyer-supplier relationships (Kern & Willcocks 2000; Cousins et al. 2006; Emberson & Storey 2006; Griffith et al. 2006; Kingshott 2006; McKee & Wang 2006; Muthusamy & White 2006; Krause et al. 2007; Lawson et al. 2008; Yang et al. 2008; Narasimhan et al. 2009; C. Zhang et al. 2009). However, few studies directly examine exchange processes, the "black box" of social exchange. Little is known about the actual processes of social exchange (Cropanzano & Mitchell 2005). This research was an attempt to open this black box by studying the decision-making principles leading to supplier relational effort in buyer-supplier relationships. These principles become the factors deciding individuals' behaviour.

Proposition 5: *The attractiveness of the customer enhances supplier relational effort in buyer-supplier relationships*

This proposition is well supported by the social exchange theory. SET entails unspecified obligations; this is typically the case in situations where the supplier is making relational effort. A person who is attracted to others is of interest, providing that he is attractive to them as well, and this process of social attraction leads to the process of social exchange (Blau 1986). This principle is also visible in the findings of this study; in these dyads the attractiveness of MSys enhanced the supplier's relational effort. The reciprocity shown in the relationship was also notable; relational effort is "paid back" in that MSys also made more effort as the supplier's relational effort increased. A positive cycle occurs: the process begins when one participant makes a "move," and if the other reciprocates, new rounds follow. Once the process is in motion, each successive consequence can create a self-reinforcing cycle (Cropanzano & Mitchell 2005). Reciprocity strengthens supplier relational effort, leading to more effort from the buyer as well. Both the current importance of the customer, due to e.g. a large sales volume, and the attractiveness of the customer, for example in terms of the potential for new business, were very significant factors affecting the supplier's relational effort. The central message of SET, "that social exchange comprises actions contingent on the rewarding reactions of others, which over time provide for mutually and rewarding transactions and relationships" (Cropanzano & Mitchell 2005) is also a good description of this aspect of supplier relational effort in the present study.

Proposition 2: *Good strategic fit and matching expectations between the buyer and supplier companies enhance supplier relational effort in buyer-supplier relationships.*

Proposition 3: A c*ustomer-focused organizational culture and clear processes enhance supplier relational effort in buyer-supplier relationships.*

These propositions are well supported in the existing literature on business relationship management (Kraljic 1983; Jarillo 1988; Ellram & Carr 1994; van Weele & Rozemeijer 1996; Ellram et al. 2002; Håkansson & Ford 2002; Gadde et al. 2003; Liker & Choi 2004; Powers & Reagan 2007; Cordon & Vollman 2008; van Weele 2010; Huntley 2006; Hallén et al. 1991). This study provides strong empirical evidence for them in the case of supplier

relational effort, thereby contributing more depth and detail to this part of the theory.

> Proposition 4: *The competence, attitude, and motivation of the supplier's personnel affect supplier relational effort in buyer-supplier relationships.*

This proposition emphasizes the importance of the individual employee in the business relationship. This has also been recognized in earlier studies, e.g. by Håkansson and Ford (2002), Liker (2004) and Möller (2006). The present empirical research findings strongly support the earlier findings on this issue. There were, for example, significant differences in the attitudes of individuals concerning the development of the business relationship.

> Proposition 6: *Current relationship quality and the level of interaction affect supplier relational effort in buyer-supplier relationships.*

This proposition was, somewhat surprisingly, clearly supported by the research data. Earlier experiences in the relationship were strongly discussed in the interviews, and the reasons for behavioural decisions were explained by reference to earlier experiences. The level of interaction also clearly affected the supplier's relational effort: regular meetings and open discussions increased the amount of "doing together" and "developing together". These frequent meetings and discussions also provided a good and safe environment for developing and discussing new ideas together. The business context was a very busy one for all the individuals in the companies studied, and without regular face-to-face meetings or conference calls they would have had neither the time nor opportunity for open discussions. The time available for ad-hoc situations or discussions can be very limited. The value of regular meetings in fostering supplier relational effort and the business relationship is very high. This finding supports the earlier study by Autry and Golicic (2010), who presented a model of relationship strength-performance dynamics, indicating that relationships tend to spiral positively following relationship initiation. In sum, developing a successful relationship requires a lot of effort and time and it is important that someone believes in it and is willing and able to work towards it (Håkansson & Ford 2002); also support the present findings. Powell (1987) mentions another important cornerstone of business relationships: a long-term perspective. While this is true, in this study it was not found to be enough: the quality of

the existing relationship has a significant impact on supplier relational effort and the future of the relationship.

The third research question was

3) *"What is the impact of supplier relational effort?"*

Proposition 7: *Supplier relational effort has a positive impact on how good or well-performing the buyer-supplier relationship is perceived by the actors.*

Proposition 8: *Supplier relational effort has a positive impact on sales volume in the buyer-supplier relationship.*

These two propositions summarize the main findings concerning the impact of supplier relational effort. These findings supported those of earlier studies (Primo & Amundson 2002; Goffin et al. 2006). The present study also adds to the insights of the earlier studies on relational effort and the quality of the relationship (Monczka et al. 1993; Y. Liu et al. 2010). Supplier relational effort has huge potential for good, and a positive spiral exists: the better the current relationship, the more probable it is that the supplier will make further relational effort, which in turn will have a further positive impact on the relationship.

6.2 Managerial implications

The managerial implications of the research findings will be discussed next. In strategic buyer-supplier relationships value is created in interaction and it involves a notable amount of unspecified obligations. A negotiated contract is a limited tool in trying to achieve all the potential benefits and value. In the present case, MSys should aim to get their suppliers to make their best efforts on behalf of the relationship more or less voluntarily. All the findings offer a good basis for better understanding the potential value of supplier relational effort and the mechanisms behind it. This in turn provides purchasing and supply management professionals with a good framework within which to reinforce the planning and implementation of the development of their supplier relationships in order to enhance value creation.

The contribution of the study to management research is an important one. The findings offer a directional framework for purchasing and supply management professionals that can assist them to better identify the poten-

tial value of supplier relational effort. There is significant potential value to be gained, even through quite small actions and with low costs. This study identifies the main factors affecting supplier relational effort, and these findings can function as guidelines for purchasing and supply management professionals that can better enable them to reinforce supplier relational effort in a business relationship. Finally, the results on the impact of supplier relational effort are a good motivation and argument for paying attention to supplier relational effort, an issue which typically rests on the assumptions of individuals and is debated around internal coffee table discussions with colleagues. This study finds scientific evidence for the importance of supplier relational effort.

First, I discuss the managerial implications of the findings concerning research question 1:

> "*What kind of relational effort does the supplier make that creates value for the buyer?*"

The findings included four categories of supplier relational effort; 1) customer-focused operations, 2) customer-focused internal development, 3) interaction, and 4) joint development. This helps managers to identify the different types of supplier relational effort. Further, this enables them to consider what kinds of supplier relational effort are the most essential in their business context and in their specific supplier relationships. By identifying the different types of supplier relational effort, the potential value to the supplier can also better be perceived. Significant additional supplier value can be created with quite simple changes, e.g. by starting regular meetings between different interest groups. Regular meetings between e.g. quality people can lead to significant efforts to enhance quality or to reduce costs.

The second research question was

"*Why does the supplier make relational effort?*"

Propositions 2-6 summarize the findings related to this research question.

> Proposition 5 states: *The attractiveness of the customer enhances supplier relational effort in buyer-supplier relationships.*

This proposition holds an important message for purchasing and supply chain management. Hence the question for MSys is: how can we be more

attractive to our supplier? The answer depends on the context, but some features seem to be especially relevant here: sales volume, the trend in sales volume and the future business potential. For example, cutting down the number of suppliers would lead to more concentrated sales volumes for the remaining suppliers, thus acting as an attractive sign for the supplier.

> Proposition 6 states: *Current relationship quality and the level of interaction affect supplier relational effort in buyer-supplier relationships.*

This proposition tells managers that good existing relationships are important sources for further development. Here the positive spiral seems to work: a good relationship motivates the supplier to make more relational effort, which leads to a better relationship and performance. This acts as a reward for the actor, who is then willing to repeat this behaviour. Active interaction also facilitates supplier relational effort. People get to know each other and interaction becomes more easy-going. Even more important, face-to-face meetings are excellent forums for open discussions concerning developmental ideas, initiatives and follow-up. Here is a good opportunity to make the positive spiral work.

> Proposition 2 states: *Good strategic fit and matching expectations between the buyer and supplier companies enhance supplier relational effort in buyer-supplier relationships.*

This proposition states the obvious findings, but nevertheless it is worth noting that congruent strategies and objectives have to be communicated actively between the buyer and the supplier as well as internally in both companies. In this way such congruent strategies and objectives can be deployed in practice and actually guide the behaviour of the individuals involved. Hence, although this finding might not be so significant in relation to the existing theory, it provides an important guideline for management.

> Proposition 3 states: *A customer-focused organizational culture and clear processes enhance supplier relational effort in buyer-supplier relationships*

This proposition draws attention to important factors behind supplier relational effort. A customer-focused organizational culture might be difficult to change from the outside but it is definitely worth paying attention to when considering with whom to deepen the relationship in the future. Clear pro-

cesses are essential, and here the buying company can do their homework by familiarizing the supplier as well as possible with the buying company's processes and operations management procedures. The processes in the company interface should be made clear to all the actors involved.

Proposition 4 states: *The competence, attitude, and motivation of the supplier's personnel affect supplier relational effort in buyer-supplier relationships.*

This proposition emphasizes the importance of the individual in the business relationship. Again, although this is not directly in hands of the buying company, it is important to understand this factor. It can be discussed, for example, in executive meetings to make sure that there are no obstacles to the future development of the relationship due to this factor.

The findings related to the third research question

"What is the impact of supplier relational effort?"

can act as motivators for considering supplier relational effort as having real potential to enhance the relationship.

Proposition 7, stating that *Supplier relational effort has a positive impact on how good or well-performing the buyer-supplier relationship is perceived by the actors* and

Proposition 8, stating that *Supplier relational effort has a positive impact on sales volume in the buyer-supplier relationship*

hold the main message for purchasing and supply management professionals: the potential exists and supplier relational effort can make the difference. Many of the wild guesses related to the supplier relationship have now been scientifically demonstrated, and these findings can act as guidelines for the managers to facilitate development of the supplier relationship.

6.3 Limitations

Although the findings are encouraging, this study has its limitations. The findings emerged from and are grounded in data gathered during an in-depth study of three buyer-supplier dyads consisting of one buying company and three of its suppliers in a single industry. The findings should not be

interpreted as a definitive or absolute depiction of supplier relational effort and the factors behind it. Instead the findings should be used to enhance understanding of the phenomenon.

Doing qualitative research was a challenge for the researcher, and she had to bring herself into the process. A combination of grounded theory and case study approaches was used. The grounded theory approach was used for the data gathering and for discovering theoretical constructs using the hierarchical structure of categories (Corbin & Strauss 2008). The grounded theory approach has been criticized with respect to its status as theory as well as on the notion of 'ground' and on the claim to use and develop inductive knowledge. These criticisms have been summarized by Thomas and James (2006). It is also said that it is not possible to free oneself of preconceptions when collecting and analyzing data in the way GT suggests. On the other hand it has been pointed out that the formulaic nature of grounded theory is in contradiction with the open and creative interpretation needed in qualitative research. The grounded theory method is a systematic, inductive, and comparative approach for carrying out an inquiry in order to construct theory (Charmaz & Bryant 2010), and with this in mind the analysis in this research has been conducted with an especially strong emphasis on its systematic and comparative nature. Despite the systematic approach to the analysis, the researcher has been encouraged and motivated to see what is essential in the data and to maintain an open mind to different explanations.

The multiple case study method was used to develop the theoretical propositions based on the empirical data (Eisenhardt & Graebner 2007). According to Eisenhardt (1989), the case study is a research strategy focusing on understanding the dynamics present in a single setting. Case study results can have high impact due to the richness of the data and due to its real-life setting in organizations (Eisenhardt & Graebner 2007). However, the results of case studies have been criticized for their lack of generalizability in the wider context (Siggelkow 2007). In this study three dyads were investigated and replication logic was used. Multiple cases with constant comparison and cross-case findings provided stronger propositions than could have been provided with only one case (Yin 2004).

6.4 Further research

The new insights here are offered as a basis for further empirical research. It would be interesting to see e.g. what impact buying company effort has on value creation in buyer-supplier relationships. A multiple case study

including several different buying companies could be a fruitful setting for this kind of further research. Also, the level of strategic purchasing management competence in the buying company can have a significant impact on value creation in relationships. Another suggestion would be to study the phenomenon longitudinally. Further empirical testing could also be conducted in different contexts in order to reinforce the reliability of the findings.

Industrial buyer-supplier relationships are complex, and it is a challenge to manage them successfully in today's tough business environment in order to ensure and further develop the sustainable competitive advantage of the organization. It is a question about managing both competitiveness and relational issues. Although purchasing and supply management is clearly driven by economic actions, it is strongly embedded in social relations (Granovetter 1985). Understanding the value potential of supplier relational effort and the mechanisms behind it can help in the successful management of buyer-supplier relationships.

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APPENDICES

1) Interview guide
2) Dyad MSys-EMS1 exploration
3) Dyad MSys-EMS2 exploration
4) Dyad MSys-EMS3 exploration

Appendix 1. Interview guide

BACKGROUND INFORMATION

Name of the Interviewee
Position
Main responsibilities
Work history

OPEN QUESTIONS– ABOUT THE RELATIONSHIP

1. How would you describe the relationship between you and NN (the other company in this case)?
2. How long have you worked in this relationship?
3. How would you describe the importance or significance of NN (the other company in this case) for you?
4. Who are the people from your company who are interacting with NN (the other company in this case) people or working for this relationship?
5. Describe your daily work – what do you do concerning this relationship?
6. i) is asked of the supplier informant and ii) is asked of the MSys informant
   i. What kind of effort do you make for MSys?
   ii. What kind of effort does this supplier make for you?

   See themes for discussion below. *Examples to be asked and stories to be told.*
7. Why do you make the effort? / What do you think – why does the supplier make the effort? *Examples to be asked and stories to be told.*
8. What do you think – what are the benefits for MSys/you due to your/the supplier effort?
9. How would you describe NN's (the other company in this case) co-operation ability?

10. How would you describe the reliability and fairness of NN (the other company in this case)?

11. How do you or do you measure your performance? Concerning the relationship with NN (the other company in this case)?
12. How would you describe the competitive situation at the moment in the market?
13. How do you see the future of this relationship?

THEMES FOR DISCUSSION

a) Change management– what kind of last minute changes? How are they handled? How do you handle them with others? How do you prioritize?
b) Conflict management– what kind of conflict situations have you had with NN (the other company in this case)? How have you managed these situations?
c) Reporting – what kind of reporting is done?
d) Communication – how do you communicate with NN (the other company in this case)?
e) Preventive actions – Do you remember any situation where some preventive actions would have been done before a problem occurred?
f) Development – product & process– What kind of development efforts do you make together with NN (the other company in this case)? Product development? Process development? Cost reductions?
g) Technology choices– What kind of technology choices have been made lately? What kinds of investments have been made? Has NN (the MSys) had any influence in this?

ASSESSMENT QUESTIONS RELATED TO THE RELATIONSHIP

1. How much (extra voluntary) effort do you (the supplier company) make for this relationship? Scale 1-7 (1= none and 7=very much)?
2. In your opinion, how important this (extra voluntary) effort for MSys? Scale 1-7 (1= not at all and 7=very significant)?
3. How good or well functioning is this relationship? Scale 1-7 (1= very bad and 7=excellent)

GENERAL QUESTIONS TO CONCLUDE

4. What characteristics make NN (the other company in this case) a good or attractive customer/supplier for you?
5. How can NN (the other company in this case) further improve?
6. What characteristics make you a good or attractive supplier/customer for NN (the other company in this case)?
7. How could you further improve?

Appendix 2. DYAD MSys-EMS1 EXPLORATION

1 The supplier's relational effort

The supplier's relational effort was explored in dyads through interviews, observations during company visits and during company meetings, and through informal discussions with company personnel. In addition company internal documents and public archival data were utilized.

At the end of each interview the informant was also asked to assess the amount of relational effort made by EMS1 for MSys. The scale was 1-7, where 1 = none and 7 = very much. The average score for the amount of supplier relational effort in the dyad MSys-EMS1 was 5.6. The MSys informants assessed the amount as 5.2 and the EMS1 informants assessed it as 6.0. In the following sections supplier relational effort is described under the headings derived from the categorization of supplier relational effort that emerged from the data.

1.1 Customer-focused operations

MSys is a key customer for EMS1; this is a strategic choice made by EMS1. The supplier's relational effort in form of customer-focused operations is visible in this relationship in many ways: EMS1 has assigned a significant amount of human resources on both the strategic and operational levels for managing and developing this relationship. The global account manager (GAM) takes overall responsibility for relationship development and the local Customer Focus Team Manager takes responsibility for the relationship at the unit level. Both these supplier key persons are very experienced, competent and motivated in their work. The global management of the customer account enables utilization of the global production network in an optimal way and distracting internal competition can be minimized. Internal competition between the supplier's production units had disturbed the relationship in some situations in the past before the global focus was established in the key account management. EMS1's aim is to plan potential product transfers proactively to maintain price competitiveness in the market. The GAM follows the markets continuously so as to obtain the best possible knowledge on the company's competitive situation. This makes it possible for EMS1 to secure their own competitiveness instead of leaving it in

the hands of MSys, who would need to use competitive bidding to measure competitiveness. This allows for the controlled and proactive development of the business. Evidence was found both in the interview and observation data.

Customer-focused operations are highly visible in manufacturing, where the customer team takes responsibility for the manufacturing of MSys's products. The team leader is very experienced and competent as well as motivated in her work. The team leader together with the team is able to respond quickly and to solve problems efficiently. Change situations can be managed flexibly and rationally. EMS1 also has a contact person assigned for engineering services and prototyping. He takes overall responsibility for these services in this relationship.

It was evident that the EMS1 personnel were listening carefully to MSys and that MSys's needs were responded to as well as possible. Most of the EMS1 personnel had a desire to understand and to manage wider entities. This made the management and development of the business relationship more sensible and holistic instead of having a situation where requests are simply answered without any understanding of the connections to other issues of importance in the relationship or business overall. Extra requests also receive responses. For example, during the MSys ERP change EMS1 put a lot of effort into manually updating the customer forecasts.

A customer focus in operations was noticed in the interviews with the EMS1 as well as MSys informants, and the atmosphere and observations supported the findings. One informant put it this way:

> *"We always try to fulfil the requests as MSys wants so we do everything we can to satisfy MSys. We are definitely reliable... We want to face challenges and work to overcome them... We make an effort for the coming..."*

Tailored reporting is one type of supplier relational effort in this category of customer-focused operations. EMS1 does a lot of reporting for MSys. EMS1 is able and willing to report to MSys basically anything MSys wishes. In this dyad the reporting responsibility was mainly at the EMS1 site. When reporting was discussed with the EMS1 informant he stated:

> *"... it's actually based on needs... So far whatever information has been asked of us we have prepared a report about it. It's kind of extra..."*

The main elements of supplier relational effort in the category 'customer-focused operations' found in the dyad MSys-EMS1 were 1) a customer-

focused organization, 2) people working with a customer focus also taking cognizance of the wider context and business objectives, 3) a quick and effective response to customer demand, 4) customer-specific development initiatives deriving from daily operations, 5) proactive actions, 6) tailor-made reporting based on customer needs and 7) a significant amount of competent human resources assigned to MSys.

1.2 Customer-focused internal development

Customer-focused internal development refers to a company's internal development initiatives and efforts where customer-specific needs are taken into account. Ideas about development are derived from the requirements, expectations or ideas of a specific customer. It is also a question of attitude in the organization: Do we make an effort for our own organization or do we make an effort for the customer? There were many signs of customer-focused development in the dyad MSys-EMS1. The main duty of the GAM was to develop the customer relationship in the long-term. An essential part of this duty was to develop internal business operations so as to serve the customer in the best possible way in the future. The EMS1 contact persons were active in this relationship as a link between MSys and their own personnel. They communicated customer needs and expectations internally, so that customer needs and expectations were the actual drivers for internal development.

There were also examples of technology choices affected by MSys. An acquisition was also made to better offer an appropriate range of engineering services for specific customers. On the unit level ideas for developing the efficiency are browsed through in customer teams. A material bonus written into the agreement encourages EMS1 to strive for lower material costs.

Developing processes and making processes clear to everyone makes it easier to interact with the customer and it makes operations more efficient. This was stated by several informants. Developing personnel competences is a relational effort as well, as e.g. when personnel are trained for demanding assembly work for MSys.

Customer-focused internal development was described by one informant:

"We have certain processes, which are MSys specific… MSys operations management is based on VMI… other customers' operations are managed with the normal forecast-order procedure. They are totally different worlds. We need to have all processes - production management, material planning and demand

planning – developed specifically for MSys... the same rules and processes are not applied to other customers."

"We have development projects focusing on production efficiency, but we approach it so that we take one customer focus team at a time and we consider what we can do for this particular customer. "

The main elements of supplier relational effort in the category 'customer-focused development' found in the dyad MSys-EMS1 were 1) examples of customer-focused development highly visible on all levels, 2) key persons active in communicating customer needs internally, 3) frequent open discussions with MSys about needs and ideas on all levels, and 4) active use of common action point lists for follow-up and communication.

1.3 Interaction

One important category of supplier relational effort is interaction. Although all business requires some type of interaction between the buying and selling company, significant differences can exist in the amount, intensity and quality of that interaction. The interaction between EMS1 and MSys is very active. EMS1 is active in its interaction with MSys and the EMS1 personnel are well motivated to discuss and work with their MSys counterparts. EMS1 responds to MSys requests quickly. Both companies actively coordinate interaction, communication and "doing together". Several regular meetings involving numerous people from both companies are held. Quarterly, the companies have a follow-up meeting where both companies present a review of their own businesses, and they review their business relationship together. An action point list is utilized in these meetings. The list is reviewed point by point and the status of actions is updated and further actions are agreed. New items are included in the list as agreed. The situation of the Vendor Managed Inventory (VMI) is also reviewed in the meeting and further actions are agreed if needed. Quality issues are briefly mentioned, but they are discussed in more depth in a separate quality meeting, which is also a regular meeting. In addition, possible impending materials shortages are discussed as well as other relevant issues related to materials or to risk management in general. New and open quotations as well as pricing issues are also discussed. Issues related to testing equipment are discussed and, finally, so too are any other relevant and topical issues. The review meeting was very thorough and the issues were discussed to the point and in a good spirit. A whole working day was reserved for the meet-

ing. Other regular meetings between EMS1 and MSys are the quality follow-up meeting and the engineering services meeting. In the quality follow-up meeting an action point list related to quality issues is reviewed. In the engineering services meeting the discussion covered general issues and announcements, project statuses, issues related to tools in use, forecasting issues, and possible quality issues. An action point list is also used as a tool in the engineering services meeting. Action points are reviewed and statuses are updated. All in all, a considerable amount of time is spent in joint meetings, which creates a natural platform for interaction. EMS1 representatives were active in these meetings and they had prepared themselves well for the meeting. The MSys representatives were also active but their preparation for the meeting varied more. All the meetings were held in a good atmosphere and spirit. The interaction seemed to be open and fluent. These regular meetings are one clear form of EMS1's relational effort in this relationship. The EMS1 representatives also make an effort to communicate MSys issues internally to their own staff members. EMS1 welcomes visitors from MSys and a lot of visits are arranged for different people for different reasons. The companies' respective locations are not far from each other and visits are frequent. EMS1 personnel also visit MSys quite frequently, mainly to participate in the meetings. Production staff members from EMS1 have also visited MSys. One informant at EMS1 put it this way:

> *"We have been able to visit MSys and we have seen these products and they have laid on a factory tour for us… It is quite good, because the girls [in manufacturing] always ask 'Hey, what are these [components in EMS1 manufacturing] gonna be when they grow up' and these and these… So you see concretely where the component goes and what it becomes… It's good to get in there and see what they are gonna be…"*

Proactive actions also represented a form of supplier relational effort. In this dyad EMS1 and MSys update and correct the MSys forecast together. EMS1 has the competence to correct customer forecasts and they process the forecast with their own tools. The supplier forecast is communicated internally and the forecast is used in operations management. EMS1 actively pursues a policy of foreseeing coming needs and makes an effort to secure the availability of materials. The customer focus team manager, manufacturing team leader and purchasing staff members are in key positions to ensure smooth operation and to evaluate the proactive actions needed in actual situations. Buffer stocks and search for alternative components are

used as a means of risk management. The optimal utilization of the global production network was discussed at EMS1:

"... these proactive actions, for example product transfers and others... probably if we step into MSys shoes and think from their point of view... if they have a supplier who knows the playing field and is able to react proactively... then competitiveness will be ensured... that's the ideal situation..."

The main elements of supplier relational effort in the category 'interaction' found in the dyad MSys-EMS1 were 1) a lot of "doing together", 2) very active interaction and open discussions at all levels, 3) visits at all levels and 4) frequent regular meetings for different functions.

1.4 Joint development

Joint development or "developing together" is one category of supplier relational effort generated from the data. This category includes the planning and development of future business, processes and products together. At the EMS1 site the Global Account Manager is responsible for the future development of business in this relationship. An essential part of business development is the planning of product transfers. Products can be transferred internally from one EMS1 production unit to another or the product may be transferred from a competitor to EMS1.

The prototyping and the starting up of mass production for new products are big efforts requiring intensive inputs from both companies. In the prototyping phase especially, the development of a design and its manufacturability along with the selection of components is essential in order to optimize the quality and cost structure of the final product. In the prototyping phase many things will be fixed and it will be difficult and/or expensive to change many of the decisions later in the mass production phase. The decisions made in the prototyping phase have a significant effect on the cost structure and quality of the final products. Cost reductions and efficiency improvements are common interests and the companies work together to reach the best results.

In MSys an important step when starting with a new supplier is to make sure that the new supplier is known and accepted among the company's staff members. Only then will the supplier be able to involve the people at MSys in active interaction and start to really work together. If the supplier is not wholeheartedly accepted by all at MSys, it can seriously hinder supplier efforts. In the dyad MSys-EMS1 "doing together" was evident. "Doing

together" can be effort itself or it can facilitate other efforts or it can be the outcome of another effort.

An example of joint development was given by a MSys informant:

"... we [MSys and EMS1] have done something which benefits both of us... we do quality development work together... we have tried to find the items which have the highest scrap rate in production or in receiving or in any other phase... We have browsed through the data together with EMS1 and we have found problems at their site. They have been able to find solutions to these problems by changing their processes... and they have been very active also if they have problems in their production for some reason... they speak up and try to find the solution."

The main elements of supplier relational effort in the category 'joint development' found in the dyad MSys-EMS1 were 1) joint development visible and active at all levels and 2) joint development in combination with "doing together" creates a positive spiral.

2 Factors affecting the supplier's relational effort

2.1 Strategy and objectives

EMS1 made a strategic decision to have MSys as their key customer. MSys products and services were considered to fit in very well with EMS1's business strategy, and this relationship has created a good platform on which to develop EMS1's own business as well. Both companies are global but still locally close to each other, a factor which was in line with both companies' strategies.

EMS1 has a clear objective to widen its service offering and to increase the volume of the business for MSys. This has been acknowledged by EMS1 and it is clearly a motivating factor also on the individual level. At EMS1 one gets the impression that "they know what they are doing and why and they know where they are heading". The EMS1 representatives felt that they have visions, strategies and objectives that are congruent with those of MSys. EMS1 and MSys "have a possibility to grow together", as the global account manager put it. The MSys representative describes it thus:

"... they [EMS1] are proactive, they want to understand our strategy, they want to adjust their own strategy... In my opinion it is a company which has a clear strategy in relation to us..."

The main markers of the affecting factor 'strategy and objectives' found in dyad 1 were 1) there is good strategic fit and 2) expectations are matching.

2.2 Organizing

In EMS1 is a customer-oriented organization. Key customers are nominated and every key customer has a global account manager as well as a local customer focus team manager. The main duty of these managers is to make sure that the customer is served as well as possible and that business, process, and product development is guided by customer needs and expectations. EMS1 already has several years of experience in operating with a customer focus. They have engaged in different types of team projects and training programs related to customer-focused operations. At least in the Finnish production unit, a customer focus was visible in the company's operations as well as attitudes.

Global organization with one global account manager enables EMS1 to serve MSys optimally, utilizing the whole global production network. In EMS1, internal communication functions and customer needs and expectations are disseminated throughout the organization via the key contact persons in the interface. This makes it possible to respond quickly to customer needs and expectations. Acting in this interface as an EMS1 key contact person requires good organizing skills, good competence and good social skills. Clear processes and responsibilities internally and between the companies enable a quick response in operations. Some differences were noticed among the EMS1 representatives in this domain: some had a very clear idea of the company's processes and responsibilities while for others these were less clear.

The main markers of the affecting factor 'organizing' found in the dyad 1 were 1) a customer-focused organization, 2) customer-assigned teams and 3) clearly defined processes and roles.

2.3 Competence, attitude and motivation on the individual level

Based on the interviews and observations, on the individual level competence, attitude and motivation have a big influence on supplier relational effort. The global account manager, customer focus team manager and manufacturing team leader were good examples of how a motivated and competent person with a good attitude enhances the relationship and business. Competence can be related to knowing the customer products, pro-

cesses and people. One learns to know the customer through experience. A common history and experience create an important foundation for further efforts. Knowing and understanding one's own business as well as its products and manufacturing operations is an important part of competence. On the unit level, the customer focus team manager and manufacturing team leader had very strong competence, gained through work experience, concerning their company's manufacturing operations. The global key account manager had a background as a general manager of a business unit and therefore strong competence in business development. The social skills of the individuals were on a good level. The key contact persons act as links between the customer and the home organization.

Motivation and a desire to develop things are also essential factors affecting the supplier relational effort. Motivation is a rather personal quality and there are differences in motivation levels between individuals. Most of the EMS1 informants were highly motivated. The customer focus team manager stated: "*I can't even question the effort*!". The supplier's relational effort is self-evident and is seen as part of one's duty. This person was described by the MSys informant as motivated, competent, development-oriented and proficient in his work. The importance of a motivated and competent key contact person was emphasized in the MSys informant interviews. Motivation was improved e.g. in manufacturing, by getting to know the customer better. When an employee knows what the end product she is working for is and what its purpose is, then motivation rises. The EMS1 manufacturing personnel had visited MSys and they had learned to know MSys, company, products and people, better.

Based on the interviews and observations; on the individual level reciprocal positivity, respect, and equality increase reciprocal effort. Clearly defined processes and responsibilities moderate the effort needed on the individual level because the person knows what to do and what to take responsibility for. Commitment and the carrying of total responsibility are then more likely. It is easier to make an effort from the content point of view as well as from the time management point of view. A customer-oriented organizational culture encourages the individual to put effort into work the customer appreciates and benefits from. To give an example, the manufacturing staff members at EMS1 are willing and able to be flexible in a demanding resource situation so as to make the best effort for MSys. At EMS1 a customer focus is noticeable on the operational level and supplier relational effort also exists on the individual level.

It is noticeable in the interaction between MSys and EMS1 that the MSys representatives know EMS1 as a business, a company and as individuals.

The interviews and observations showed that individuals respect each other and the demands made are reasonable in relation to the situational realities. This creates a good and safe basis for EMS1 to make an effort. People know each other and this makes communication and interaction easier; it is easier to approach a person you know, you behave better among the people you know and you respect the other. Discussion is straightforward and open. You can speak frankly without beating about the bush, which makes cooperation easier and operations more efficient. The cooperation between individuals in this dyad is good.

The main markers of the affecting factor 'competence, attitude and motivation in individual level' found in dyad 1 were 1) a high motivation to serve the customer, 2) a good understanding of the big picture, 3) high interest in developing at all levels and 4) a positive attitude to challenges.

2.4 Attractiveness of the buying company

The attractiveness of the customer affects supplier relational effort both on the strategic and operational levels. Its big current sales volume and growth potential make MSys attractive. MSys is seen as an attractive customer because of the large amount of potential new business the company has to offer in both manufacturing and engineering services. MSys is an innovative company continuously developing and bringing new products onto the market, which brings new potential products for EMS1 as well. MSys is seen as a customer who could utilize EMS1 life cycle services in the future. Business growth potential is one of the key drivers of supplier effort but the employment effect was also considered very important on the unit level. Also, past growth in business is a good and attractive sign for EMS1. In day-to-day operations the importance of MSys is visible in the high number of deliveries, wide product range and high manufacturing volume. Consequently a lot of work is done on behalf of MSys. The amount of interaction with MSys and effort concerning MSys issues is naturally high and spaces for relational effort are created naturally in everyday work. The evident importance of MSys motivates the supplier personnel to make an effort for this key customer in their daily work, and also motivates EMS1 to consider MSys's needs when planning internal development efforts on the unit as well as group level. On the strategic level, the importance of the customer is easier to communicate and understand. The fact that MSys and EMS1 have rather congruent visions, strategies, and objectives motivates making a relational effort on the strategic level.

In addition, EMS1 sees MSys as an appropriate size customer. EMS1 values the industrial electronics field in which MSys is operating, because industrial electronic products have a longer life cycle than consumer electronics.

MSys is experienced as a customer with whom interaction and "doing together" is easy and meaningful. This makes MSys attractive and encourages relational effort.

The main markers of the affecting factor 'attractiveness of the customer' found in dyad 1 were 1) customer perceived as highly important and attractive for many reasons, e.g. large and increasing sales volume and future business potential, 2) a 'caring customer' who makes reasonable demands, 3) is easy to communicate with and open, and 4) is easy to cooperate with.

2.5 Current relationship and interaction

The quality of the current relationship affects supplier relational effort. A close and active relationship together with good cooperation and a common history with its challenges and successes create a good basis for further effort. "Doing together" brings with it situations where effort is a natural part of the operative actions. When working actively together people learn more about others and their way of doing things, and about ways of doing things together. Thus as a result of the learning process, a good relationship promotes both further effort and a better outcome of that effort. It is possible to respond quicker and results can be achieved sooner, which again motivates new efforts and outcomes. These factors were visible in the data for the dyad MSys-EMS1. The relationship between MSys and EMS1 is very active and close. The informants felt that their cooperation was good and a lot of interaction occurred between many different persons. "Things are easy to settle" was repeated several times in the interviews. The interaction was easy-going.

Earlier product transfers to the EMS1 production unit were good examples of common experiences from a common history. Both parties reported learning a lot along the way and that this learning can be utilized in future projects. The journey together has not been easy in any sense. There have been many challenges and there will be more to come. Nevertheless surviving and succeeding together encourages the facing of new challenges and possibilities together. The companies dare to take risks together.

EMS1 finds MSys reliable and fair. Feedback, expectations and ideas for development are brought up and discussed in frequent meetings in a good spirit. Interaction is open, positive, and development-oriented, which cre-

ates an atmosphere supporting relational effort. If issues can be handled in a good spirit and easily they are more likely to be handled. If one party makes an effort into maintain the relationship the other will make an effort as well. This reciprocity was evident in this dyad, in both the interviews and observations. Good procedures like regular meeting with action point lists are good tools for managing and steering efforts. These keep things happening. Through active interaction individuals learn to know each other better. This makes ”doing together” easier. In sum it was noticeable that EMS1 takes MSys's requests and wishes seriously and vice versa. Reciprocity and trust were visible in this relationship and interaction.

Congruent visions and strategies ensure that both companies and personnel have a similar picture about the future, about where they want to be. A shared good future motivates relational effort. Active interaction and communication as well as “doing together” are justified. In this dyad growing business competition seemed to be one of the main objectives for both companies, and was communicated and understood at all levels.

Formal contracts have little direct influence on the everyday work of individuals. Some informants did not even know the content of the company's contract. Contracts shape the frame for economic transactions, but everyday operations and efforts are mainly driven by other factors.

The main markers of the affecting factor ‘current relationship and interaction’ found in dyad 1 were 1) the companies have a common history of successes, 2) the people know each other well, 3) interaction is easy and open, 4) a lot of interaction in different forms occurs, and 5) people are ‘doing and developing together’.

In this section the different factors affecting supplier relational effort have been discussed. Some questions remain: for example, is plentiful reporting or active interaction a good or a bad thing? The answer depends on what the reporting is for or why we are interacting. It is a good thing if we do it mainly in order to develop business, processes, products or competence, or if we do it to aid discussion of future possibilities and new business ideas. In some cases plentiful reporting and interaction can occur due to the need to control and monitor things. Or we may need to make special arrangements because we are running late. In these cases there may be a problem in operations management or in resource management, probably in both. However, the majority of the interaction seemed to have a development and future planning orientation.

3 Impact of the supplier's relational effort

How does EMS1's relational effort affect the relationship between EMS1 and MSys and the business of both companies? The MSys-EMS1 informants were asked 'How good or well functioning is this relationship?' They answered on a scale of 1-7, where 1 = 'very bad' and 7 = 'excellent'. The average of all the scores given for the dyad MSys-EMS1 was 5.6. The average for the MSys informants was 4.7 and for the EMS1 informants it was 6.4.

Informants were also asked how important supplier relational effort was for MSys. The scale was 1-7 and the average score was 5.6. The average for the MSys informants was 5.7 and the average for the EMS1 informants was 5.5.

Another indicator studied here in the dyads is sales volume and how has it developed. For example, EMS1's sales to MSys increased by 10-20% between 2007 and 2009.

In addition, the following impacts of supplier relational effort were brought up in the discussions and supported by observations. Owing to supplier relational effort, the business relationship and interaction are closer and more active. Interaction is regular and frequent, open and easy-going. People learn to know each other and trust increases.

Working together is easier and operations are more efficient. Information about the current situation is more accurate and in real time. In addition to increased operational efficiency, the effort made in engineering services and prototyping improves product design and manufacturability as well as the selection of components. Thus the quality and cost structure of the final product can be optimized. Supplier relational effort promotes development initiatives and actions in the fields of product development, process development and competence development. All this in turn promotes the growth of sustainable competitive business for both companies.

In sum, supplier relational effort positively influences the competitiveness of the two companies, the profitability of both companies and the growth of the business.

Supplier relational effort requires resources, especially human resources. In the present case a significant amount of human resources had been invested in relationship management and development. Such an effort also requires resources from MSys. The demand for resources is a consequence of the effort made, but resources are also needed to make the effort. Thus resources are an enabling factor for supplier relational effort.

Appendix 3. DYAD MSys-EMS2 EXPLORATION

1 The supplier's relational effort

In the dyad MSys-EMS2 the informants were also asked to assess the amount of relational effort the supplier makes for MSys. The average score for the amount of supplier relational effort in the dyad MSys-EMS2 was 4.5 (5.6 in the dyad MSys-EMS1). The MSys informants assessed the amount as 3.8 (5.2 in the dyad MSys-EMS1) and the EMS1 informants as 4.9 (6.0 in the dyad MSys-EMS1). In the following supplier relational effort will be described.

1.1 Customer-focused operations

Several examples of customer-focused operations were found in this dyad. EMS2 established a "My company" concept in 2008 and now have a team assigned to work for MSys and for two other customers. The team includes the key account manager and representatives from engineering, planning, manufacturing, quality, sourcing and logistics. This team bears the main responsibility for operations related to MSys's business. Senior management from EMS2 have also been assigned to the MSys relationship, for example through business reviews and visits. According to the interview data and statements from both the MSys informants and EMS2 informants, EMS2 is flexible in its operations, following customer demand. They are also quick in their response to customer demand. Personnel at EMS2 are "looking behind the numbers" and trying to be sensitive to what is happening around them. For example, during the time of MSys's ERP changeover they noticed that the number of units being ordered was dropping below the normal level, and so they started to trace the real reasons for this. EMS2 applies constant monitoring in their production and corrective actions are introduced as soon as defects are noticed. EMS2 has back-up plans for machinery, material or manpower shortages and for extra demands concerning MSys products that might occur. The manpower in production is multitask and therefore transferrable, which helps in varying demand situations. MSys is in a position where it is prioritized over some other customers in a

demanding situation at EMS2. EMS2 delivers a significant share of MSys's finished products directly to end customers. EMS2 also arranges tax exemptions for MSys.

The overall atmosphere seems to be one where "the supplier is doing their best to fulfill customer requests" and they are willing and able to "stretch" in demanding situations, e.g. during the high December demand period. The people at EMS2 have shown good commitment and effort in demanding situations. Extra series of tests or trials, for example, have been done when needed by a customer. Also, they have supported MSys's ERP changeover situation by doing manual work where this has been required to run operations smoothly. Overall one can see that a lot of operations have been done with the customer in focus. This effort was described in EMS2's presentation materials in a MSys-EMS2 executive meeting:

> *"We work with our customers collaboratively to reduce total costs through redesign, competitive sourcing, and manufacturing efficiency."*

EMS2's proactive actions did not receive a very flattering assessment from MSys. Based on the interview data, such actions were perceived as more reactive than proactive in many situations. However, EMS2 also referred to their proactive behaviour in several phases, including mentioning that there is room for improvement. In part, the difference can explained by the fact that some of the proactive actions in question are internal development actions and are perhaps not so immediately visible to MSys. A critical issue at the moment seems to be component availability and a lot of proactive actions are expected in this area. EMS2 has started to review component or material availability and they are sharing the information with MSys. EMS2 is also "defending" component prices in the market. EMS2 are very conscious about their competitiveness and therefore quite a lot of proactive actions, such as technology development and continuous improvements, are implemented internally. These are not always visible to MSys, but can lead to e.g. development ideas for the production process or for a product design. The constant follow-up of the market situation can also be considered as a proactive action. EMS2 seems to have the knowledge and the interest to follow the market situation. This makes it possible to act proactively whenever needed. An EMS2 informant discussed competitiveness:

> *"When we talk about the competitiveness; I think we are still in - I would say - in the ball game. We have also been actually doing some internal benchmarking with our competitors, especially on costs compared to others, are we high or are*

we low. We have also been measuring ourselves there. So in terms of competitiveness, I would say we are still in the ball game and also we, our management, actually have a kind of road map and they have an idea of how to bring [EMS2]to the next level where we will equip ourselves with more advanced equipment or we will be a more value-added supplier to [MSys]. So basically I would say, of course, we will not be the cheapest of all, but we would like to position ourselves at least …as competitive."

Tailored reporting is included in this category of customer-focused operations. During the major production transfer from Finland to Malaysia a few years ago, it was agreed that the reporting on production would be on the same level as in MSys's own factory. This operational reporting includes e.g. yield reports, test reports, shipping info and e-invoices. In addition, EMS2 provides weekly minutes of meetings concerning operational issues. EMS2 makes a monthly production line audit with a check list provided by MSys. Annually, EMS2 carries out a customer satisfaction survey and the results are shared with MSys and with other key customers. A business review is also a mode of reporting, and one in which EMS2 shares information such as sales volumes, delivery performance, quality performance, the comparison of forecast versus actual sales, and delivery backlog.

The elements of supplier relational effort in the category 'customer-focused operations'; found in the dyad MSys-EMS2 were 1) a customer-focused organization, 2) people working with a customer focus who also consider the wider context and business objectives, 3) a quick and effective response to customer demand, 4) customer-specific development initiatives deriving from daily operations, 5) proactive actions, even if these were not highly visible to MSys, and 6) formal reporting.

1.2 Customer-focused internal development

At EMS2 a lot of development effort seems to be related to MSys's needs and expectations. EMS2 controls quality and the efficiency with their internal key performance indicators (KPIs). KPIs are a tool to find issues for continuous development and improvement. KPIs are communicated to MSys and improvement ideas related to MSys business and operations are discussed and processed together. EMS2 has a process engineering team where process improvement ideas and initiatives are created and implemented. The process engineering team also has a member in the EMS2 customer focus team (My Company concept). EMS2 is running a lean in-house production–development project. One example of this internal development effort was a reorganization of manufacturing so that all manufactur-

ing related to MSys products is now in one location. This makes manufacturing and its supervision easier and more efficient. Another initiative already implemented was keeping the manufacturing area clear of cardboard boxes in order to increase the quality and safety level of the production environment. One EMS2 informant reported:

> *"...we have a process engineering team in place which is regularly looking into the manufacturing processes and gives feedback to [MSys]. If we see something, we change it."*

MSys, as all key customers, also influences investment decisions at EMS2. EMS2 is making proactive efforts in production technology development in order to better serve customers' future needs. EMS2 has suggested changes in the design of MSys's products to enable better manufacturability or lower costs. Another EMS2 effort concerned reducing the turnaround time in prototyping. This required some extra manpower for prototyping. EMS2 offer their customers a possibility to utilize virtual prototyping software. The software enables reduced time-to-market, better manufacturing design, lower costs and a more effective supply chain. EMS2 has several quality certificates, which helps the company to run development efforts in a systematic way and supports continuous improvement. EMS2 also has specific quality certificates for the medical industry, which could also serve MSys's business due to the demanding environmental requirements in both businesses. EMS2 runs quality awareness training for their operators and inspectors twice a year to uphold quality competence among the staff members.

Further examples of EMS2's customer-focused development efforts include developing jigs and fixtures for MSys, and they have developed proper documentation capabilities for them. EMS2 is also creating some documentation for MSys's existing jigs. For relationship building, EMS2 is running a Customer Relationship Management –programme in order to increase market awareness and risk management capabilities. It aims at better understanding of the customer's business. It is about "getting to know each other at all levels – getting to know the customer". EMS2 has e.g. budgeted money for company visits to enable face-to-face meetings between the people involved in the relationship in different operations and at different levels. On the strategic level they are presently working with MSys to produce a proper current state analysis of the relationship. The aim of the analysis is to produce a detailed assessment of the current situation and to plan for the future together. A customer satisfaction survey is carried out annually by

EMS2 and the information obtained is utilized to manage and propel customer-specific development efforts. At the moment EMS2 is planning new capacity and are investigating possibilities for a major expansion. This opens a new opportunity to "think big" with MSys.

The main elements of supplier relational effort in the category 'customer-focused internal development' found in the dyad MSys-EMS2 were 1) visible examples of effort, driven by efficiency requirements, on the operational level driven, 2) key persons communicating customer needs internally, 3) a customer satisfaction survey driving the internal development process, and 4) an action point list for follow-up and communication.

1.3 Interaction

Active interaction is one category of supplier relational effort. There can be significant differences in the amount and the quality of the interaction in different business relationships. MSys's official main contact person in this relationship was changed from one in Finland to a new one based in China just prior to the research field study. The Finnish contact person was interviewed due to his long experience in this relationship. The interaction between MSys and EMS2 is partly controlled by an agreement. For example, certain quality and efficiency reports are required and are delivered on-line for all products. Due to the long distance, the demanding assembly and delicate nature of their products MSys and EMS2 have agreed specifically on the process and content of information sharing. EMS2 seems strictly to obey the terms of the agreement and they are interacting actively as agreed. However, they do not seem to be very spontaneous or proactive in their interaction with MSys. The interaction is more formal in its nature, at least on some levels and between some individuals. On the other hand the management level described the relationship as professional, goal-oriented and consisting of two proactively involved parties. There seemed to be some differences between individuals in how the interaction was experienced.

MSys's management team was changed two years ago and thus these last two years has been spent "getting to know each other". This refers to the fact that the relationship is based on individuals working together, and thus it is essential to know the other side personally to have a fruitful relationship. The management style of MSys's new management team was somehow different from what EMS2 were used to earlier, and it took some time to learn to know each other and to find a common style of interaction and communication. Now the relationship is working more in the "old way", referred by EMS2 informant as a "gentlemanly relationship".

The interaction involves several information systems and information sharing applications. EMS2 offers MSys on-line access to its component database to see the active components in use, which again can make the start of manufacturing a new product easier, quicker and more cost efficient. It provides MSys with price indications for new components. MSys has on-line access to the production line information. EMS2 defined the change in the management process, which they follow strictly. They also require MSys to follow it; this was experienced as a positive thing by MSys.

MSys and EMS2 had a major conflict around a year ago, and their experience of managing the conflict was discussed in every interview. The conflict was solved with an open approach described as "be open about it – find the solution together". Settling the conflict included e.g. additional testing and analysing as well as company visits. The problem was nevertheless settled under pressure in a short time and it seems that there are no longer any hard feelings. This was a very testing experience for the individuals involved, and it serves as a shared "survival experience".

EMS2 and MSys also meet on the senior management level. They had an executive meeting recently with a business review and discussion on future expectations. EMS2 felt that discussion about problems was always open, whereas at MSys this was not agreed quite as unanimously. Both companies welcome visits from the other party and several visits have been arranged lately despite the long distance. EMS2's management takes overall responsibility "for keeping the customer happy". This includes e.g. business reviews, visit arrangements and problem solving. On the operational level EMS2 and MSys have a weekly conference call concerning operational issues. To give an example from the operational level, the working instructions are written by MSys in English while EMS2 takes care of the translation and implementation of the instructions. From the interviews and observations it was seen that the relationship includes collaboration in problem solving as well as goodwill. EMS2 are strict in their behaviour also in this relationship: what is agreed, is done – even in tough situations. The interaction was described by one the EMS2 informants:

"There is no discussion or no unnecessary discussion I would say - if there is an issue to be discussed discussions are about the issue. We look - both parties name problems the way they are and we look for a fast effective way to resolve the problems that we are having. There is no - I don't see a lot of polemical things going on there or always saying hey you know two years ago you had this and three years ago you had that. It is really goal-oriented. We don't lose a lot of time lingering in the past and that is – beat managing problems, manag-

ing changes in the production line that we have to do, increasing or decreasing production capacity. So I think it is – I see it as an easy way to work when it comes to how the work has to be done. It's not easy work that has to be done but the way we work together is fairly easy, fairly straightforward. We have a team in place here as well as in [MSys] that understand each other very well, they get along very well."

In the category of 'interaction' the following main elements of supplier relational effort emerged from the interviews with the dyad MSys-EMS2; 1) lot of formal interaction, 2) management visits despite long distance, 3) regular meetings and 4) information systems for sharing information.

1.4 Joint development

One category of supplier relational effort arising from the data is shared development. This category includes e.g. the planning and development of products, processes and future business together. At EMS2, the director of business development (DBD) is responsible for future business development, including finding new customers as well as expanding business with present customers. The DBD together with the EMS2 senior management is working actively at the moment to find new business opportunities with MSys. They had an executive meeting recently where the senior managements of EMS2 and MSys shared and discussed their visions of future possibilities. EMS2 is very keen to expand its business with MSys with new additional MSys products or whole product categories. They are also trying to convince MSys to utilize the EMS2's engineering services. For example they offer services such as engineering for manufacturability, engineering for cost competitiveness, engineering for design and engineering for an efficient supply chain. EMS2 and MSys are updating their contract at the moment in order to "remove obstacles" for the future.

The companies have engaged in some product development together; they have e.g. developed a new component for one of the finished products. EMS2 arranged the testing of the new component locally, and even MSys took some of the responsibility for the testing. When starting the production of new products at EMS2, joint efforts are required to train the staff members in the new product and its testing.

Some process redesign was done recently due to the ERP changeover at MSys. EMS2 runs a VMI warehouse for MSys, which has been developed and implemented together. They are currently jointly developing an inventory process at EMS2 in order to provide more precise inventory data. One

of the big interests of both parties is local sourcing opportunities. EMS2 is trying to find potential component suppliers locally to lower costs. MSys is participating in this, and they are providing additional resources from their China procurement office in some cases. This is one example of the cost-down projects companies are working on. Due to the fact that cost is an important issue in this business, interest in these projects is high and the companies are willing to do it together. The outcome of cost-down projects is shared in accordance with the win-win principle. To prevent difficulties with the availability of materials, the possibilities for buffer stocks are being considered together and frame contracts with critical component suppliers are being negotiated. One joint effort is MSys marketing in Asia. EMS2 has supported MSys in their marketing efforts in Malaysia.

In this category of 'joint development', in the dyadMSys-EMS2 several examples of supplier relational effort were found but they were quite independently executed. Hence, 'doing together' was not highly visible.

2 Factors affecting the supplier's relational effort

2.1 Strategy and objectives

MSys is one of EMS2's top customers. They have been in this business relationship for a long time and the business has grown substantially along the way. The owner and chairman of the company established the relationship over 20 years ago, and is still involved in it, and this relationship tends to receive a lot of attention at all levels of the company. EMS2 would like a bigger role in MSys's business. They would prefer to have total responsibility for manufacturing and quality control from sourcing to delivery for some products or product categories. At the same time they are trying to expand their business in the area of engineering services. EMS2 is very aware of the market situation and they are actively positioning themselves in the market. They understand that as a contract manufacturer they have to be highly competitive; it is a tough market. They are not trying to be a large-sized tier 1 supplier. Instead they are a tier 2 supplier offering the customer more flexibility and attention. They understand that as a tier 2 supplier they have to make relational efforts in order to serve the customer flexibly according to the customer's specific needs. This explains EMS2's positioning strategy and why EMS2 is making an effort to develop the relationship. However, they also understand the importance of cost competitiveness; they know that there are other companies that could do the same business for MSys.

They are working under constant cost pressure, which leads them make efforts in form of proactive improvements in their operations. The personnel at EMS2 are used to working in a competitive culture and environment, and they are used to competitive situations. They are trying to work out how they can survive and win customers, unlike some other business cultures where more attention would be paid to circumstances and the environment in order to find explanations for losses.

In the category 'strategy and objectives' as a factor affecting supplier relational effort, relatively good strategic fit was observed in the dyad MSys-EMS2, although some contradictory expectations were also noted.

2.2 Organizing

EMS2 started the "My company" -programme in 2008. This has increased the customer focus on all levels of the organization. Now they have a customer-focused organization with customer teams and key account managers and executives. This has been a good facilitator for supplier relational efforts towards specific customers. In EMS2 the senior management is actively involved in customer relationships as well. This creates a good platform for interaction and for the creation of new ideas. Such attention gives the opportunity for interaction and interaction creates a foundation for new ideas. New ideas in turn facilitate supplier effort (and customer effort), such as new product development or process improvement. EMS2 is located at a distance from MSys, which makes face-to-face interaction somewhat challenging. At the same time, the manufacturing of MSys products is strategic for both parties, the quality requirements are high and the product is delicate. Due to this combination the interaction involves quite a lot of e-reporting and information sharing, as agreed in the contract. Hence, the reporting is more formal and structured than in the dyad MSys-EMS1, where face-to-face meetings and "doing together" were more usual.

In the category 'organizing' as a factor affecting supplier relational effort the markers found in the dyad MSys-EMS2 were 1) customer-focused organization, 2) customer-assigned teams and 3) clearly defined processes and roles.

2.3 Competence, attitude and motivation on the individual level

Based on the interviews and observations, motivation and competence on the individual level has an important effect on supplier relational effort. This was visible in all cases and was very clearly expressed by MSys in the

interviews. One individual especially valued by the personnel at MSys in this case was the manufacturing superior at EMS2. This individual was perceived as truly able to keep the things running and hold the fort. This is related to other findings in the data that show that individuals are very important in the relationship.

Appropriate behaviour and respect for the other person also affect relational effort and create a fruitful platform for a better relationship. Reciprocity was visible in the findings: if we are treated well, we will be more willing to put effort into serving the other.

At EMS2, individuals keep their promises. This is perceived as a question of honor and derives also from the cultural background. Another cultural element is the attitude to serving the customer and making things better. An EMS2 informant put it in this way:

"It's my duty – you have to make improvements day to day."

In the category 'competence, attitude and motivation' on the individual level as a factor affecting supplier relational effort in the dyad MSys-EMS2 the markers were 1) a high motivation to serve the customer, 2) a good understanding of the big picture and 3) interest in developing.

2.4 Attractiveness of the buying company

The attractiveness of the customer affects supplier effort on all levels, from the strategic to the operational. MSys is an important customer for EMS2 in many senses. The current sales volume is high; MSys is among the top five customers for the EMS2 group and among the top three customers for the business unit. The business with MSys has grown substantially along the way. The last big step in business was taken a few years ago when the manufacture of certain MSys products was transferred wholly to EMS2. It was a big effort from the part of both parties and a good learning experience as well. The volume of these MSys products is high and gives EMS2 a possibility for mass production and also for developing the process in the long run. Thus, EMS2 has had positive experiences with MSys, along with some noteworthy challenges. MSys also continues to be attractive to EMS2 due to potential new business in the form of new products and engineering services. Discussions on future expectations and opportunities are on-going and this gives EMS2 confidence to plan for the future and to put more effort into the relationship. It was clear from the interview data and from the dis-

cussions that MSys is an important customer and an attractive customer for EMS2. One of the EMS2 informants described it thus:

> *"... What is our relationship with [MSys] like... I think to be honest [MSys] is one of our favourite customers. They tend to get maybe a little bit of most favoured customer status and treatment from us because we have such a long historical relationship. It's a very important relationship to our owner and founder... in the course of my many years here at [EMS2] I've had the chance to work with a number of people [from MSys] and really step by step raise our relationship to quite a significant and important level. That's not to say that there haven't been a few bumps along the road 'cos there is always something comings up, delivery challenges or quality issue, process issues that need to be solved... but I think in generally that we have tried very hard to be a good partner in every sense of the word partner to [MSys] and here we just we think they are a great customer for EMS2."*

In EMS2's day-to-day operations the importance of the customer is visible due to the high volume of actions related to the customer's business. This creates an environment where a lot of work and interaction takes place, and in such an environment staff members understand the importance of the customer. On the individual level this motivates the putting of extra effort into one's work. The interaction with customer also creates situations where people get to know each other and where space exists for discussions to exchange ideas and learn more about the business and essential related issues. A working environment with a lot of customer-specific actions and with a lot of customer-specific interaction generates "natural spaces to make an effort for the customer". The more visible the importance and the attractiveness of the customer are the more likely it is that people will take customer-specific needs into account also in their internal development efforts and plans.

MSys' attraction for EMS2 was explained by one EMS2 informant as follows:

> *It's a good fit in terms of the kind of customers that we look for. That is; a leader in their niche, a high technology company with some unique technology with products that demand quality and reliability and have a long life-time, that is products that continue from generation to generation and some good volume as well. So [MSys] for us really is sort of the ideal fit for the kind of target customer profile that we are looking for... the companies are good match in terms of their technology and quality focus. [MSys] has high tech products. They have good name in the market place for reliability and quality. They are the leader in their*

niche or niches that they serve in meteorology and instrumentation. And that's exactly the kind of customer that we look for."

In another interview the attractiveness of MSys was discussed and the reasonable nature of the company's demands was valued by the EMS2 informant:

"...the fact that [MSys] understands that its supplier has to make a profit as well in order to be successful in the long term. With [MSys] we have, what I would say, is a customer who is reasonable in their demands. It is not that [MSys] only says do whatever you want - [MSys] knows exactly what they want, but [MSys] understands the business and has reasonable demands. They are tough but they are reasonable."

MSys was perceived as attractive also due to the pattern of its demand for the products manufactured by EMS2: demand is constant on a yearly basis. In addition, business with MSys has been a good learning opportunity for EMS2, who have gained valuable experience about the challenging product, process and business of MSys. EMS2 has won other customers as a result of the learning experience with MSys.

One EMS2 informant discussed the mentality of the companies as enhancing the attractiveness of the relationship:

"I think there is a good match between the mentalities of both companies. I think we are both serious technical and engineering companies our focus being design, development and manufacturing, and [MSys] is really in science, behind science is engineering and the instruments that they produce."

In the category 'attractiveness of the customer' as a factor affecting supplier relational effort the markers found in the dyad MSys-EMS2 MSys were 1) a customer highly important and attractive for many reasons, e.g. big sales volumes and future business potential, 2) a 'caring customer' with reasonable demands, and 3) a customer open and fairly easy to communicate with.

2.5 Current relationship and interaction

The quality and the functioning of the existing relationship have an effect on supplier relational effort. Based on the interviews and observations concerning this dyad it can be said that a close and active relationship as well as good cooperation and a common history with its challenges and successes

create a good foundation for further effort. ”Doing things for the customer and doing things together” creates situations where effort is a natural part of operational work. Individuals learn more about the partner, about their processes and about how to do things in a jointly way. Hence a well-functioning relationship facilitates more effort and that effort is more influential due to the learning it involves. Issues can be responded to quickly and the results can be seen quickly, which again motivates continued effort.

EMS2 and MSys have had a business relationship for over 20 years. The relationship has been experienced as a good working relationship with mutual understanding. One of the EMS2 informants described the meaning of this long relationship like this:

> *“We have built up a relationship with MSys that allows both sides to work in a very efficient way and it would be a pity for us not to use what we have already achieved so far to do more. We know how to work with MSys, MSys knows us. So why not build on this basis and try to maximize the results.”*

This emphasizes the importance of learning to know the partner through common experiences. The informant continued:

> *“…a lot of learning has happened. We know what MSys wants. We know what quality expectations MSys has. MSys has learned what they can expect from us.”*

Trust is a key element in any relationship. It takes time for trust to develop between organizations and trust has to be gained between individuals. Therefore shared experiences also along the way are important for building trust. On the organizational level trust can be built based on e.g. good references, but to create trust between individuals requires personal experience as well. An EMS2 informant expressed the idea thus:

> *“…there is a lot of trust and I think a lot of collaboration in solving problems and looking for ways we can build on the relationship we have had and how it benefits both companies.”*

In sum the people at EMS2 were happy and positive about the current relationship and about the interaction with those at MSys. They valued the openness of the interaction and the ability to speak out. This all makes it easy to work together. There are no unnecessary discussions or polemic. According to one of the EMS2 informants:

"The way we work together is fairly easy."

The way of communication and discussion was also described as straightforward and easy. The people at EMS2 and MSys have been able to solve a very challenging conflict situation recently. It has been a good learning experience for both parties; there was open communication despite the critical situation. This was an experience indicating the level of commitment in the relationship. It also deepened trust due to the good outcome.

The markers of the affecting factor 'current relationship and interaction' found in the dyad MSys-EMS2 were 1) the companies have a long shared history with successes, 2) a major conflict was solved successfully, 3) there are cultural differences, 4) the distance between the parties is long, and 5) in regular interaction there is (sometimes?) a formal emphasis.

3 Impact of the supplier's relational effort

What is the impact of supplier relational effort on the relationship and on the businesses of both parties? The informants in the dyad MSys-EMS2 were also asked 'How good or well functioning is this relationship?' The average of all the scores for the dyad MSys-EMS2 was 4.8 (5.6 in the dyad MSys-EMS1). For the MSys informants the average was 3.7 (4.7 in the dyad MSys-EMS1) and for the EMS2 informants it was 5.5 (6.4 in the dyad MSys-EMS1).

Informants were also asked how important EMS2 relational effort was for MSys. The average score was 5.2 (5.6 in the dyad MSys-EMS1). The MSys informants assessed it as 5.2 (5.7 in the dyad MSys-EMS1) and the EMS2 informants also assessed it as 5.2 as well (5.5 in the dyad MSys-EMS1).

Sales volume was also investigated in the dyad MSys-EMS2; EMS2's sales volume to MSys had decreased by 0-5% from 2007 to 2009 (10-15% increase in the dyad MSys-EMS1).

The following impacts were brought up in the discussions and supported by observations. The business relationship develops due to effort. Here, effort includes open discussion, which has created more trust and in turn laid the foundation for good cooperation. The business environment in the relationship feels safe enough for the participants to interact freely and to discuss issues openly. People have learned to know each other, the other company, its business, product and processes, which make it easier to communicate and to work together. The way of working becomes more straightforward and operations become more efficient. Problem solving

becomes more effective and faster. Rapid response and actions become possible. Every action does not need to be separately agreed and invoiced, owing to the atmosphere of trust. Possible extra costs can always be agreed later on. This all brings flexibility. The easiness of the relationship also means lower relational costs and things get done more effectively and efficiently. Low relational costs facilitate interaction at all relevant levels. All this can further strengthen the relationship. The MSys-EMS2 relationship was described as excellent by one of the informants. The relationship between MSys and EMS2 seems to be a strong relationship at least partly due to all the effort made and to past shared experiences such as success in the product transfer operation and in conflict management. The companies share the spirit of a long-term partnership.

The main aim expressed in this dyad, as also in the dyad MSys-EMS1 was to expand the business and become more competitive. This aim drives relational effort; the evidence for this can be seen in the perception that business expansion and better competitiveness can be at least partly due to supplier effort. MSys would not have transferred their strategic production to EMS2 without the supplier's effort. EMS2 is also constantly striving to improve their competitiveness and thus their ability to offer MSys more competitive prices. This means lower total costs in the supply chain. An effort like local sourcing is a good example of effort directly affecting the competitiveness of both parties. With more efficient operations and a more efficient supply chain the parties can enjoy shorter lead times, which reduce the pressure on forecasting and create better opportunities for MSys's sales in terms of shorter delivery times for their products. Time-to-market can also be reduced.

All this improves MSys's possibilities of gaining a greater market share, which again would mean more business for both parties. If the supplier's effort is good and the relationship is working well, MSys can concentrate on their main business, i.e. marketing, selling and new product development. An outcome of the supplier's effort is a competitive, reliable and effective contract manufacturer with consistent deliveries and with fewer quality issues. This improves customer confidence, including for MSys, one result of which is that the reputation of MSys improves. All these points were brought up in the discussions with the informants.

EMS2 has learned a lot as a contract manufacturer in this relationship. They can adapt the lessons learned to other customers as well, to both existing and potential new customers. Although many good outcomes can be achieved by supplier relational efforts, all such effort needs resources. Hence it is always a question of balance between the amounts of resources

needed versus the outcome to be achieved either now or in the future. According to the social exchange view, “Profit thinking can be applied also in social exchange environment. The profit can be said to be the reward (value) less cost.”(Homans 1958; Calhoun et al. 2007)

Appendix 4. DYAD MSys-EMS3 EXPLORATION

1 The supplier's relational effort

The informants of the dyad MSys-EMS3 gave an average score of 4.1 for supplier relational effort (5.6 in the dyadMSys-EMS1 and 4.5 in the dyad MSys-EMS2).The MSys informants gave a score of 2.2 (5.2 in the dyad MSys-EMS1 and 3.8 in the dyad MSys-EMS2) and he EMS3 informants a score of 5.6 (6.0 in the dyad MSys-EMS1 and 4.9 in the dyad MSys-EMS3). In the following sections supplier relational effort will be described.

1.1 Customer-focused operations

MSys is a Key Customer for EMS3, which is a strategic decision made by EMS3. On the operational level the actions are customer-oriented and the people at EMS3 respond quickly to MSys's requests. The Current Account Manager has worked for EMS3 for less than two years and he was characterized as "clearly better than earlier ones" in responding, while things have also improved in this sense from MSys's perspective. On the individual level the customer focus can clearly be seen and serving the customer as well as possible is perceived as a question of honor. One of the EMS3 informants put it this way:

> *"For us the customers are very much 'number one' and important. They have always been and [MSys] is important for us as well just for the product range … We want to make an effort for the customer one way or another; they are very important to us. Without customers we would not have these operations…"*

However, stiffness or non-flexibility of operations on the practical level makes quick responses difficult. In many cases the answer is that the request cannot be fulfilled in the given time frame. For example, in the case of extra new demand the Buying Cuttomer has to wait for an answer until the weekly commitment meeting at EMS3 has taken place. Only after that can answers can be given concerning new orders. One of the MSys informants expressed it this way:

"... to be direct... at [EMS3] almost anything that differs from the normal - it is terribly difficult to get it through..."

On the operational level a lot of expediting takes place. It seems to be very important and a lot of effort is put into it. The work at EMS3 production units strongly emphasizes operational actions and a lot of resources are used for controlling the order-delivery chain. The controlling of deliveries seemed to be more or less continuous and does not really indicate the kind of customer-specific supplier relational effort that is the interest of this study. The need of control can be an indication of a situation where the operations management is not working properly and therefore constant human control is needed. The impression based on the interviews and observations was that EMS3 is more reactive than proactive in their operations.

Little discussion takes place about developing things. The aim was more to fulfil the order as well as possible. Some checking of customer forecasts is done and possible corrections are communicated. A demand simulation was done once a week at the EMS3 production unit and the feedback from the simulation in form of a delivery plan was sent to MSys. According to the EMS3 informant very few comments were received from MSys concerning this plan. MSys receives some priority in production.

There is no regular reporting between EMS3 and MSys. There was some in earlier years. Currently, reporting occurs only in case of major problems, when extra control is required, and the reporting procedure is agreed separately. Delivery reliability is measured, but the only issue related to it brought up in discussion was that MSys measured it "wrongly" until it was corrected on the initiative of EMS3. There was no discussion how this reliability indicator is currently followed or communicated or how the things are developed based on the indicator. There is significantly less reporting in this dyad than in other two dyads.

The elements of supplier relational effort in the category 'customer-focused operations'; found in the dyadMSys-EMS3 were 1) a customer-focused organization and 2) people working with a customer focus.

1.2 Customer-focused internal development

In customer-focused internal development EMS3 differed significantly from the other two suppliers in this study. Relatively few examples of this kind of supplier relational effort were observed. In the dyad MSys-EMS1 there were many signs of and discussions about customer-focused internal development. Also in the dyad MSys-EMS2 the informants strongly empha-

sized a development orientation in their cooperation with MSys, which was supported by examples of already implemented development efforts. In both dyads 1 and 2 they emphasized that they are actively trying to make customer needs a driver for internal development efforts on all levels.

Developing EMS3 purchasing was discussed, and it was also the main development effort being made by the Account Manager at the time of the research. The developing of purchasing focused on the re-planning of buffer stocks down the supply chain. No wider discussion occurred.

EMS3 carries out a customer satisfaction survey annually and this way they also receive feedback from MSys. The process for utilizing the survey results to improve customer satisfaction was not revealed in the discussions. How efficiently and effectively the survey results are used in developing operations remained open. In comparison, in the dyad MSys-EMS2 a customer satisfaction survey was also carried out and the informant explained the post-survey process and the principles according to which the results are used to improve operations. EMS3 is running a Vendor Managed Inventory (VMI) for MSys, but no development actions, initiatives or desire concerning the VMI was brought up. It was simply stated that "VMI is working as usual".

In sum the only issues related to customer-focused internal development were purchasing initiatives and the customer satisfaction survey. To give an example, when one EMS3 informant was asked about what customer-specific development efforts were made he was unable to mention any and instead he started to wonder what could be done in the future. In this respect there was a significant difference compared to the discussions with the informants of other two suppliers. On the operational level at EMS3 no examples at all of any customer-specific internal development efforts were given nor was there any indication of a desire to develop. There was no discussion on any level about developing efficiency in production or overall competitiveness. Efficiency in production was not measured or controlled, according to the discussions with the informants. At least, the management of operations was not stated to rely on efficiency or performance measures. No examples of customer-specific production technology development were given either. Only on the strategic level did the informant express the desire to develop the production technology together with the customer.

Nevertheless, the personnel at EMS3 were all very motivated to work hard to serve the customer on daily basis. The desire to develop internal issues, efficiency and competitiveness was not present in the research data. This was a significant difference compared to the other two dyads.

Very few markers of supplier relational effort in the category 'customer-focused internal development' were found in the dyad MSys-EMS3.

1.3 Interaction

In daily operational issues EMS3 and MSys communicate actively. Persons from different operations interact with each other and. cooperation between individuals functions well. Interaction is concerned mainly with taking care of daily business on the operational level, including discussing issues, solving problems and controlling deliveries. On the strategic level the companies have had some informal discussions and meetings recently. A good example of the "increasing interaction" mentioned by an EMS3 informant was the participation of EMS3 in MSys's new ERP training programme. In this dyad there were no regular meetings between the parties, which was a significant difference compared to the dyad MSys-EMS1. Regular meetings used to be held in earlier years, e.g. review meetings and production weekly meetings. At the moment, interaction was related to the handling of operational actions, solving problems and controlling things. In this sense the dyad MSys-EMS3 differed significantly from the other two dyads. There is a lot less interaction overall in this dyad than in other two dyads.

The updating of the contract had not been finished the previous year due to the challenges in it. It was proposed by EMS3 to improve the forecasting procedure instead, and this was decided. However, the forecasting has not improved and the contract has still not been updated.

No problems in communication or interaction between individuals were mentioned, but open discussion appeared to be missing. There is no place for proper dialogue at the moment. Only a few face-to-face meetings have been held lately between EMS3 and MSys. Meetings have been set up basically at the customer's request, and only in the case of major problems. EMS3 representatives have not properly prepared themselves for these meetings and typically another follow-up meeting has been needed to resolve the issue. The people in the production units at EMS3 have mainly communicated only via e-mail and the telephone with MSys. The MSys management has visited the Estonian production unit once.

The markers of supplier relational effort in the category 'interaction' found in the dyad MSys-EMS3 were 1) interaction mainly via e-mail and phone and little open discussions, 2) a few visits only and 3) occasional meetings only.

1.4 Joint development

EMS3 and MSys have had discussions on the strategic level in order to find shared future possibilities. There were no other actual signs of joint development efforts on any level. In this sense the dyad MSys-EMS3 is different compared to the other two dyads, where "developing together" was strongly emphasized both verbally as a desire and in the realization of various practical measures. To give an example EMS3 is not actively involved in forecasting. They expect the customer to provide a good forecast for them; the message was more along the lines 'if we do not have an accurate forecast we cannot operate well'. Another example indicates the low level of desire EMS3 has to develop and to expand its business with MSys. An EMS3 informant said:

> *"... It's really hard for me to start to talk with MSys about what more we could manufacture... I haven't done it... because anyway I have a limited capacity in use."*

The" doing together" spirit was very much visible in the dyad MSys-EMS1, but in this dyad it seemed to be almost completely absent. "Doing together" and "developing together" go very closely hand in hand, as was seen in in the dyad MSys-EMS1. If one is absent, it is hard to have the other. However, on the strategic level some intentions for developing together were seen.

No markers of supplier relational effort in the category 'joint development' were visible in this dyad.

1.5 Summary of the supplier's relational effort in the dyad MSys-EMS3

Doing and motivation on the individual level was good. Hence supplier operational effort was good. The level of developing was modest and the desire to develop operations and wider entities was very much lacking. Basically, only the top management expressed a development orientation. Perceiving the bigger picture or thinking of developing a bigger entity was not typical in this case. For example, neither the supply chain as a whole nor the competitiveness of EMS3 was really discussed. Contradictory views were expressed both internally and between the case companies. Strict boundaries seemed to exist between functions or work positions and the feeling of "doing together" was not visible either internally or between the parties. Operational doing was heavily emphasized.

2 Factors affecting the supplier's relational effort

2.1 Strategy and objectives

EMS3 considers MSys a strategic customer. There was some mismatch between the strategies of EMS3 and MSys, leading to a situation where the respective views were not congruent. In this dyad the companies did not have congruent strategies or objectives. The fact that MSys is a key customer for EMS3 increases EMS3's effort and currently this can be seen on the strategic management level as active discussions concerning future prospects. But supplier relational effort is not very visible on any other level, and the desire to increase the volume of business with MSys is missing as well. The motivation is missing and many issues were experienced as troublesome.

Conflicting views on issues were observed both internally and between the companies. For example, the reasons given for why the contract was not renewed or production transferred were not convergent. The EMS3 strategic level informant had a fairly good understanding of the big picture and was clearly trying to build a foundation for the relationship. But does he get a response? Is his own organization aware of the strategies and objectives, and are they willing and able to adapt them?

Concerning the category 'strategy and objectives' as a factor affecting supplier relational effort it can be concluded that in the dyad MSys-EMS3 there is poor strategic fit, but the potential for better fit exists.

2.2 Organizing

EMS3 is a customer-oriented organization. The key account manager takes responsibility for the relationship with MSys and each production unit has customer support managers who act as contact persons with MSys on both technical and commercial issues. On the operational level issues are taken care of with the customer in focus, otherwise people work quite independently taking responsibility only for fulfilling their own duties. A development orientation and a wider perspective on issues were not visible in the organizational culture. Things are done more or less in the way they have been done before and the consequences are visible.

In the category 'organizing' as a factor affecting supplier relational effort it can be concluded that in the dyad MSys-EMS3 the supplier has 1) a cus-

tomer-focused organization, 2) customer-assigned personnel, and 3) somewhat confusing business processes.

2.3 Competence, attitude and motivation on the individual level

A "customer is important" attitude is visible at EMS3 and the motivation to serve the customer is high. Situations are handled as well as possible, and effort and motivation on the individual level are good. On the operational level at EMS3 a good working attitude was evident: 'things are taken care of and that's it'. The EMS3 informant said:

"It is a question of honor to be able to serve the customer".

Differences were observed in competence levels. For example, at one production unit the customer support manager had taken care of the relationship with MSys and its products for very long time, and was very competent in his work. His competence played a very important role in the manufacturing of MSys's products and his partial absence can be seen in the company's business operations. He is now part-time retired, which makes the running of operations somewhat challenging. For some products EMS3 is the only supplier and the documentation in not complete, which makes switching suppliers problematic. The motivation of individuals is somewhat weakened due to time pressure, where the customer often places an order at the last minute and in a big hurry.

The people at EMS3 shared a common view and attitude: "MSys is poor at forecasting". This was brought up continually in all the interviews and it was highly emphasized. In comparison with the other two dyads many of the difficulties in this dyad were explained by poor forecasting. There were few signs of trying to understand the wider perspective or to develop issues by active participation. "The problem is theirs" was a prominent attitude. Another difference in attitudes between this dyad and the other two dyads was that the EMS3 informants often saw as troublesome issues which the others might have seen as opportunities. For example, MSys was described by the informants as a "product development house" and "engineering house", which was seen an opportunity for some informants in the other dyads and a problem for some informants in this dyad. To offer a wider range of services, e.g. total responsibility for manufacturing or design for manufacturability, was seen as an opportunity in the other two dyads. "Engineering house" was seen as troublesome due to non-flexibility and due to unclear processes in the dyad MSys-EMS3. In attitudes, the discussions

with the EMS3 Informants included more searching for reasons and guilty parties than considering how to change and develop things. This was very different in the dyad MSys-EMS1 where guilty parties were not discussed; instead the discussion focused on development and doing things together. Doing or developing together was rarely discussed in the dyad MSys-EMS3; instead each company only bears their own responsibility. This was typical internally as well as between the companies in this dyad. In manufacturing, although people know they are working for MSys, it remained somewhat unclear whether they are motivated to make customer-specific effort or whether they are just doing their job as well as possible whoever the customer happens to be.

The EMS3 informants had a rather simplistic view of the functioning of this relationship; if a proper forecast were available everything would work, but because MSys cannot forecast, problems occur and longer delivery times and bigger buffer stocks are needed.

The product transfer to competitors was a huge blow and disappointment for EMS3. They felt that MSys had not been acting openly or fairly.

With respect to the category 'competence, attitude and motivation on the individual level' as a factor affecting supplier relational effort in the dyad MSys-EMS3 it can be concluded that the supplier showed high motivation to serve the customer.

2.4 Attractiveness of the buying company

MSys is among the top 10 customers for EMS3. EMS3 considers MSys a strategic customer. MSys is an attractive customer to EMS3; both strategic fit and the product fit are good according to the EMS3 informants. MSys was seen as a successful and growing company with a lot of potential business for EMS3. All the informants considered MSys to be important and attractive, although this was rather modestly stated. The perceived troublesomeness of the customer seemed to moderate their attractiveness.

With respect to the category 'attractiveness of the customer" as a factor affecting supplier relational effort in the dyad MSys-EMS3, MSys was perceived as a highly important and attractive customer for many reasons, including sales volumes and future business potential.

2.5 Current relationship and interaction

There is less interaction between the companies in this dyad than in other two dyads. The interaction occurs mainly on the operational level, i.e. for

purposes relating to the order-delivery process. There are few meetings between the companies and no meetings on a regular basis. For this reason there is no natural space for free discussion. The interaction can be described as passive compared to that in the other two dyads; neither party makes more than minimal initiatives to increase their interaction. The communication cannot be characterized as open, either. EMS3 felt they were treated unfairly during the product transfer to their competitors. This information came late, after EMS3 had used a lot of resources in planning the same product transfer from one of their production units to another one. Contradictory views were also expressed by the informants on this issue. There are tensions in the relationship, and hence MSys is trying to act carefully to maintain the relationship and ensure the delivery of their products. The situation is challenging due to the fact that the volume of the business has been falling, while at the same time there are products which it would be challenging and risky to move to another supplier. The poor level of documentation also makes product transfers difficult.

On the operational level the EMS3 informants felt that the relationship was good and convenient. One of the informants put it this way:

"It is good to work with [MSys] people, the buyers are nice".

In this dyad, individuals working in the interface had very differing views about the quality of the relationship. Another common factor was that all of them thought that they got along with each other very well. On the strategic level the EMS3 informant described this relationship as a 'worse than an average customer relationship'. The purchasing procedure is not as professional as it should be and the relationship is superficial.

The markers of the affecting factor 'current relationship and interaction' found in the dyad MSys-EMS3 were 1) the companies have a long shared history, 2) disappointments have occurred, and 3) there is little interaction outside daily operational issues.

2.6 Other remarks

The operations management methods in this dyad were felt somehow to be confusing by the informants. MSys has products where the material flow is managed based on orders and they have products where the material flow is based on forecasts. In between there are a lot of items controlled on the basis of inventory levels. Hence there are methods like make-to-order, assemble-to-order and make-to-stock used, and the same item can be man-

aged by several different methods. This lack of clarity in operations management hinders the ability to make an effort and develop operations. It is difficult to make an effort or focus effort in case the time and resources are used instead for settling problems and correcting situations. Issues have to be handled case by case instead of working along the supply chain according to the plan. Inadequate operations management also leads to a situation where things tend to be done at the last minute and in a hurry. This may also be a commonly accepted way of working in the company culture or it may be due to a lack of resources or due to the inefficient utilization of resources. MSys faces challenges in operations management where the whole supply chain is concerned. But this is the same for all the cases studied here and it should not therefore cause extra trouble in one specific case. There seemed to be differences, however, in suppliers' toleration of the possibly inadequate operations management and how willing and able they were to help MSys in operations management-related issues.

EMS3 operations management and processes were felt to be inflexible. Such inflexibility can also explain why the change situations were experienced as troublesome. However, sufficient amounts of resources are a prerequisite for making an effort.

3 Impact of the supplier's relational effort

What is the impact of supplier relational effort in this dyad for the relationship and business of the companies? Or, conversely, what is the impact of the lack of relational effort compared to the other two cases? Also In the dyad MSys-EMS3 informants were asked 'How good or well functioning is this relationship?' The average of all scores given for the dyadMSys-EMS3 was 4.1 (5.6 in the dyad MSys-EMS1 and 4.8 in the dyad MSys-EMS2). The MSys informants average score was 3.2 (4.7 in the dyad MSys-EMS1 and 3.7 in the dyad MSys-EMS2) and the EMS3 informants' average score was 4.8 (6.4 in the dyad MSys-EMS1 and 5.5 in the dyad MSys-EMS2).

The MSys-EMS3 informants assessed the importance of EMS3's relational effort for MSys with an average score of 4.6 (5.6 in the dyad MSys-EMS1 and 5.2 in the dyad MSys-EMS2). The MSys informants gave an average score of 4.0 (5.7 in the dyad MSys-EMS1 and 5.2 in the dyad MSys-EMS2) and the EMS3 informants gave a score of 5.1 (5.5 in the dyad MSys-EMS1 and 5.2 in the dyad MSys-EMS2).

The sales volume in the dyad MSys-EMS3 had decreased 0-5% from 2007 to 2009 (10-15% increase in the dyad MSys-EMS1 and 0-5% decrease in the dyad MSys-EMS2).

The following aspects were brought up in the discussions and supported by observations. The amount of interaction and communication had decreased. For example, all regular meetings have been ended. There were situations where the interaction was not experienced as open. In this context people will not learn to know each other. Trust is not developing positively. However, on the strategic level the discussion was continuing and opportunities were discussed in a fairly good atmosphere.

Due to the fact that on all levels there are so few meetings, there are no natural situations for open conversation and no new issues or ideas can emerge. The operational interaction relies mainly on e-mails and phone calls of the "question and answer" type. A wider dialogue is missing. The big picture is not clear or most people are not really interested in it. The overall efforts at development are modest. This may be due to the fact that none of the parties really makes a significant relational effort. A lot of time is spent on control and on solving issues, operations are not well planned and development is not done either internally or together. Processes are unclear, troublesome and inefficient. Operations management is incomplete: MSys operations management is unclear and EMS3 operations management is inflexible. As a result effort and resources are spent on accomplishing the basic task, i.e. delivering the product on time.

The amount of business done in this dyad has not grown. Instead there have been product transfers from EMS3 to other suppliers.

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