CUSTOMER-SUPPLIER INTEGRATION IN THE FOREST INDUSTRY

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1 INTRODUCTION

1.1 Research background

The management of strategically important customer and supplier relationships has been emphasised in recent literature. Some research findings indicate that strategically managed long-term relationships may have a positive impact on the firm's financial performance (e.g., Carr & Pearson 1999, 497, 516). However, it has also been argued that business relationships cannot be created, owned, managed or controlled by any single company alone (e.g., Ford & Mouzas 2007, 5). Company managements face complicated optimisational challenges regarding their operations, roles and strategies (Möller & Svahn 2003, 218) especially in business relationships and wider in networks. Firms are no longer operating as separate and independent entities with their own goals and strategies: they also need to match them against those of their customers and suppliers. In integrated customer-supplier relationships the roles and responsibilities of industrial customers and suppliers are becoming increasingly blurred, confused and complex.

Due to competitive pressure, customers and suppliers need to facilitate multi-level interaction, explore opportunities for leveraging skills, achieve integration within and across firms, think long-term and look for new win-win solutions (Spekman & Carraway 2006, 12). The similarity of tasks between supplier and customer is emphasised in the current literature. Company activities that have traditionally been viewed as internal have become joint, and no longer under any single company's responsibility and control. (Ford & Håkansson 2006, 249, 252.) According to Keast et al. (2007, 18, 26), increased integration between customers and suppliers means that individual entities are losing their autonomy and are becoming increasingly interdependent: the parties concerned have adopted a holistic view, although they still represent their own organisations. The concept of integration is thus closely related to efforts to overcome intra- and inter-organisational boundaries, a shift from local to system optimisation (Romano 2003, 122). The parties in an integrated customer-supplier relationship operate as a unified and joint team in dealing with their end customers and other market actors. The key questions thus concern how to overcome organisational boundaries between a supplier and a customer, and how to influence and contribute mutually in a relationship, even though both companies still have their own goals.

This research focuses on customer-supplier integration in vertical business relationships. This kind of relationship has been studied extensively since the 1980s, especially in the literature on marketing channels and on the management of business relationships. However, it seems that the concept of integration is ambiguous, and is sometimes understood as being quite narrow in scope. There is a multitude of theoretical approaches, and a host of integration-related concepts such as cooperation, coordination, collaboration, commitment and partnering. However, there is very little research explicitly analysing the conceptual differences between integration and the related concepts, and especially taking into account the various theoretical approaches. Therefore, it would be useful to have a deeper and more comprehensive picture of what integration actually means in vertical customer-supplier relationships.

The concept of integration has been primarily studied in the contexts of organisational or strategic management (e.g., Lawrence & Lorsch 1969; Teece et al. 1997), vertical marketing channels (e.g., Mattsson 1969; Hyvönen 1990), and supply-chain management (e.g., Bowersox et al. 1999; Bask 2006). Despite the substantial number of studies concerning marketing-channel and vertical relationships, very few researchers (e.g., Larson 1992; Yorke 1990) have focused on the processual perspective, i.e. taking into account the evolutionary development. Moreover, the informal aspects of integration have attracted less attention than the formal aspects, although both perspectives are needed. There are various dimensions, and the degree and level of integration may vary considerably depending on the relationship, aspects that are quite poorly covered in the current literature.

Therefore, there is a need for a holistic conceptualisation of integration in customer-supplier relationships in industrial markets, although this is quite a challenging task. The concept should be extended to incorporate the context of vertical relationships, in which integration is often related to formal governance. First, a clear distinction should be made between integration and related concepts. Secondly, integration should be defined more widely than has traditionally been the case, to include both structural and processual elements. As a concept it is both versatile and ambiguous. It is versatile in that it offers various perspectives and alternatives, while at the same time it is ambiguous because it still lacks preciseness, rigour and clarity. For example, the concepts of customer and supplier integration have been treated mainly as separate and connections between them do not seem to be clear. In addition, integration is difficult to measure empirically and there is little evidence of how it improves operational performance (Van der Vaart & van Donk 2004, 21).

In general, integration can be studied at three levels: intra-firm, inter-firm vertical or horizontal, and inter-firm network (Figure 1). This research focuses on vertical-relationship integration, i.e. customer-supplier integration, the important role of which is recognised in marketing-channel and supply-chain contexts (e.g., Bask 2006). It is always embedded in a wider network context, which means that it may even guide wider network integration. Moreover, intra-firm integration may have a supportive role.

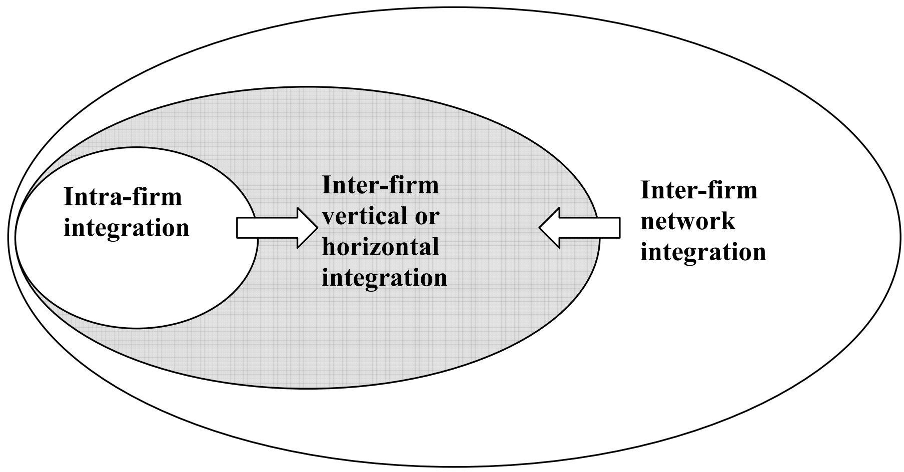

Figure 1 Three levels of integration

In this research elements constituting customer-supplier integration are identified and analysed from both the supplier's and the customer's perspectives. This mutual approach makes it possible to identify perceptual gaps between parties: a supplier and a customer do not necessarily share the same view concerning the nature of the relationship, and these perceptual gaps may even put a damper on it (Barnes et al.0 2007, 662─663), or at least hinder the process of integration. This process may develop in two directions: towards closer integration or towards disintegration. Sometimes it is not possible or reasonable to share congruent views regarding the future of the relationship. Disintegration in a dyadic business relationship may be a clear strategic choice, but it may also be evolutionary without any clear, predetermined strategy.

1.2 Research purpose and questions

The purpose of this research is to offer an analytical description of the concept of customer-supplier integration. The aim is to clarify the concept in the context of industrial business relationships by defining what customer-supplier integration is, and what the key elements constituting an integrated relationship are. This research is mainly descriptive, but also contributes to theory development.

In order to arrive at the analytical description the following three research questions were addressed:

1. Which theoretical approaches and concepts are relevant for describing customer-supplier integration?
2. How can customer-supplier integration be conceptually described in terms of both structure and process?
3. What contextual elements affect customer-supplier integration?

This research builds on various theoretical approaches and ideas. Consideration is given to the definitions of integration as well as to the integration-related concepts discussed in the current literature. Relationship governance, and especially the concepts of power and control, dependence and interdependence, and trust provide a framework and a basis on which to develop a comprehensive picture of an integrated relationship. Existing relationship-governance forms and mechanisms are thus related to the structure and the process of integration. The traditional view is that the higher the degree of formal governance, the higher is the degree of integration, but this could be challenged.

The processual perspective on integration has attracted less attention, although it is at least as important to understand the relationship-development process and the progress towards either closer integration or disintegration, which ends in a certain integration structure. The process implies constant interplay between actors, activities and resources in a relationship, and it is related to the longer-term institutionalisation process. The emphasis on and the importance of the various structural dimensions of integration depend on the relationship and its development, and the structure and the process are closely connected. The structure is always an outcome of the process, however: it may be a conscious strategic choice, or it may emerge as unplanned and evolutionary, even unconsciously.

Customer-supplier integration in a specific vertical relationship cannot be understood out of its context, and it is necessary to identify the contextual elements that affect the integration process. Contextual elements refer to both the relationship in which integration occurs, and to the business or market environment of both the customer and the supplier. An integrated relationship cannot operate in isolation, and should be connected to supply-chain or marketing-channel integration.

This study will be conducted in the forest industry, for which studying integration has also managerial value. Customer-supplier relationships in the forest industry often face a clear need to change. The increasingly competitive market environment and the changing end-customer needs and demands are creating clear pressures for suppliers and customers to operate as a joint team with regard to their end customers.

The resulting conceptualisation will take the form of a theoretical framework for use in the academic world, but also a practical tool for business management. The framework may help managers in their organisations, and most importantly in their relationships with customers and suppliers, to make appropriate relationship-specific decisions. Disintegration is required sometimes, and this framework may also help in the making of such decisions. It should also be of use in assessing and evaluating the role and significance of customer-supplier integration in the forest industry. The basic idea behind integration is that the relationship is able to exploit some team effects that companies alone cannot produce. Such effects have traditionally referred quite narrowly to economic, and more specifically cost-efficiency, benefits. However, they can be understood more widely as a combination of economic and more behavioural non-economic effects, which may have indirect economic consequences in the long term.

1.3 The theoretical background of customer-supplier integration

This research draws on various theoretical approaches: vertical-marketing channels and the political-economy framework, the interaction and network approaches (of the IMP School), relational contracting, resource-dependence theory, and supply-chain management. In addition, the strategic-management literature is utilised in as far as it concerns business relationships. Integration in the marketing-channel-management context is often focused on the vertical and the formal, referring to legal integration even within a changed ownership structure, or at least under a contractual arrangement, while the interaction and network approaches focus more on the informal and social aspects in emphasising trust, tight, close and mutual relationships.

Cross-paradigmatic efforts are required in order to enhance understanding of a complex phenomenon such as customer-supplier integration. The political-economic framework and the IMP's interaction and network approaches cover several disciplines, and are valuable in this sense. The IMP School draws on social-exchange and resource-dependence theory, which are also highly applicable to integration, and the model of actor bonds, activity links and resource ties is utilised to describe the process. The IMP School mainly adopts the processual perspective, focusing on relationship-development processes, whereas the political-economy framework captures both the structural and processual dimensions of vertical customer-supplier relationships.

Relational contracting is to be distinguished from discrete contracting. Relational contracts are often complex and long-term in nature, and they are based on mutuality of interests and bilateral governance mechanisms rather then authoritative or market mechanisms. One important question is thus whether existing governance forms and mechanisms support mutual influence in a relationship. Very little is known about how both formal and informal governance forms and mechanisms are connected. An integrated relationship is not achieved through formal or informal governance alone, and both are needed. The relational-contracting view is valuable because it acknowledges both the formal, and the informal, more social aspects of relationship governance.

Different approaches represent different attitudes in terms of whether they deal with mainly operational or strategic issues. Often the term integration is quite narrowly related to the operational context. For example, much of the literature on supply-chain management deals with operational aspects. A strategic perspective is also required, however: this means that a relationship becomes a strategic resource or asset, which gives it added value in the market. It has been even argued that business strategy cannot be realistically regarded as an individual company activity, and that the outcomes of individual companies are less the result of individualistic strategies and more the result of interaction (Ford & Mouzas 2007, 3–4). The scope of the strategy and of strategising crosses organisational boundaries in customer-supplier integration. Interdependencies among companies make the strategy process interactive, evolutionary and responsive, instead of independently developed and implemented (Gadde et al. 2003, 361). Extending the perspective from intra-firm to inter-firm, integration (Teece et al. 1997) is not an easy task, because management models that work well internally within companies may no longer work for relationships.

1.4 An overview of the forest industry as an empirical research setting

The forest industry incorporates the mechanical forest industry and the chemical forest industry. The former, also called the wood-products industry, comprises the sawmill industry, wood construction, and the wood-based panel industry (e.g., plywood), for example. The chemical forest industry comprises the paper and pulp industry. Converting and packaging are also included in the forest industry, as well as new business areas utilising wood (Finnish Forest Industries Federation).

The industry is not homogeneous, and incorporates different business areas in which the only common denominator is the use of wood as raw material. Its products have traditionally been characterised as relatively low in added value, and the whole industry is considered to be production-oriented, defined by heavy investments focused on raw materials. It has been recognised that in order to maintain competitiveness it will have to find new business concepts that are closer to the markets in the value chain, and which are based on end-customer needs rather then production capacity. This means that it will be necessary to change from a wood-centred view to a wood-utilising view. (Pohjoinen puutuoteteollisuus 2002, 46)

The paper and plywood industries were chosen for this study, paper representing the chemical and plywood the mechanical forest industry. The plywood industry belongs to the wood-products branch: plywood can be used in construction, transport, furniture and parquet flooring, for example. The paper industry covers heterogeneous business areas classified in many ways according to end use, raw material or printing method. Paper forms and end uses vary considerably, from heavy paperboard to thin tissue. This research focuses on printing papers (e.g., magazine and newsprint), fine papers (e.g., office paper) and label papers.

The forest industry is an appropriate setting in which to consider integration for four main reasons. First, customer-supplier relationships in the paper and plywood industries have traditionally been long-term and well established in nature, but they often face new kinds of challenges and the need to change their traditions in the current competitive environment. On the one hand, both suppliers and their customers face similar challenges related to the business environment, such as the increasing prevalence of electronic media: thus they could be considered to be in the same boat. On the other hand, it has been recognised that customers' negotiating power has, generally speaking, increased (Raunio 2007). In this kind of change process it is increasingly important to focus on clearly predetermined strategic partners in order to achieve added market value.

Secondly, the paper and plywood industries cover various businesses and products in different end-use areas. Business relationships vary from the low-volume, local and relatively simple to the high-volume, multi-level, complex, and international or global. The variety of businesses and relationships makes it possible to gather rich data, which will shed light on various perspectives of integration. The author's own long experience in and pre-understanding of the paper industry supports the choice of industry. Established contacts facilitate relatively easy access to all relevant data.

Thirdly, the forest industry in general, and the paper and plywood industries among the most important industries in it, has still managed to maintain its important position in the Finnish economy. Its products accounted for close to 36 per cent of the country's total export value, although the share decreased by 10 per cent between 2003 and 2005 (Statistical Yearbook of Finland 2006, 263). It has nevertheless faced several challenges on the home front in the current and previous decade, such as changing market conditions, consolidation, and market expansion.

Fourthly, there are number of people in the Nordic countries, and in Finland in particular, conducting research on forest-industry management. For example, Laurila (1992) studied business change in a paper company, and technological discontinuities in the Finnish paper industry (Laurila 1998), Sajasalo (2003) focused on the internationalisation strategies of Finnish forest-industry companies, and Lamberg et al. (2006) studied the evolution of competitive strategies in global forest companies. However, there have been relatively few studies on business relationships in the forest industry, and especially few in which qualitative methods are adopted. One example is Alajoutsijärvi's (1996) dissertation on dyadic relationship development between the Kymmene Corporation and Valmet Paper Machinery.

Although internationalisation has always been inherent in the Finnish forest industry, the companies faced revolution in the 1990s when market expansion happened through acquisitions and mergers. It has been anticipated that consolidation will continue, but rather in the context of internationalisation and within the industry regardless of the national origins of the companies. Consolidation is not likely to lead to a situation in which there is no room for local niche players, however. (Sajasalo 2003, 172; 2004, 424.)

The paper industry has also suffered from declining consumption in the mature markets of Europe, while in emerging markets, especially China, consumption is growing rapidly. It is also increasing in Russia, Eastern Europe and other parts of Asia. Newsprint and office-paper consumption has decreased in the United States, Canada and Europe, but magazine publishers seem so far to be managing to defend their positions. (UPM Annual report 2006; Jurvelin 2006.) The forest industry has had poor profitability performance since the 1990s (Juslin & Hansen 2002, 71). Structural overcapacity has led to low prices, without reflecting the increased production costs (UPM Annual report 2006; Jurvelin 2006; Puustinen 2006). In 2004 the return on investment for Finnish forest-industry products was only close to five per cent (Statistical Yearbook of Finland 2006, 200). It has been estimated that in recent years all Finnish forest companies have, in fact, lost much of their value (Europaeus, 2007). Between 2006 and 2008 the big Finnish paper producers made significant restructuring efforts to decrease production capacity by shutting down paper machines, but it is too early to say whether these actions were sufficient to balance the market demand and supply.

A further challenge is product homogenisation, which in the paper industry means that the paper quality and properties of the different producers have become very much the same. For example, coated magazine papers were speciality products in the 1980s, but today they are clear bulk products. The whole product concept could be questioned. “The product” will lie not in quality improvement, nor even in newly developed products, but in the company itself (Alajoutsijärvi & Laurila 2006). The company’s image and reputation matter: for example, environmental issues have become increasingly important to large and international customers.

Traditionally, the forest industry has been production-oriented, but it has been anticipated that the various companies will move gradually from a production and commodity mentality towards adding value through processing and marketing (Juslin & Hansen 2002, 75─76). Developing the customer’s active role and integrating customers into the supplier’s product development and system is suggested as one way in which competitive advantage can be maintained (ibid., 486). Involving customers is not an easy task, however, because they need clear motives and incentives to become involved with their suppliers.

Another thing affecting the breadth and depth of customer-supplier integration is the industry tradition: the Finnish paper industry has traditionally integrated more upstream with suppliers of raw materials such as chemicals and pigments, than downstream with customers, who are mainly located abroad. Customers have even been said to have an unclear and non-integrated role in product development and differentiation. (Haarla 2003, 142, 208; Lamberg & Laurila 2005, 1819─1820.) Large and global customers are looking for suppliers that are able to become global along with them, and which can meet their needs regardless of location (Juslin & Hansen 2002, 73).

All the above-mentioned changes mean that the importance of integrated customer-supplier relationships has increased in the forest industry. The companies can no longer operate as independent and separate entities. External changes in the market environment and company-internal changes such as mergers and other rearrangements have demanded considerable management time and attention at the cost of maintaining important business relationships. However, many forest-industry companies have already recognised the need to integrate with their partners, but such integration has so far remained primarily an operational issue. For example, an increasing number of paper and forest companies are currently pursuing system-to-system integration with customers and suppliers, although system compatibility and cost factors may still hinder development (Shaw 2002, 45–46). Large forest- and paper-product customers are narrowing the number of suppliers they deal with, and are expanding the breadth of the relationships they have retained. Customers want greater stability and predictability in prices and supply. Closer integration and technology-enabled information are already helping to make this happen. (Hayhurst 2002, 40–43.) However, technology alone is not sufficient in customer-supplier integration. Technology refers to connectivity, but it is not the same thing as integration. True customer-supplier integration is not only virtual: it is acknowledged that face-to-face interaction and communication cannot be totally eliminated.

The forest industry has suffered considerably from price and demand fluctuations for a long time, and this has affected customer relationships negatively. Merely anticipating changes was not considered sufficient in the face of the cyclical changes. The relationship-management approach was suggested instead, according to which managers truly believe that they can affect and change the underlying logic of their industry. (Alajoutsijärvi et al. 1998a, 19–20; 1998b, 55; 2001, 490, 495.) Today both suppliers and customers struggle with the same kinds of problems and face similar external threats, including the increasing use of electronic media and the declining demand for printed advertising. It seems insufficient for the single firm to rely merely on relationship management and strategies, and a new perspective entailing the formation of joint supplier and customer teams is needed. This would clearly mean blurring organisational boundaries and finding new roles that hold no respect for the traditional set-up. Both partners need to understand each other’s role and earnings logic to ensure future efficiency, effectiveness and value creation.

1.5 Research design and methodology

The qualitative approach was considered the most appropriate in order to develop an analytical description of customer-supplier integration. The aim is to gather rich empirical data in the forest industry that will shed light on the various aspects of integration. Qualitative research aims at holistic description by taking the reader into the multiple dimensions of the problem. Therefore, the multiple-case study seemed to be appropriate in terms of comparison and analysis. Each individual case forms a valid foundation for cross-case comparisons, and ultimately for the resulting conceptualisation. The evidence from multiple cases could be considered more robust than that in single cases.

The supplier in question is a big and global forest-products company. The cases examined are six different customer-supplier relationships. The customers selected represent different business and product areas. The idea was to have versatile and different cases in the paper and wood-products industry, so that the integration phenomenon could be described from various angles. The nature and type of relationship also differs between the cases because they involve local, international and global relationships.

Face-to-face interviews comprised the main data source, although public and private written material was also used. I also benefited from free discussions with management and my own practical business experience in the forest industry. I conducted seventeen face-to-face interviews and one telephone interview. The final case-study reports encompass the perspectives of both parties, and also draw on written material. The case-study descriptions and cross-case analyses form the empirical part of this study. The comparisons and analyses are used in giving content and meaning to the developed theoretical framework. A conceptualisation of customer-supplier integration is the outcome, derived from both the existing literature and the empirical evidence. The reasoning logic is abductive, which means confronting the theory with the empirical world more or less throughout the research process (Dubois & Gadde 2002, 555–556).

The study comprises six chapters. Chapter 1 is the introduction, and includes the research background, purpose and questions, the theoretical background to customer-supplier integration, an overview of the forest industry as an empirical research setting, and a description of the research design and methodology.

Chapter 2 comprises the theoretical part. It begins with an overall introduction of the domain of customer-supplier integration, and continues with a description of relevant approaches to integration in vertical relationships. The focus then turns to vertical-relationship integration and governance: structures and mechanisms of relationship governance, as well as the underlying concepts of governance with regard to integration. The structure and process of integration are discussed separately, and the framework of the empirical study is outlined.

Chapter 3 discusses the methodological choices. The qualitative multiple-case approach is justified, and the case design and selection processes are described. The data-collection and analysis processes are also discussed, and a summary of the research process is given.

Chapter 4 consists of the case descriptions and within-case analyses. It begins with a case-by-case overview and an account of the relationship development. The integration process in terms of actor bonds, activity links and resource ties is then described. Next the focus turns to the structural dimensions in terms of operational, strategic, formal and informal integration. Each case description ends with a short within-case analysis.

Chapter 5 presents the cross-case comparisons and analyses. It consists of four subchapters: the context, the process and the structure of integration, and a summary of the analysis. The chapter ends with a description of the resulting conceptualisation of customer-supplier integration.

Chapter 6 discusses the research findings and the implications of the study. It begins with a summary of the results and the empirical conclusions, and continues with an assessment of the theoretical conclusions and the managerial implications. Finally, the study is evaluated and future research possibilities are suggested.

2 INTEGRATION IN CUSTOMER-SUPPLIER RELATIONSHIPS

2.1 The domain of customer-supplier integration

2.1.1 Definitions of integration in vertical relationships

Although the focus of this research is not on strategic management, it is important to acknowledge that there is an inter-organisational management perspective as well as an intra-organisational perspective on integration. Follett (1933) found three ways of settling differences: integration, domination and compromise. Integration 'involves invention, the finding of the third way' (Follett 1933, 66 as cited in Ettlie & Resa 1992, 797). In fact, this definition from 1933 seems to apply even today in that it refers to achieving synergistic and alternative solutions instead of compromise or coercive domination, both of which imply that somebody always loses: it cannot be a real win-win situation. Lawrence and Lorsch (1967, 4; 1969, 11) define integration "as the process of achieving unity of effort among the various subsystems in the accomplishment of the organization's task". They thus mean both the process and the organisational devices that bring it about: it implies the collaboration that is required to achieve unity of effort according to the demands of the environment. Basically they claim that differentiation and integration can only be achieved at the expense of the other, not simultaneously (Lawrence & Lorsch 1967, 4, 47; 1969, 11).

Lawrence and Lorsch recognise the necessity for joint decision-making between organisations, which they call requisite integration. The greater the necessity for joint decision-making between the two subsystems, the more difficult it is to achieve integration. This is because organisations cannot act independently in the system, and continuous collaboration in making decisions is required. (Lawrence & Lorsch 1967, 10.) Integration involves decision-making regarding the autonomy of trading partners versus the need for cooperation and authority within inter-firm relations. Its level in inter-firm relationships thus develops from autonomy to cooperation, and ultimately to authority. (Mohr et al. 1996, 104.) If the organisation or system is complex and involves many parties at different levels, bureaucracy and rigidity often increase. Integration is thus not easily achieved when complexity is high.

Extensive collaboration is needed both in making decisions and in implementing those already made.

Teece et al. view integration as intra-firm and inter-firm organisational processes, which include coordination and integration (a static concept), learning (a dynamic concept) and reconfiguration (a transformational concept). It reflects the congruence and complementarities among processes and organisational routines both internally and externally between companies. (Teece et al. 1997, 518─520.) However, it remains to some extent unclear why they define integration as a static concept, referring to coordinative, stable and routine rather than to improved routines and processes.

Integration in vertical relationships often means blurring organisational boundaries. Therefore, intra-firm and inter-firm integration are not strictly separate phenomena when there is a need to link the strategies, processes, functions and individual activities of both the supplier's and the customer's organisations, often at various organisational levels. According to Cannon and Naryandas (2007, 417), cross-functional integration is advantageous in both the intra-firm and inter-firm contexts. Cross-functional integration means getting rid of silo-type thinking, not only within the firm but also externally, within the company's external relationships with its customers and suppliers (ibid.)

In terms of the connection between intra-firm and inter-firm integration there are conflicting views on whether or not the latter facilitates or promotes the former. There is no clear answer in the existing literature, and it seems that much depends on whether integration is seen from the technical or the human perspective. Many technical solutions could enhance both intra-firm and inter-firm integration. On the other hand, when there are changes in contact persons, due to tighter intra-firm integration for example, the relationship may disintegrate, at least temporarily.

Möller and Wilson (1995, 620) emphasise the need for efficient intra-firm resource integration when the breadth and depth of business relationships expand. Håkansson and Snehota (1995, 118) put forward a somewhat opposing view in arguing that tight intra-firm integration could even destroy external relationships. Relationships are often based on personal contacts and flexibility between individuals in buying and selling companies. When a well-functioning relationship falls under the management of a central unit following intra-firm integration, rigidity may increase. It could even be comparable to when a totally new relationship is established. (Håkansson 1995, 118.)

When the processes, functions and activities of both the supplier and the customer need to be integrated, the relevant questions concern how data-management systems and information flows support it. Gulledge (2006) argues that inter-organisational or business-to-business (B2B) connectivity is commonly and erroneously understood as integration in the literature on enterprise systems. Connectivity typically focuses on information sharing with external suppliers and customers through the use of accepted industry standards such as EDI. However, business-process logic is not shared and B2B connectivity typically does not include extensive business-process integration: it remains on the data-exchange level. “Big integration” implies that all relevant data concerning a particular bounded business process is processed in the same software application within and between firms, thereby crossing organisational boundaries. (ibid., 16─18.)

Perona and Saccani (2004, 191) consider integration a set or combination of techniques and tools in inter-firm relationships. Their model of buyer-supplier integration consists of relational styles, integration techniques on the tactical level, and integration tools on the operational level. Relational styles involve traditional relationships, and operational, technological and evolved partnerships. Integration techniques are connected with the decisions to manage interface processes between parties and are classified into the domains of operations, technology and joint strategic planning. Integration tools belong to the domains of information technology, management and the organisation, and support the adoption of integration techniques. (ibid., 189─194) Perona and Saccani’s (202─203) results suggest, however, that integration is mainly achieved in the operational domain, and that strategic integration in inter-firm relationships is still quite rare. In the operational domain the aim is at internal efficiency, while in the strategic domain it is to create new opportunities and growth. In sum, cost-oriented companies limit their integration practices to the operational domain.

Vertical customer-supplier relationships may build on various approaches, and in this study the most relevant are the interaction and network approaches, and the vertical-marketing-channel approach. Studies based on the latter (e.g., Andersson 1979) have focused more on integration structures, implying relationship control and governance. Integration studies based on the interaction and network approaches are rare, because the term is not explicitly used, but various related terms cover the domain as understood and already described in this study. The more managerial approach to integration in vertical relationships (e.g., Perona & Saccani, 2005) emphasises its role at various levels: operational, tactical and strategic. It also adopts the relational view and focuses on managing interface processes between supplier and customer. Integration is not just an achieved structure or a coordinative mechanism through which to aim at a specific framework, it is also an evolutionary relationship-development process, the outcome of which is not self-evident.

The literature on vertical marketing channels acknowledges both vertical integration based on a changed ownership structure and contractual integration (e.g., Stern & El-Ansary 1988). Although the degree of integration is often paralleled with the degree of formal governance in both the relationship and the marketing channel (e.g., Andersson 1979), voluntary cooperative structures (e.g., Mattsson 1969), sometimes termed quasi-integration, may also be beneficial, implying limited vertical integration. Studies on vertical marketing channels, in particular, build on the political-economy framework according to which a dyadic relationship is the basic element. The term integration in the marketing-channel literature primarily refers to the channel structure or form, not to coordination mechanisms. It means either vertical integration through ownership forwards or backwards or alternatively contractual integration, when channel members have separate goals but there is some formal organisation of common goals (Stern & El-Ansary 1988, 326–327, 348–349).

Much of the literature on supply-chain management, on the other hand, takes a more or less holistic approach. It has recently been acknowledged that total or full integration in the supply chain is difficult or even impossible to achieve, and that the emphasis should rather be on targeted efforts (e.g., Bask 2006). She (ibid., 24) identifies various dimensions of supply-chain integration: structural, systems, process and relational integration. The focus should no longer be on either the structure or the process, but on combining both in order to achieve flexibility and responsiveness to market demands. An achieved structure is worthless unless it produces added value for the market and the end customers.

Table 1 gives a selective overview of the integration concept. The ideas presented form the basis of the more detailed theoretical review. It illustrates the fact that there are three broad approaches that are relevant to customer-supplier integration. In general, the approaches do not convey a common attitude, but there are some commonalities and shared characteristics. Integration is primarily seen as mechanism through which to achieve differentiation and synergistic solutions. It could also be seen as a coordination mechanism for enhancing efficiency and congruence in inter-organisational processes. Intra-firm integration is often considered to be a prerequisite for inter-firm integration, which may well be collaborative in nature when partnership decisions are made. Although the focus has been on the processual aspects, the need to achieve structural unity is also acknowledged.

Table 1 A selective overview of the integration concept in vertical relationships

Approach	Authors	Definition of integration	Perspective
Inter-organisational management	Follett (1933, cited by Ettlie & Resa 1992)	Integration is finding and inventing the third way (besides domination and compromise), it involves a sense of collective responsibility	Processual
	Lawrence & Lorsch (1967)	Integration is both a process and a set of organisational devices for achieving unity among various subsystems	Structural and processual
	Teece et al. (1997)	Integration reflects congruence and complementarity among intra-firm and inter-firm processes and organisational routines	Processual
Vertical customer-supplier relationships	Andersson (1979)	Increased degree of integration means increased formal governance	Structural
	Perona & Saccani (2004)	Buyer-supplier integration is a combination of integration techniques (tactical level), integration tools (operational level) and relational styles (e.g., operational, technological or strategic)	Processual
Vertical marketing channels & supply chain	Mattsson (1969)	Voluntary cooperative structures imply limited vertical integration	Structural and processual
	Stern & El-Ansary (1988)	Corporate forwards or backwards vertical integration, contractual integration	Mainly structural, but also processual
	Bask (2006)	Various dimensions of supply-chain integration: e.g., structural, systems, process and relational integration; integration aims at matching the internal processes with external services, focus on semi-integrated and targeted supply chains	Structural and processual and their combination

There is clearly remarkable variation in the content and meaning of the integration concept. For example, it is sometimes treated as a structure, sometimes as a process. However, research explicitly combining both is not very common, and the different authors have different attitudes to the relation between integration and the concept of time. The existence of related concepts makes the area even more confusing and challenging. Integration structures and processes are described in more detail in Chapters 2.4 and 2.5, vertical marketing channels in Chapter 2.2.1, and supply-chain management in Chapter 2.2.5.

2.1.2 Integration-related concepts in vertical relationships

It is difficult to find a commonly agreed definition for integration in the current literature. The terminology is often confusing: the term integration does not always refer to the concept as understood in this study. In addition, integration-related studies do not necessarily use the term at all. Therefore, it would be useful to review some of the main integration-related concepts and to identify the similarities and differences between them in the context of vertical relationships.

The term integration has often been used synonymously with, or has at least overlapped, concepts such as *cooperation, coordination, collaboration, commitment, and partnering or partnership.* In fact, there has been very little research explicitly attempting to establish clear conceptual differences between integration and these related concepts. Naturally this makes its straightforward positioning and unambiguous definition very challenging.

The terms *cooperation and integration* have been paralleled with each other. For example, Mattsson (1969, 39) found that limited vertical integration happens in voluntary chains and in other loose forms of cooperation. A cooperative contract is a less formal agreement, which draws more on trust and reciprocity than on legal aspects (Lindblom 2003, 71). Elements of cooperation and conflict coexist in a business relationship, although cooperation is necessary in order to avoid its becoming a zero-sum game (Håkansson & Snehota 1995, 9).

However, there are conceptual differences between cooperation and integration. According to Keast et al. (2007, 17, 25), cooperation represents the starting point or the base level in inter-organisational relationships. It may also happen on a short-term and informal basis. It does not mean the loss of autonomy, and it is not a great risk because in general no changes to existing operations and practices are required. In fact, people basically just share information. (ibid.) Further, it shows the variety in relationship structures

(Gulati & Singh 1998). Cooperation can be seen two ways: first, as a starting point for a longer-term relationship that could become more integrated, and secondly, as an overall term to cover all kinds of relational arrangements between business partners. This research adopts the former view.

The terms *coordination and integration* are sometimes used interchangeably (e.g., Gadde and Rosenbröijer 2000, 383; Anderson & Narus 1999b, 327─328; Naudé & Buttle 2000, 355). For example, by integration and coordination Anderson and Narus (1999, 327─328) mean the ability to resolve differences between groups and to inspire different functions to work together to meet the requirements of customers. According Ettlie and Resa (1992, 797─800), integration refers to the firm's coordination of human efforts and interdependencies. In other words it is a cross-functional system in a firm with collective responsibility. They are of the opinion that how coordination, cooperation and integration differ from each other remains unresolved. Lawrence and Lorsch (1967, 4, 1969, 11) use the term integrator, which refers to the integrator's intermediate position between two differentiated departments and the integrative devices used. The term integration may also refer to third-party coordination (e.g., Lawrence & Lorsch 1967, 1969), which is not integration as understood in this study.

Anderson and Narus (1999, 391─392) refer to coordination as both the customer and the supplier firms' synchronisation of activities and resources. It also means the ability to accomplish collective tasks. It may be mechanistic, i.e. formalised, programmed and rule- and hierarchy-based, or organic, i.e. flexible, cooperative, and innovative. (ibid.) According to Möller and Wilson (1995, 27), it refers to the development and use of mechanisms that facilitate control of the exchange process. While Möller and Wilson view coordination primarily as one of many control mechanisms, Anderson and Narus take a wider perspective that puts it closer to integration.

Keast and Brown (2007, 18) make one crucial observation in arguing that participating in coordination does not require any loss of individual autonomy, as integration does. Coordination may require intense efforts in orchestrating activities, sharing information and increasing commitment, as well as formality in structures and processes, but organisations nevertheless remain separate from each other (ibid., 25). King and Meyer (2006, 477─478), in turn, studied these concepts in the context of service management, in which a lack of consensus about their meanings prevails. They consider service coordination a process rather than a structure or outcome. Integration aims at enhancing effectiveness and optimising the use of resources. (ibid.) It involves both structural and processual aspects, whereas coordination primarily refers to the control process.

In sum, when it is a question of coordination the organisational boundaries are still very clear. The need emerges from a highly specialised division of work, and the roles of the partners are clear and agreed. Coordination may refer to both inter-firm and intra-firm activities and processes. Narduzzo et al. (2000, 43) connect such processes with organisational and interdependent routines. Required to ensure the smooth flow of actions, it is a process of connecting and interfacing. (ibid.) Although in its evolution coordination has been said to lead to a certain institutionalised and formal structure (Narduzzo et al. 2000, 43), a state of institutionalisation or any other structure is not the primary aim. While coordination primarily refers to routine-like or operational connectivity, integration implies more strategic-level synchronisation and congruence between partners. The process of integration may lead to some new structure in a specific relationship.

The terms *collaboration and integration* also resemble each other. According to Keast and Brown (1998, 12), inter-firm relationships range from autonomous, loose, low-intensity and fragmented cooperation to fully-connected and high-intensity collaborative systems. Between the two are coordinative relationships with medium connectivity and intensity. Increasing integration means movement towards a high level of connectivity and intensity in collaborative relationships. According to Anderson and Narus (1999b, 25), a collaborative relationship means a kind of strategic alliance, a commercial agreement between two or more partners to work together in a mutually defined way. According to Schaller et al. (2004, 121), value in collaboration is mutually created among the actors on different levels in the relationship, not separately within each organisation.

The collaborative creation of added value is an essential element in integration, but it always also implies dimensions of efficiency and effectiveness. This refers to internal coherence and congruence in a specific relationship, meaning cost-efficient and effective collaboration between partners to ensure value creation on a long-term and mutual basis.

C*ommitment and integration* are sometimes treated as parallel terms, and it has been argued that highly committed relationships are closest to integrated relationships (e.g., Gadde & Håkansson 2001, 142). Commitment could be defined as an enduring desire to maintain a valued relationship (Morgan & Hunt 1994, 23). According to Dwyer et al. (1987, 21), a relationship develops in different phases from awareness to commitment, which is the most advanced phase and involves an implicit or explicit pledge of relationship continuity and interdependence. The criteria for commitment include input, durability and consistency (ibid., 19). According to Anderson et al. (1994, 10), relationship commitment captures the perceived continuity or growth in a relationship between two firms. It reflects each firm's perception of the likelihood that it will continue, or that an exchange relationship is broadened and deepened (ibid., 10).

Commitment implies personal willingness and responsibility in terms of remaining in the relationship, and both parties are ready to work hard to satisfy the interests and expectations of everyone involved (Rodríguez & Wilson 2002, 59). It is evident that an integrated relationship requires high commitment, but still it is only one element, although a very important one. High commitment does not necessarily mean that the relationship is effective, or that strategic compatibility is high in both parties and the division of work optimised, as in the integrated relationship. It is possible that the partners are committed to each other just because there are no better alternative suppliers or customers available.

The terms *partnering or partnership relationship and integration* are close. The former have become buzzwords in a real life, covering a wide array of relationships. Partnerships have been extensively studied in the context of both relationship marketing and supply-chain management. Anderson and Narus (1999a, 42) define them in terms of "the extent to which there is mutual recognition and understanding that the success of each firm depends in part on the other firm". Partnerships are ongoing and committed relationships between two people or entities over an extended period of time. Partnering is characterised by the sharing of information, risks and rewards. (Duffy 2008, 228, 238.) According to Lambert et al. (1996, 28), a partnership is a tailored business relationship based on mutual trust, openness, shared risks, and rewards that result in competitive advantage and better business performance than would have been achieved by the individual firms.

Both parties in a partnership are willing to be involved in the relationship and to bring their complementary skills and resources to the partnering process (Biong et al. 1997, 91). A partnership between a customer and a supplier is based on mutual dependence and trust. Compatibility between the parties is required, which in turn facilitates mutual dependence. Both parties are committed to collaboration beyond a sequence of buying-selling transactions. Partnerships are often founded for economic reasons in order to create value for customers. They may lead to institutionalised forms of collaboration, but often require governance structures that provide incentives to support the partnership performance. (Ploetner & Ehret 2006, 4, 6–7.) Partnering is often a formal process, which may lead to integration. Not all partnership arrangements involve mutually integrated parties. Therefore, partnering as an intentional and mutually decided process of cooperation may facilitate integration between supplier and customer. This view is in line with Anderson and Narus (1999, 24–25), who state that partnering is a process in which a customer and a supplier form strong and extensive social, economic, service and technical ties.

Business relationships can be categorised as arm's-length relationships, partnerships and vertical integration (e.g., Lambert et al. 1996, 28–29). Lambert et al. differentiate between three specific types of partnership. In the first type the organisations merely recognise each other as partners and coordinate their activities mostly on a limited and short-term basis. In the second type they deepen their cooperation beyond the coordination of activities to integration by involving multiple functions and divisions on a long-term basis. Thirdly, a supplier or a customer has become critical or strategic to an organisation's long-term success. (ibid.)

Not all partnerships are integrated because the term may also refer to relatively short-term and limited forms of cooperation. The second type presented by Lambert et al. implies more integration than high coordination, but integration still remains primarily on the operational level. In turn, the third type implies strategic supplier or customer integration in which the partner has a critical role in the other's success. However, strategic partnerships are not necessarily characterised by symmetric power positions (Duffy 2008, 239). In a truly strategically integrated relationship both parties have to play a critical role in each other's success.

It follows from the above that cooperation represents the core or base level in business relationships. Coordination, in turn, implies the synchronisation of activities and resources, and does not require any loss of individual autonomy, as integration often does. Collaboration refers to fully-connected and high-intensity cooperative systems, whereas commitment implies both parties' enduring desire to maintain, broaden or deepen a valued relationship, and their perceptions of the likelihood of doing so. Moreover, there are several types of partnership relationships, not all of which are integrated.

A partnership arrangement may also refer to a relatively short-term and limited form of cooperation, which is not the case with integration. Forming a partnership is often a formal process, which may enable or facilitate integration between the parties.

Integration in vertical relationships draws on the concepts of cooperation, coordination, collaboration, commitment, and partnering or partnerships. It requires both cooperation and coordination. Cooperation is the starting point and a minimum requirement, and forms a basis for further customer-supplier integration. The process of integration requires various coordination mechanisms between the supplier and the customer. Coordination may also come about through third parties, but integration does not. Collaboration, which implies mutuality, could be considered the outcome of the integration process. Relationship commitment refers to the willingness of both partners to maintain and develop a relationship on a long-term basis, and their perceptions of how to go about it. It is a necessary precondition for integration, although committed relationships are not always integrated - even if they come closest to it.

What is perhaps the most difficult is to make a distinction between a partnering or partnership relationship and integration. Given the extensive amount of literature, it is difficult to find an unambiguous definition, nor is that the aim in this study. An integrated relationship could nevertheless be seen as a specific type of partnership, one that implies strategic supplier and customer integration and in which both parties have a critical role in each other's success.

2.2 Theoretical approaches to integration in vertical relationships

A cross-paradigmatic approach is needed in order to enhance understanding of customer-supplier integration, and thereby to paint a more comprehensive picture of the phenomenon. This section describes the basic ideas behind the theoretical approaches on which this research is built: vertical marketing channels and the political-economy framework, the interaction and network approaches, relational contracting, resource-dependence theory, and the supply-chain-management perspective. In sum the discussion focuses on how each approach contributes to customer-supplier integration.

Although the interaction and network approaches are built on resource-dependence theory to some extent, and have much in common, it is worthwhile reviewing them separately. The key concepts of relevance to customer-supplier integration are power and control, and dependence and interdependence, which are also fundamental aspects of resource-dependence theory and the literature on vertical marketing channels. Transactional cost economics provides a basis for understanding relational contracting, and therefore these two approaches are discussed in the same section. The focus in this research is more on relational contracting than transactional cost economics, however.

2.2.1 Vertical marketing channels and the political-economy framework

Integration has been studied a great deal in the context of vertical marketing channels, in which integration and governance are two central concepts. Research on marketing channels as inter-firm systems focuses on the processes and structures that facilitate distribution and inter-firm management, leaning on concepts such as power and control, dependence, and conflict. (Reve & Stern 1979, 405, 408.) Inter-firm dyadic relationships have become one of the most researched areas in the context of vertical-marketing channels, and this research draws on various theoretical approaches (Andersson & Mölleryd 1999, 293). The political-economy framework is particularly relevant for the purposes of this study.

It is the commonly adopted view in the literature on vertical marketing channels that forms or structures of governance in inter-firm relationships imply a degree of integration between partners. The concept of vertical integration refers to the market-hierarchy continuum with various degrees of integration (Hyvönen 1990, 20, 23), i.e. the degree of formalisation. Formal integration is based on a changed ownership structure or some other hierarchical or contractual arrangement. For example, according to Andersson (1979, 375), an increased degree of integration means more formal governance in inter-organisational relationships. The highest possible level is the merger of the two companies, either through consolidation or by acquisition, while cooperation and contracting arrangements reflect only a medium degree. (ibid.)

Four kinds of marketing channels or systems can be distinguished: conventional marketing channels, administrated systems, contractual systems and corporate systems (Stern & El-Ansary 1988, 316; Gadde & Rosenbröijer 2000, 383), representing the progression from isolated and autonomous firms to common ownership. The extent or degree of integration could be seen as a decision variable, which could be increased or decreased based on the channel structure or arrangement (ibid., 384). Channel performance is not determined only by its form or structure, but also by the behaviour of the individual members, which refers to the coordination process (ibid., 260).

Diamontopoulos (1987, 1985) distinguishes four types of vertical inter-firm alignments or systems: conventional market systems, vertically integrated systems, corporate free-flow systems, and vertically quasi-integrated systems. In the first of these each firm has independent decision-making units and complete autonomy over its decisions, while vertically integrated systems have common ownership and a centralised decision-making unit. Corporate free-flow systems have common ownership, but the control and decision-making are autonomic, not centralised. Finally, a vertically quasi-integrated system has independent ownership but the control and decision-making may rest with either the buyer or the seller, and is thus determined by the power structure. There are two types of vertically quasi-integrated systems: contractual and administrative. (Diamontopoulos 1987, 1985—1986.)

The political-economy framework for marketing channels is relevant to integration in that it combines both the internal and external, and the structural and processual aspects of a channel dyad. It also represents an attempt to provide a systematic framework for integrating economic and behavioural research traditions. It emphasises the inter-organisational and collective nature of marketing channels, in which organisations simultaneously pursue selfish and collective goals. Political economy is close to transaction cost economics (TCE) in terms of channel structure, but it also aims at explaining channel behaviour and incorporates dynamic processes. It posits that complex relationships cannot be understood out of context and without consideration of both economic and socio-political, behavioural factors. (Möller 1994, 356–357.)

Political economy also emphasises the interplay of power, the goals of the power wielders, and the productive exchange system. Polity refers to the power-control system and encompasses both power and the values or ends for which it is used to achieve. Economy, in turn, refers to the productive exchange system that transforms inputs into outputs, and concerns the division of work and the allocation of resources for task accomplishment and efficiency maximisation. What is essential is the simultaneous analysis of both factors and their interdependence. (Arndt 1983, 47–48.)

Inherent in political economy are two subsystems, the internal and the external, which comprise internal and external economy and polity, respectively. Internal economy and polity, in turn, refer to internal economic, and socio-political structures and processes, respectively, which together form the distribution channel. External political economy comprises the external economic and socio-political environments. (Stern & Reve 1980, 54.) The following three internal structural dimensions are considered to be important: complexity, formalisation and centralisation. Processes refer to interactions, flows of activities, resources and information. (Arndt 1983, 50.)

According to Stern and Reve (1980), the internal economic structure refers to the vertical economic arrangement of forms in the channel. Internal economic processes or decision mechanisms are required when operating within such a structure. The internal socio-political structure is the pattern of power-dependence relations within the channel. Mutual dependencies exist, but the power may still be fully concentrated within a single organisation. Internal socio-political processes refer to the dominant sentiments and behaviours that characterise interaction between channel members: two of the main socio-political processes are cooperation and conflict. External economic and socio-political forces interact with and define the environmental conditions, and influence the internal political economy. Channels not only adapt to their environment they also shape and influence it. (ibid., 55–57.)

The framework proposed by Stern and Reve (1980) is focused on the dyadic perspective and the internal political economy in the channel. Singh Achrol et al. (1983) add the impact of environmental forces on the dyadic structures and processes. There are three types of environmental forces: primary and secondary task environments and the macro environment. The primary task environment comprises the dyad's immediate suppliers and customers, the secondary environment incorporates the supplier to the immediate suppliers and the customers of the immediate customers, for example, and the macro environment includes general social, economic, political and technological forces. (ibid., 57–58.)

The political-economy framework incorporates concepts from research traditions such as social-exchange theory, the behavioural theory of the firm and transaction cost economics, and includes them under one umbrella. It could be criticised for putting too little emphasis on effectiveness and efficiency, i.e. performance and goal attainment. (Arndt 1983, 51–52.) Its key strengths, however, are in its integrative and contextual nature. It is the only framework that quite parsimoniously combines the economic and power-dependence models of inter-organisational relationships (Möller 1994, 364).

2.2.2 The interaction and network approaches

Both the interaction and the network approach are concerned with understanding and explaining the dynamics of developing, maintaining and terminating inter-organisational exchange relationships, the emphasis being on the specific dyad and network rather than on static governance (Harrison 2004, 113–114).

The interaction approach relies on a number of disciplines, including resource-dependence theory, social-exchange theory, the political-economy framework and transaction cost economics. The basic goal is to understand and explain dyadic behavioural processes. The unit of analysis may be a firm, a department, a person, or an inter-firm relationship. There are two different schools of thought: the Industrial Marketing and Purchasing approach (the IMP School), and an approach focusing on dynamic inter-organisational relationships. The latter relies primarily on social exchange and has been adopted by North American researchers (e.g., the work of Anderson and Narus). (Möller & Wilson 1995, 600, 603–604.)

The studies conducted in the 1970s and 1980s among proponents of the IMP School emphasised the process of interaction between active buyers and sellers who are individually significant to each other. Later on the focus shifted to networks of relationships. (Ford 2004, 139–141.) The aim in the early studies was to increase understanding of patterns of dependencies between companies, the evolution of their dealings over time, the adaptations each one has to make to meet the requirements of the other, and inter-organisational contacts between individuals (Turnbull et al. 1996, 44─45). IMP studies generally rely on the notion of resource-interdependence: they tend to focus on managerial issues and problems in managing industrial and often also international exchange relationships. The school has developed a conceptual understanding of long-term relationship bonding, forms of adaptation and the development of trust and mutuality. Adaptation and relationship-specific investments are the key phenomena, and provide insight into the change process in a particular relationship. (Möller & Wilson 1995, 600, 603─604.)

The discussion covers close, mutual and committed business relationships, but does not focus on the concept of integration: when it is used it refers to the informal side, sometimes termed quasi-integration (e.g., Håkansson 1982; Gadde & Håkansson 2002). It has been argued that the basis of quasi-integration lies in resource interdependence (Håkansson & Snehota 1997, 143─146), which does not in itself guarantee that the relationship will become integrated. It is rather a question of how interdependent partners can optimise their division of work by adapting and showing flexibility so as to realise the team effects.

A business relationship with an independent company may, in fact, be more integrated than a vertically integrated organisation (Håkansson & Snehota 1995, 117). Therefore, it is not enough to understand only formal governance modes and mechanisms: it is also necessary to know about informal processes. It represents the informal approach, referring to arrangements that imply joint action and tight, close, high-involvement and high-continuity relationships between individuals (Heide & John 1990, 25; Håkansson 1982, 61─62, 352; Gadde & Håkansson 2002, 427─428).

The network approach is primarily identified with the work of the IMP School. It is often concerned with the actions of the focal company and other companies around it, such as distributors, subsidiaries, competitors and customers. (Ford 2004, 139─141.) It is anchored in the knowledge that industrial markets consist of exchange relationships between multiple organisations. Researchers aim to enhance understanding of the systems involved, not only from the perspective of the focal firm, but also from a network perspective, i.e. a holistic and aggregate perspective. The primary goal is to shed light on complex inter-organisational structures and relationships, the emphasis being on contextuality and time. (Möller 1994, 362─363)

Firms may follow either network-integrative or network-changing strategies. The former entails close adaptation to the network through which the existing network structure is strengthened: the firm does not intend to change the strategic position of other firms in the same network. It is a strategy that does not create resource imbalances or excess supply capacity, one example being the use of existing distribution channels instead of developing alternative channel relationships. A firm pursuing a network-changing strategy, on the other hand, is looking to make structural changes that influence the strategic positioning or situation of other firms in the same network. Major investments in new production capacity and major withdrawals of capacity are examples of such strategies. (Mattsson 1987, 242─243; Anderson & Mölleryd 1999, 294) This same idea could be applied to dyadic relationships: a firm could pursue either relationship-integrative or relationship-changing strategies.

Both the interaction and network approaches adopt an informal view of business relationships, and this could be considered a major deficiency. Mutual orientation and continuous interaction are thought to constitute a relevant governance mechanism, and contractual safeguards are often neglected (e.g., Harrison 2004, 114). Customer-supplier integration requires both formality and informality: the informal aspects are important but not sufficient.

2.2.3 Transaction cost economics and relational contracting

Studies on marketing channels in particular have incorporated the notions of transaction cost economics (TCE) in examining relationship structures between channel members. TCE derives its strength from its simplicity, and its main research task is to derive efficient governance structures. (Möller 1994, 354─355.) The principle premise is that markets and hierarchies are at two extreme modes of governance, and between these two extremes are various intermediate or hybrid forms such as different types of contracting. Moving from simple and short-term exchanges or agreements to more complex contracts or a hierarchical structure incorporates additional security features. However, by reason of bounded rationality complex contracts are unavoidably incomplete, which raises the problem of opportunism. (Williamson 2000b, 601─603, 605; Williamson 1985, 16.)

Asset specificity is an important dimension of TCE: transaction-specific assets, i.e. physical or human investments, are specific to one or a few users or uses (Anderson & Gatignon 1986, 7). Assets tailored to a specific relationship induce a safeguarding problem because they cannot be redeployed without loss of their productive value. Continuity of such relationships is important. This, in turn, induces bilateral dependence, which within TCE is solved ex ante through designing appropriate governance structures, introducing sufficient high-hazard premiums in terms of prices and profits, for example, and effecting coordinated adaptation within the firm's management, not in the market. (Buvik & Reve 2002, 263; Williamson 2005, 4, 7─8.)

While TCE acknowledges all kinds of governance structures within which firms can effectively conduct transactions (e.g., Möller 1994, 354), relational contracting is focused on the long term. There is a significant difference between discrete, simple contracts and more complex relational contracts, which often involve specialisation (Macneil 1980a, 10). Relational contracting thus means one specific intermediate or hybrid form of governance. Contracts are essential in terms of safeguarding the owners of specific assets from the risks of opportunism and bilateral dependence (Harrison 2004, 110).

In the context of relational contracting it is assumed that contracts will be adjusted over time. Contracting practice may thus deviate from the original ex ante contractual agreement, and stronger relational norms will be established as the supplier-customer relationships evolve. (Buvik & Reve 2002, 268) Such norms emerge from role integrity, the preservation of the relationship, the harmonisation of relational conflict, and supra-contract norms that reflect the broad or common norms beyond the boundaries of the contractual relations (Macneil 1980a, 64─70).

Relational contracting suggests a more dynamic view: while markets are governed through price mechanisms and hierarchies through unified authority structures, relational exchanges and contracts draw on the mutuality of interests and bilateral governance mechanisms based on various behavioural norms between the partners (ibid., 40; Heide 1994, 73─74). It is not based on the assumption that explicit and written contracts between parties always exist: it is rather a question of the outcome of a negotiation process based on mutual dependence (Webster 1992, 7) and many informal mechanisms such as norms.

2.2.4 Resource-dependence theory

Resources include financial, physical, legal, human, organisational, informational and relational resources. Both tangible and intangible resources produce the market offering. (Hunt 2002, 253.) The key question is whether the perspective is that of a single organisation (the resource-based view) or a resource-dependence or interdependence perspective. Resource-dependence theory concerns the resources exchanged in a relationship and the exchange parties' ability to replace them outside of it (Buvik & Reve 2002, 262).

Resource-dependence theory takes account of mutual or bilateral dependence on the relationship rather than pursuing the single-firm perspective.

According to Pfeffer and Salancik (1978), organisations must interact with others who control the resources they need. Organisational boundaries could thus be defined in terms of the organisation's control over its activities and resources. Consequently, power is determined according to the social reality as well as control over resources. The organisation's most important sources of control include its empowerment of individuals and its ability to regulate the use, access and allocation of resources. It confronts a dilemma: at the same time as seeking to avoid being controlled, it includes itself in collective structures that imply the loss of discretion and control, and that exert conflicting demands. (ibid., 258─262, 272─273.) The greater the level of system dependence, the more uncertain and unstable the environment is for the organisations in it. On the other hand the actions of organisations in systems that are not particularly interdependent or tightly connected are less predictable. (ibid., 70─71.)

Resource-dependence theory distinguishes various types of dependence as a possible predictor of network behaviour: it varies as a function of the breadth and complexity of the relationship (Grandori & Soda 1995, 190). The main premise of the theory is that firms seek to reduce uncertainty and to manage dependence by structuring relationships either formally or informally, contracting, entering into joint ventures, or completely merging. Identification of dependence and uncertainty are the key antecedent variables motivating the establishment and maintenance of inter-firm relationships. (Heide 1994, 73.) The key concepts of power and control, and dependence and interdependence are reviewed in more detail in Chapters 2.3.2.1 and 2.3.2.2.

2.2.5 The supply-chain-management perspective

Supply-chain management is an extensive research area, and aspects referring to optimised supply- and demand-chain processes and operations are considered especially relevant to integration. This kind of optimisation refers to operational integration, often from a systemic perspective. System optimisation refers to both inter-firm dyadic and overall supply-network integration (Romano 2003, 123). Supply-chain management is a set of practices aimed at managing and co-ordinating the supply chain from the raw-material supplier to the ultimate customer (Heikkilä 2002, 749). The literature covers three categories: supply-chain structures, industrial networks and relationships, and emerging demand-chain management, which put emphasis on the needs of the customers as a starting point (ibid.). Integrated customer-supplier relationships are not isolated from the network or the supply chain, but are essential elements in more general supply-chain integration.

Integration in the whole supply chain covers various contexts and dimensions. Bowersox et al. (1999, 33, 24, 117) distinguish three contexts: operational, planning and control, and behavioural. The operational context refers to both internal integration and external integration with customers and suppliers. The types thus include customer, internal, and materials- and service-supplier integration. The prerequisites are end-customer focus, excellence in functional and process performance, and inter-organisational coordination. The planning and control context incorporates measurement, technology and planning, while the behavioural context refers to relationship integration and effective relationship management. (ibid., 33, 24─26.) However, relationship integration in particular remains a relatively narrow concept. It is not exactly the same thing as effective relationship management, and the behavioural context is only one of many other possible contexts. Moreover, ambiguity regarding the whole integration concept still prevails.

Bask (2006, 24) identifies various dimensions of supply-chain integration: structural, systems, process and relational integration, adaptation, and various soft forms achieved through socialisation. The challenge in supply chains lies in the ability to combine integration with innovation, responsiveness and flexibility (ibid., 66). The task seems to be to match the company’s internal processes with its external services. Integration could be seen as a goal according to which structures and processes need to be transformed into different forms of service and service strategies. In this sense it could mean that customised services are given up and standardised in order to improve efficiency. (ibid., 4, 73.)

Bask (2006, 68) further suggests that more attention should be given to the various dimensions and targeted efforts of integration, such as processes, relationships, channels and performance measurement, rather than to the full integration of the supply chain. Semi-integrated chains may be sufficient for such efforts and achieving total or full integration would no longer be the primary focus. (ibid.) It could be questioned whether they are even realistic. When integration covers large numbers of actors, activities and processes the complexity increases and there may be a risk that it remains on the superficial level. On the other hand, some easily managed aspects may be given more attention at the cost of more important but more difficult aspects.

2.2.6 A summary of the theoretical approaches and the integration concept

Both the political-economy framework and the interaction school are cross-paradigmatic and incorporate benefits from several disciplines, which is a pre-requisite in terms of enhancing understanding of complex phenomena (Möller 1994, 367). This research builds on various theoretical approaches of which the most important are the political-economy framework, the interaction approach and relational contracting. It seemed appropriate to adopt several theoretical approaches given the extensiveness and complexity of the integration concept. I assumed that considering customer-supplier integration from several standpoints would facilitate comprehensive analytical description of the phenomenon. The theories are not necessarily very close to each other, although there is some commensurability. In particular, the political-economic framework combines ideas from various theoretical approaches in parsimonious ways. Naturally, not all the ideas and concept assumptions are taken as read: the idea was rather to consider each in terms of the vertically integrated relationship.

The number of approaches naturally delimits how profoundly each one can be described. Therefore, for practical reasons it could be said that the theoretical basis of the study comprises the political-economy framework in marketing channels, the interaction approach and relational contracting. As discussed, other approaches also make a contribution. The contributions of the chosen approaches are summarised below.

The major concepts in the literature on *vertical marketing channels* as far as this study is concerned are power and control, and dependence: the study is based on the notion of vertically quasi-integrated relationships or systems, the assumption being that it is possible to achieve integration benefits without any party losing autonomy or flexibility. *The political-economy framework* within the context of marketing channels combines both the internal and external, and the economic and behavioural aspects of a channel dyad. A major advantage is that it takes into account the relationship contextuality. Both the structures and processes of a dyadic relationship are crucial elements in political economy, as shown in this study.

The interaction approach focuses on the dynamic and processual aspects of relationship development, which are often evolutionary. In terms of this study, the key concepts are long-term actor bonding, including the development of trust and mutuality, activity coordination, and resource adaptation. The model of actor bonds, activity links and resource ties developed by the IMP School is used as a basis on which to enhance understanding of and describe the process of customer-supplier integration.

Relational contracting offers a dynamic perspective on the government of vertical long-term relationships. This study draws on the notion that both explicit contracting and implicit practices matter in customer-supplier integration. It is not based on the assumption that explicit and written contracts between parties always exist, however: what is important is the outcome of a negotiation process based on mutual dependence. Relational contracting focuses on both formal and informal seller-buyer structures and processes, which are considered important in this study. One such process is the development of common norms as part of the institutionalisation of a relationship. An integrated relationship may, in fact, utilise all kinds of governance structures and mechanisms, including markets and hierarchies. However, it seems unlikely that relationships based on either markets or hierarchies alone can become integrated, and thus an effective and efficient hybrid governance structure incorproating various mechanisms is a basic requirement.

Resource-dependence theory has, in fact, fostered many other theories and approaches, including the interaction and network approaches. The key question concerns the way in which firms are dependent on each other. It is necessary to understand the concepts of dependence and interdependence because, from a relationship-integration perspective, there is a big difference between the two. Dependence, unlike interdependence, is not necessarily mutual or reciprocal. Power positions and relationship symmetries/ asymmetries are key aspects to be considered, concepts that are also incorporated into many other theoretical approaches such as relational contracting and political economy.

One of the major concerns in *supply-chain management* is to optimise the supply and demand process. This is mainly an operational issue, seen from a systemic perspective. It is recognised that total supply-chain integration is very challenging, and therefore targeted efforts are needed. Although the focus of this study is on dyadic customer-supplier relationships, it should be borne in mind that these relationships are always part of a wider supply-chain network, especially with regard to industrial business relationships.

Relationship governance provides a framework and a basis of both the structure and the process, and this is reviewed first. Three central concepts were distinguished: power and control, dependence and interdependence, and trust.

2.3 Vertical-relationship integration and governance

2.3.1 Structures and mechanisms of relationship governance

The concepts of governance and integration in vertical relationships are closely related. Relationship governance provides a framework within which to study customer-supplier integration: it determines whether or not the relationship has the potential to become integrated. Change towards integration also places new kinds of demands on the governance of these relationships. Therefore, it is necessary first to shed light on the structures and mechanisms of relationship governance before offering a description of customer-supplier integration.

The verb to govern in a relationship and exchange context means organising (Ebers 1997, 3), or regulating and coordinating (Li & Nicholls 2000, 456.) Governance structures refer to forms or modes of governing, while mechanisms refer to processes of control and coordination. It is therefore necessary to develop appropriate and effective governance structures and mechanisms in vertical relationships between firms and the individuals operating in them. This could also help to enhance understanding of how and why a specific customer-supplier relationship does or does not become integrated.

Relationship governance requires the contributions and influence of the key individuals in a specific customer-supplier relationship (Ferguson et al. 2005, 218─219, 229). Thus the concept of governance parallels the concept of management. Heide (1994, 72), for example, defines relationship governance as establishing, structuring, monitoring and enforcing the relationship, which refers primarily to the management process. Ouchi (1984, 197) makes a clearer distinction between management and governance: while management refers to making operational decisions, governance refers to the creation of settings in which management can be effectively carried out.

Giddens differentiates structures, systems and structuration, defining structures as “rules and resources, or sets of transformation relations, organized as properties of social systems”. Structuration, in turn, means “conditions governing the continuity of transmutation of structures”, and systems are “reproduced relations between actors of collectivities, organized as regular social practices”. Duality of structure means that structural properties are both the medium and the outcome of the practices in social systems. (Giddens 1984, 25.) Structure as a generic concept incorporates structural principles (i.e. principles of organisation), structures (i.e. rules and resources), and structural properties (i.e. institutionalised features) (ibid., 185). A vertical relationship is always a part of a wider business system, which is also always a social system. A strong and powerful relationship may even affect the whole structure of the business system. The relationship structure produces the system, and vice versa: practices and processes among actors may lead to a specific structure.

The term structure could easily be connected to something static, an achieved state of affairs. However, it is also related to change. For example, Arbnor and Bjerke (1997, 117–119) differentiate between static and dynamic structures: dynamic structures allow some regular or predictable change, but the entire structure of the system remains the same. Thus, adopting a structural perspective does not imply something static or unchanging: it is rather something that is relatively permanent, although there may be evolutionary or incremental change.

Three basic governance structures have been distinguished: classical spot-market exchange, hierarchies (e.g., firms), and long-term hybrid modes between markets and hierarchies (Williamson 2000a 1; 2005, 7). Different governance modes require different governance mechanisms. It is through the mechanisms that institutions (or governance modes) arise and are maintained (Williamson 2000a, 597). The concept of governance mechanisms in vertical relationships refers to the means and decisions with which activities and resources are controlled and coordinated: such mechanisms serve a proactive purpose (Weitz & Wang 2004, 862).

There are three main types of coordination mechanism: price competition, authority and administrative control, and within them is a broad spectrum of relational mechanisms such as negotiating, contracting and relational norms. The main coordination mechanisms in market structures are bargaining and price competition, in network and relationship structures they are negotiation and concurrence, and in organisation structures authority and identification (Ebers 1997, 16). Relational exchanges draw on the mutuality of interests and bilateral governance mechanisms based on various behavioural norms between the partners (Macneil 1980a, 40; Heide 1994, 73–74). There are various relational mechanisms, such as contractual terms and relational norms as identified by Weitz and Wang (2004, 861, 864).

Governance structures and mechanisms fall into two main categories on the general level: formal and informal, and market and non-market governance. First, formal governance is contractual or ownership-based, whereas informal governance is based on shared social norms (Ferguson et al. 2005, 220–221). Ebers (1997, 12) makes an institutional-level distinction between two broad types of coordination mechanisms: the first is the distribution of property rights over resources among actors and the second is the allocation, exchange and management of resources. Property rights are often contractually fixed, i.e. formalised, while the allocation of resources is less frequently contractual, i.e. it is more informal. (Ebers 1997, 12.)

Many alliances between firms use multiple governance mechanisms: they may begin as formal, but over time they become more informal. (Dyer & Singh 1998, 671.) According to Spekman and Celly (1995, 163, 171, 178), vertical integration as one type of formal governance is not always the preferred solution in inter-firm relationships due to its hierarchical nature and strategic inflexibility: perceived resource dependence and compatibility between actors are better determinants. Relational norms and other informal aspects could be considered an effective governance mechanism (Lambe et al. 2001, 3), although emphasis has often been put on various other types of formal governance such as contractual arrangements.

The second distinction is that between market and non-market governance (Heide 1994, 75). Market governance refers to discrete exchanges, and non-market governance to both unilateral, i.e. authority-based, and bilateral, i.e. mutuality-based governance. The essential point here is that there are two types of non-market governance, unilateral and bilateral. Examples of unilateral forms include franchising and other arrangements based on authority. Whereas unilateral governance is based on legitimate authority, bilateral governance is based on common values, future expectations and relational norms. (ibid., 74─75, 78.) According to the current literature, independent actors often base relationship governance on market mechanisms, whereas interdependent actors rely on social norms and control. In reality the choice is not that simple because relationships often operate according to a combination and variety of governance forms and mechanisms.

Governance structure is related to the degree of formal integration in the vertical marketing channel. Hyvönen (1990, 22─29) distinguishes three broad forms of integration: non-integration vs. full integration, contractual integration, and quasi-integration. With full vertical integration the parties have a unified governance structure or hierarchy, while non-integration means that the market is the governance mode. There are also a number of structural arrangements that lie between the two extremes: markets and hierarchies. Contractual integration refers to contractual arrangements made by independent firms: quasi-integration refers to cooperative ventures or equity agreements between two firms, although according to Hyvönen (ibid., 29) it may be related to contractual integration. Both contractual and quasi-integration refer to intermediate forms between full and non-integration.

Governance structure is also related to the degree of informal integration in the marketing channel. Webster's (1992, 5) transactional-relationship continuum places pure transactions at one end and fully integrated hierarchical firms at the other. In the middle there are various intermediate and relational exchange forms such as long-term relationships, buyer-seller partnerships, strategic alliances and network organisations. The focus in relational exchange shifts from products and firms as units of analysis to people and social processes that bind the actors together (ibid., 10).

According to Li and Nicholls (2000, 457), when relational involvement increases, the sufficiency of pure market mechanisms decreases, and there is a greater need for relational bonding. Relational exchange is embedded more deeply in its historical and societal contexts and requires a different marketing strategy than transactional exchange. The choice between transactional and relationship marketing depends on the nature of the particular relationship, and on the governing mechanisms underlying the exchange process. (ibid, 457─459) Webster's continuum provides an important context for understanding exchange governance in general (Ferguson et al. 2005, 219), but especially for positioning vertically integrated relationships along it. Depending on the relationship and the circumstances, some exchanges may require more market governance, while others may require more relational and bilateral governance. A single relationship may thus utilise several formal and informal governance forms and mechanisms along the market/hierarchy continuum.

Both economic and behavioural aspects have been emphasised in the context of relationship-governance structures (Donaldson & O'Toole 2000, 494). It is important to extend the economic aspects beyond efficiency: effective relationship governance generates relational rents[1] by either lowering transaction costs or providing incentives for value-creation initiatives (Dyer & Singh 1998, 670).

Intermediate governance forms, which take resources and/or governance from more than one organisation, are often called hybrids. They may be formal organisations or formalised relationships. They often lack a common history, however, and not all are expected to continue in the long term (Borys and Jemison. (1989, 235, 242─243.) Hybrids fall between the market and hierarchies, and use power, influence and trust as governance mechanisms (Thorelli 1986, 37─39; Wilson & Möller 1995, 59). The hybrid organisation incorporates cultural elements from both parties and generates a governance structure that bridges the two organisations in new ways (ibid., 64─65). Its governance remains a relatively loose concept, however: it could be a formal arrangement between two or more companies, or an informal relationship or network utilising various mechanisms. It represents a combination of bilateral and unilateral governance forms and mechanisms.

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[1] Dyer and Singh (1998, 662) define a relational rent "as a supernormal profit jointly generated in an exchange relationship that cannot be generated by either firm in isolation and can only be created through the joint idiosyncratic contributions of the specific alliance partners".

The term quasi-integration is also used to describe intermediate governance forms, which means moving from market-based exchange towards more bilateral governance (Heide & John 1990, 25, 33─34). The concept of quasi-integration is still imprecise, although it is often related to contractual arrangements (Hyvönen 1990, 29). On the other hand, it takes various forms and the degree of formality may vary: for example, it may include customer investments in production tools, joint product development and financial support (Gadde & Håkansson 2002, 428). The basis of quasi-integration lies in resource interdependence - gaining influence over and becoming dependent on others. In this case, the perspective and focus shift from the control of resources on the single-company level towards integration on the relationship level. (Håkansson & Snehota 1997, 143─146.)

Vertical relationships are always basic elements in a wider network structure. Network-governance forms and mechanisms affect relationship-governance forms and mechanisms, and vice versa: they are not independent of each other. Grandori and Soda (1995, 199─203) distinguish network forms along the following dimensions: formalisation, centralisation and symmetry. The various forms include social, bureaucratic and proprietary networks or relationships. Social networks or relationships are coordinated through group norms and control mechanisms, and bureaucratic networks or relationships through formalised exchanges or associational contractual arrangements. These networks or relationships may be symmetric, such as trade associations, or asymmetric such as agency networks, licensing and franchising. Proprietary networks or relationships involve the inter-firm cross-holding of equities and include joint ventures and capital ventures. (ibid.) However, it is not merely a question of selecting between a bureaucratic or proprietary, i.e. formal governance structure and a social, i.e. informal governance. Understanding also the market mechanism is important in all kinds of business networks and relationships, although social control may still have a crucial role.

Powell (1990, 298─299, 301, 303, 317) argues that viewing networks and relationships only in terms of intermediate or hybrid forms of governance represents the static view, and that networks or relationships implying reciprocity, continued mutual dependence and collaboration should be seen as having alternative governance mechanisms with their own logic. Moreover, according to Thorelli, networks and relationships represent an alternative governance form to vertical integration: qualitative mechanisms such as the intensity and strength of customer-supplier relationships are as important as the quantitative sales volume or market share (Thorelli 1986, 46─47). Markets have coordinative effects, but they lack integration. Large, vertically integrated firms, in turn, are often formalised and rule-bound, and lack the ability to respond quickly and flexibly to competitive changes. Therefore, firms are being pushed to redefine their organisational boundaries. They are reducing the number of hierarchical levels, externalising some of their current activities, and searching for new collaborative and innovative efforts with their partners. (Powell 1990, 302, 318‒319, 321.)

Powell and Thorelli represent the view according to which the emphasis should be on dynamic and informal mechanisms of relationship governance. Many researchers draw on their ideas, but still the current literature fails to foster understanding of both informal and formal governance within a single relationship. Customer-supplier integration requires a clearer understanding of the appropriateness of both formal and informal governance structures and mechanisms. It is not a question of either formal or informal, market or non-market, but rather which is the appropriate combination: a more formal approach may be required in a specific relationship, or in a specific situation within a single relationship. In another relationship or situation informal governance may be preferable. The key point is that the selection of governance form and mechanism is a strategic choice in business relationships, and is always relationship-specific.

This study adopts the widely defined view of relationship governance: it incorporates formal and contractual, and informal, social and behavioural aspects. This means adopting the idea of a plural form of governance (Cannon et al. 2000) combining relational and social norms with a legal contract, which alone is always insufficient (Harrison 2000, 111). Every governance mechanism has unique positive and negative effects, so that channel members often use a portfolio of mechanisms rather than any single one (Weitz & Wang 2004, 865). Each relationship requires careful consideration of the necessary levels of formal and informal safeguarding mechanisms. Plural forms allow various mechanisms to work together and thus to complement each other.

Relationship governance relies upon various social aspects such as trust, continuity, norms and so on, but they only form the context for a contract, not the contract itself (Harrison 2004, 119). Thus a long-term relationship is not an implied, legally binding contract, and does not guarantee that mutual orientation, consent and trust between partners exist (ibid., Kumar 2005, 863‒866). Ring and Van de Ven (1992, 495) suggest that risk and reliance on trust between parties may vary and change over time. Therefore different governance mechanisms are needed. It seems too risky to rely solely on trust, which may vary and change over time. Trust could be a complementary or even a major mechanism, but alone it is insufficient.

This notion is supported in the current literature. According to Gadde and Håkansson (2001), flexibility and the ability to switch between formality and informality is necessary because formal integration alone does not necessarily guarantee access to the required resources and control over them. It is also necessary to understand informal governance mechanisms in the context of integration. Historically, ownership-based integration has secured access to strategic resources. Today, however, specialisation and outsourcing mean that companies have become increasingly dependent on the resources of other firms. Nevertheless, insourcing and performing activities internally may still be favoured if earlier perceived non-core activities bought outside the company have become strategically critical. (ibid., 119, 123─124, 127─128.)

Thus each relationship embeds a norm of flexibility or inflexibility in its transactions. The term contractual governance flexibility reflects attitudes towards and the enactment of contractual agreements - the ability to adjust to changing conditions in a relationship. (Yli-Renko et al. 2001, 534.) Neither the contract nor the formalisation is the key to relationship governance. The focus may be different in different types of relationship, but each one requires a combination of unilateral and bilateral, formal and informal governance. Different forms and degrees of integration require different governance structures and mechanisms, and there is always a mixture of the formal, i.e. more explicit, and the informal, i.e. more or less implicit.

2.3.2 Underlying concepts in relationship governance with regard to integration

2.3.2.1 Power and control

Power and control are essential underlying concepts in relationship governance, especially with regard to integration. Power positions and control mechanisms have a significant role in determining whether a vertical relationship has integration potential or not. This is valid irrespective of the formal degree of integration. The key questions concern how integrated relationships are controlled and what kind of power positions between parties exist. However, the literature paints a rather fragmented and confusing picture because the various theorists hold conflicting views (Hyvönen 1990, 39, 59). The role of power in business-to-business relationships has often been either overlooked or dealt with as a side issue (Hingley 2005, 552), although the concept of power has been extensively studied in the literature on marketing channels. Moreover, power and control are often related to the level of the whole organisation or relationship, and individual and personal power sources are often neglected.

The concepts of control and governance are sometimes treated as parallel in the current literature. For example, Heide (1994, 78) refers to hierarchical control based on enforcement, and Grandori and Soda (1995, 194─197) to social-control mechanisms such as communication, negotiation, common staff and incentive and partner-selection systems. Larson (1992, 90–91, 95–97) argues that interdependent parties achieve control through social relationships by means of joint determination, and connects control to concepts such as trust, honesty, and norms of fairness, reciprocity, reputation and identity. The variety of aspects related to the term control makes it difficult to treat it as a separate phenomenon from governance. However, in this research governance is considered a higher-level phenomenon, and concepts such as power and control are part of it. It is therefore necessary to define the terms power and control in this context.

First, both concepts reflect the social-exchange perspective rather than TCE-based cost efficiency (Dwyer et al. 1987, 20–21). Relationships with high mutual interdependence and commitment cannot be governed by means of authoritarian power and control. In such relationships value structures and various contractual and relational mechanisms may support joint investments (Dwyer et al. 1987, 20–21), which in turn requires a mutual perspective on both power and control.

Secondly, it is assumed in this research that the concept of control is related to influence (Hyvönen 1990, 59), and power to dependence and relationship symmetry. Although the two concepts seem to overlap to some extent, there are some conceptual differences. According to Hyvönen (1990, 60–61), power means the capacity to exert influence on others, i.e. it is "potential power", while control could be considered real influence. Power could thus be seen as a prerequisite for control. The dependence and power positions between parties determine whether it is possible to exert control and influence.

Macneil (1980b, 909) refers to power as the ability to impose one's will on others irrespective of their wishes. There are different types of power. Vertical integration may be based on economic, reward, coercive, legitimate or expert power (Diamantopoulos 1987, 187–189). Power in a relationship may be unilateral or bilateral: unilateral power can be exercised without the other's consent, while bilateral power allows either party to release the other from some of the restraints imposed by their unilateral power (Macneil 1980b, 909). Bilateral power is mutually exercised when real contracts are agreed, and after that each party acquires new unilateral power. The exercise of unilateral power does not necessarily mean the lack of bilateral power: it could be the interplay or balance between them. (ibid., 910, 913.)

The concept of power is not only organisation-related: individuals also possess power. Gemünden and Walter (1997) describe individual power sources as personal or structural. Personal sources include expertise, knowledge about the cooperation partner, social competence and charisma, while structural sources concern the individual's place within the organisation's position in the social network. (Gemünden & Walter 1997, 183–184)

Understanding relationship symmetry and asymmetry may help in evaluating power-dependence positions between parties. According to Spekman and Celly (1995), power balance in a relationship reflects symmetrical exchanges, whereas power imbalance reflects asymmetrical exchanges. In the former both parties are motivated to their mutual benefit, while in an asymmetrical exchange one party is motivated and the other is not, although one is powerful enough to coerce the other. (Spekman & Celly 1995, 170–171.) Asymmetry exists when the exchange is not equally important to both partners, and without it neither partner possesses a particular power advantage. Of course, there may be asymmetries with regard to one specific resource or exchange within a relationship, but still the total relationship remains balanced (Pfeffer & Salancik 1978, 53). It is not safe to assume that symmetry is always a state to be achieved: organisations may actively and intentionally seek to unbalance the symmetry in order to gain more power and larger benefits (Hingley 2005, 554).

Vertical relationships and networks are often asymmetric in nature, which may imply centralised control and power, while horizontal relationships and networks are more symmetric or parity-based (Grandori & Soda 1995, 200). Diamontopoulos (1987) argues that the power positions in a relationship may also be balanced in vertically quasi-integrated systems. Joint control allows equal influence, but balanced power does not necessarily mean that both the buyer and the seller always have exactly the same amounts. An asymmetrical power relationship does *not need* to be interpreted as a 'have' or 'have not' situation, however. Power should rather be conceptualised in terms of relative rather than direct dependence. One actor may control particular situations and activities, while another may be dominant in other areas. Therefore influence could be considered mutual rather than unilateral in vertically quasi-integrated systems. (ibid., 187–192.)

Power positions and attempts at control and influence may be mutual and bilateral in vertical relationships. However, power is not always distributed equally, and may be asymmetrical even though the power positions could be considered relatively balanced. Power is always somehow distributed or divided between partners in a relationship. This view is close to Macneil's concept of bilateral power, which ultimately goes back to unilateral power.

When control refers to the ability to influence, communication has an important role in the exercise of both power and control. Mohr et al. (1996) suggest that collaborative communication may serve as a pseudo-integrative control device, which makes the independent partners feel more like partners. Unlike formal control, collaborative communication is more flexible and inexpensive. (ibid., 105, 111.) Despite the amount of communication or communication systems existing between parties, control and influence cannot always be predicted: some individuals are more influential than others irrespective of the “formal” power positions between organisations. Therefore, formal communication channels may be insufficient to ensure influence and control in business relationships.

2.3.2.2 Dependence and interdependence

The intertwined concepts dependence and interdependence are central in vertical relationships, and especially with regard to integration. They are also related to power and control. For example, if a supplier is highly dependent on the customer, the customer’s power and control should be high (Diamontopoulos 1987, 190). The term dependence is an overall concept, and it is necessary to understand the distinction between dependence and interdependence. Dependence may be unilateral, while interdependence reflects mutual and reciprocal dependence, i.e. both the supplier’s and the customer’s dependence on each other.

Dependence could be defined as the extent to which a partner provides important and critical resources for which there are few alternative sources of supply (Duffy 2008, 231). There are three critical factors in determining the dependence of one partner on another: the importance of the resource, the level of discretion involved and the extent of control over the resource. Regardless of how important the resource is, unless it is controlled by relatively few suppliers the buyer will not be particularly dependent on any of them. (Pfeffer & Salancik 1978, 45─46, 51.) The higher the exchange dependence, the higher is the level of interaction, coordination and complexity in the relationship (Yli-Renko et al. 2001, 532).

Hyvönen (1990, 40) suggests that dependence is an inherent feature of any co-operative relationship, and thus the origin of power. Power and dependence are closely linked (e.g., Diamantopoulos 1987, 187─192). If a firm is highly dependent on its supplier, the supplier’s power is expected to be high. When the power positions are balanced neither buyer nor seller has clear dominance over the other. However, it would be too simple to argue that if a partner were highly dependent on its supplier, it would possess only limited power over it. The connection between power and dependence is still quite poorly understood.

Interdependence means reciprocal dependence between two firms (Duffy 2008, 230). It exists whenever one actor does not entirely control all the conditions necessary for actions or desired outcomes (Pfeffer & Salancik

1978, 40). There are three types of interdependencies: sequential or serial, pooled and reciprocal (e.g., Borys & Jemison 1989, 248). Sequential interdependencies mean that the activities of each partner are distinct and serially arrayed (Gulati & Singh 1998, 796), and the output of one actor's activity is the input of the other's. Pooled interdependencies mean that the relationship or alliance provides a common pool of resources from which each can draw. In the case of reciprocal interdependencies the partners exchange outputs simultaneously, which requires a fit between the operations of both partners, and learning from each other. (Borys & Jemison 1989, 241; Forsström 2005, 75) Reciprocal interdependence, on the other hand, is more interactive and requires ongoing mutual adjustments and adaptation (Gulati & Singh 1998, 796).

Vertical interdependencies arise among collaborative partners who complement each other, while horizontal interdependencies arise between partners who exchange knowledge or resources in order to develop something new (Romano 2003, 129). The latter thus stems from resource pooling based on symbiosis and complementarity, and the former from resource transfer from one firm to another (Grandori & Soda 1995, 190).

Interdependence is positively related to the adaptations a firm is willing to make (Lambe et al. 2001, 20). Power is an important motivator for adaptation, but exercising only coercive power may be detrimental to a long-term relationship (Brennan et al. 2003, 1660). Interdependent relationships often require both the supplier and the customer to respond and to adapt to the demands of the other partner. When dependencies are asymmetric, adaptation may reflect the relative power of the actors (Geersbro et al. 2007, 11). Dyadic adaptation may thus be either unilateral or mutual. When it is unilateral the firm implements a specific modification for its partner without any reciprocity, and when it is mutual both parties adapt reciprocally. (Brennan et al. 2003, 1639.) Mutual interdependence between partners is often high in jointly controlled relationships with relatively balanced power positions.

However, customers typically adapt less than their suppliers, and suppliers tend to adapt more to powerful customers and those offering reciprocal adaptation (Brennan et al. 2003, 1657). In general, high independence encourages short-term thinking, while high dependence encourages long-term thinking (Geersbro et al. 2007, 11), which supports mutually and reciprocally oriented adaptation. On the other hand, there seems to be a tendency for asymmetrical relationships to move towards a balance, as a powerful partner realises that high dependence increases strategic vulnerability. Thus, symmetrical relationships are considered to be more stable over time (Spekman & Celly 1995, 170–171), which is a necessary requirement for a vertical relationship to become integrated. The mutual adaptations bind the companies together, and they generate and reflect mutual commitment that at the same time constrains and empowers both supplier and customer (Håkansson & Snehota 1995, 9). Mutual dependencies and adaptations create a common vision of future value generation for both partners, (Ploetner & Ehret 2006, 7), thus also representing a more strategic perspective on integration.

2.3.2.3 Trust

Trust is considered an important antecedent of successful and committed inter-organisational relationships (e.g., Morgan & Hunt 1994, 22–23; Ryssel et al. 2000, 9; Lindgreen & Wynstra 2005, 738), and it is also a crucial informal antecedent of integrated relationships. It promotes efficiency, productivity and effectiveness, but also fosters acquiescence, stability, cooperation, conflict resolution and decreases decision-making uncertainty. (Morgan & Hunt 1994, 25–26.) It incorporates a set of mutual anticipations and obligations that provide effective, flexible and informal coordination, and thereby facilitate cooperation, coordination and commitment (Rodríguez & Wilson 2002, 56, 58). Trust implies confidence in the continuation of a mutually satisfying relationship, and is based on reputation, past performance, personal friendship and social bonds (Thorelli 1986, 41). A trust relationship is established when the expectations of one party are fulfilled by the other party (Rodríguez & Wilson 2002, 56, 58). Trust is the actor's expectation of the other party's capability, goodwill and self-reference in future situations involving risk and vulnerability (Blomqvist et al. 2005, 499).

Ring and Van de Ven (1992, 488) refer to two different definitions of trust frequently used in the literature: confidence or predictability in one's expectations, and confidence in the other's goodwill. The first type, fragile trust, leans on formal contractual safeguards and the latter type, resilient trust, on moral integrity (Ring & Van de Ven 1994, 93; Ebers 1997, 20). Ring and Van de Ven focus on the latter type, resilient trust, as do Morgan and Hunt (1994, 22–23) who define trust as confidence in an exchange partner's reliability and integrity. The importance of trust has been conceptualised in two ways in the marketing literature: first, as a constituent component of relationship quality, and secondly as a necessary determinant of a sound business relationship (Mouzas et al. 2007, 1016).

Fragile trust, based on formal contracts, may exist on the organisational level, but resilient trust based on moral integrity evolves among individuals who continuously interact, persuade and negotiate with each other. According to Mainela (2007, 94, 96), personal-level trust is required in the settlement of disputes over unexpected problems. It does not guarantee organisational-level trust, however. It is possible to have trust in an organisation, but trust by an organisation appears to be nonsensical (Mouzas et al. 2007, 1017). Thus trust is needed on both inter-personal and inter-organisational levels, given the possibility that there is trust in the individual exchange partner, but not in the company he or she represents. The concept of trust still seems more applicable to inter-personal than business relationships. (ibid., 1017─1018.)

Trust is often viewed as a separate, informal governance or coordination mechanism in inter-firm relationships (e.g., Gadde & Håkansson 2001, 192; Lunnan & Reve 1995, 361─362; Hauglaug & Grønhaug 1995, 368, 378; Anderson & Weitz 1989, 320). For example, Hauglaug and Grønhaug (1995, 368, 378) suggest that when actors are highly dependent upon each other, trust becomes the most dominant governance mechanism: on the other hand, authority and trust complement each other and can be combined in different ways. According to Anderson and Weitz (1989, 320), trust serves as a supplement to or even as a substitute for formal legal contracts, and dyadic relationships are governed as much by implicit practices as by legal obligations.

However, not all authors agree that trust can be treated as a separate governance mechanism with its own merits. According to Mouzas et al. (2007, 1017), there are long-term business relationships characterised by collaboration and interdependence that are not based on trust - there may even be a lack of trust. Grandori and Soda (1995, 198) posit that although trust is the most frequently mentioned element in inter-firm relationships and their coordination, it is not the inherent coordination mechanism. Even when conflicting interests prevail and no safeguard mechanisms exist, parties may trust each other on the basis of some other informal mechanisms such as social norms. Trust is more an outcome and a characteristic of the relationship than a mechanism. Furthermore, Chotaganda (2000, 104─105) argues that it is one of the antecedent behaviours of relational contracting, not a separate form of relational governance: it draws on human emotional bonds between individuals and relational norms, which rely on mutuality and solidarity. She considers it important to find the proper amount of trust because too much may prevent the parties from terminating or modifying the relationship when is not mutually beneficial. It is only one element, and equally important is the institutionalisation of relational norms in the enhancement of performance and effectiveness.

Trust is a necessary element in all kinds of business relationships, especially the integrated kind. However, it is not in itself a governance mechanism in a vertical relationship, but is rather both a precondition and an outcome. According to Blomqvist et al. (2005, 502) it complements flexible and incomplete contracts. Trust and contracts could be considered complementary rather than alternative mechanisms of governance. For example, if a contract were made despite a lack of trust it would be likely to be costly and adversarial. When there is no trust at all contracting is not reasonable in the first place. Although the process may be valuable in creating trust, the contract may also bring about deterioration.

2.4 Integration structures in vertical relationships

This and the following section deal with the basic elements of customer-supplier integration: integration structures and processes. The structures can be classified in many ways. First, there is the distinction between institution-, decision- and execution-related integration, which partly overlaps with the operational and strategic, and the formal and informal structures. Customer integration focuses more on supplier, and supplier integration on customer initiatives.

2.4.1 Institutional, decision and execution integration

Mattsson (1969) describes three forms of integration in marketing systems: institutional integration, decision integration and execution integration. Institutional integration refers to the legal power of the institutional relations, i.e. the structural arrangement between the parties. If the legal power over the behaviour of another party increases it strengthens the institutional integration. Full integration means that the company is owned solely by another company and is part of the same legal entity. (ibid., 5, 11, 46–47.) This view refers not only to the structural side of integration, but also takes the process into account.

According to Mattsson (1969), execution integration concerns the activity flow in a system and involves four variables: activity transference, internalisation, exclusiveness and homogeneity. Activity transference measures the ratio between the transferred and internally executed activities, i.e. it expresses the division of work within the system. Internalisation measures the extent to which activities are carried out internally, i.e. the division of work between the system and the environment. Exclusiveness measures how ‘open’ the system is to its environment, and homogeneity measures the uniformity in the way in which different components carry out the same activity. (ibid., 7, 102–104, 106, 108.) Decision integration refers to the degree of centralisation in the decision process, which in turn reflects the information received and its influence on the decision (ibid., 57).

Hertz (1992, 108–115) expresses Mattsson's categorisation in network terms. Institutional integration focuses on the strength of the informal as well as the legal ties between organisations, thereby assigning importance to informal agreements and trust. Execution integration could be broadened if one more element were added: the scope of the integration process, which is close to the concept of exclusiveness. This measures the scope of the activities and resources involved in the integration process in a dyadic relationship, and covers the relative importance and dependence of a certain relationship. Decision integration in network terms also concerns the degree of symmetry in a relationship. Centralised decision-making could mean control as well as symmetrical decision-making: when more actors and hierarchical levels are involved in the integration process, there are more types of information and knowledge to be transferred. Therefore, decision integration implies a power-dependence balance: the ability to influence in complex decision-making processes. (ibid.)

Mattsson's (1969) basic idea of integration in marketing systems was one starting point in this study. He considered the alternative form of (vertical) integration the extension of control over successive operational stages, through either contractual or informal agreements. Independent parties then become dependent on and integrated with each other under a single or joint decision-making unit. Mattsson did not understand the term integration necessarily only as ownership or other legal compulsion: it also refers to achieving coordination, forms of cooperation, degrees of interdependence and inter-unit standardisation (ibid., 38–41).

2.4.2 Operational and strategic integration

Customer-supplier integration has operational and strategic dimensions, which partly overlap with the concepts of execution and decision integration. Control and coordination cover the successive stages of activities, i.e. execution and operational integration are close, and centralised or symmetrical decision-making is close to strategic integration. The literature on marketing channels focuses more on the formal and informal dimensions of information, and less on the operational and strategic dimensions. However, as organisational boundaries blur and firms operate as vertically quasi-integrated units, it is necessary to make an explicit distinction between the operational and strategic dimensions, given the differences in the operational and strategic agendas described in this chapter. Different theoretical approaches give quite different meanings to the terms operational and strategic, and there is no clear answer in the existing literature. This section considers this problem from the perspective of vertical relationships

Very few researchers have made a distinction between operational and strategic integration in the context of vertical relationships. One exception is Larson (1992, 83), who distinguishes between operational integration, strategic integration and control in the context of dyadic business relationships. According to her, integration refers to economic aspects and control to the relevant social aspects, but the connection between the two as she presents it is not clear. Operational and strategic integration are relevant here, but social control is related more to relationship governance, as discussed earlier.

The ambiguity regarding both the operational and strategic agendas applies on both the intra-firm and inter-firm levels. In the context of supply chains, Bowersox et al. (1999, 64─67) posit that integration in the operational context refers to synchronisation, which requires system linkages and interfaces between partners. The primary indicator of such integration is improved performance from integrated operations, shared resources, and split responsibility for new-product and service development. Integration in the strategic context is the product of each partner's strategic role and the alignment of the value-creation process along the supply chain. The basic requirement for strategic integration is a shared or common vision of this value-creation process. The goals and objectives of the partners must be complementary and focused on joint performance achievement. However, strategic integration is also an indicator of the degree to which firms integrate operations with partners by developing interlocking programmes and activities (ibid., 65), which is usually associated with operational integration. Thus the distinction between strategic and operational agendas does not seem to be evident or clear. Juslin and Hansen (2002, 341─342), in turn, describe operational integration in terms of sharing both physical and human assets and resources. Thus resources are viewed from an operational and not a strategic perspective. However, the opposite approach, viewing resources from the strategic perspective, is more common in the case of vertical relationships (e.g., Gadde et al. 2003, 359).

The operational and strategic agendas still differ in orientation regarding the nature and extent of the decisions made. They also have a different relation to and perspective on time. The operational agenda primarily refers to relatively short-term effectiveness and efficiency, whereas the strategic agenda refers to the kind of unique mapping and timing in decisions that allows competitive advantage to be maintained or enhanced on a long-term basis. The decision-making is often more complex and requires a more holistic perspective, whereas on the operational agenda it may be enough that separate activities are managed efficiently and effectively.

The operational agenda thus covers effective and efficient functional and activity integration, which may have long-term consequences despite the primary focus on relatively short-term outcomes. According to Larson (1992), *operational integration* in a dyadic relationship requires communication linkages and administrative systems spanning the boundaries between the customer and the supplier. The relationship begins to resemble a well-coordinated, vertically integrated unit. One firm becomes an extension of another one with established administrative systems, procedures and modes of communication, and there is an emphasis on day-to-day administration. (ibid., 90─92.) Larson's view supports the idea that operational integration mainly refers to the relatively short-term, administrative activity or system linkages required for day-to-day operations and transactions.

Two types of operational integration have been identified: the first is integration related to downstream operations, i.e. the supply of internal production factors, and the second is related to upstream operations, i.e. the service bundle received by the customer (e.g., Häkkinen 2005, 67─69). It is essential to integrate customers (or suppliers) in producing and delivering a certain product or service (ibid.), so operational integration in vertical relationships is always related to the concepts of customer and supplier integration, forms of which are discussed later in this study. However, customer or supplier integration may be both operational and/or strategic in nature.

The operational dimension refers to the implementation process, and covers functional integration such as between two production units, sales organisations, business units, or regional organisations. Operational integration very much determines the outcomes of the integration process, thus its role is vital. (Vuorenmaa 2006, 159, 170, 181.) It is a wide concept, and incorporates the actual implementation of integration in various functions and activities of the two organisations, and also the relatively narrow area of activities between them. It primarily means the integration of *current or existing* activities and operations, and usually has no connotations in terms of entering new or withdrawing from current business areas.

The strategic agenda usually means choosing to carry out activities differently, or having different activities from those of rivals. Strategy then refers to a combination of activities in which the whole matters more than any individual part. The strategic agenda involves tightening the fit in activities, which is often difficult to achieve because it requires the integration of decisions and actions across many independent subunits. (Porter 1996, 64, 73─74, 78.) This idea is applicable in inter-firm relationships as well, although it mainly represents the strategic-management perspective. The cornerstones constituting an appropriate strategy are simplicity, organisation (unique mapping) and timing (Eisenhardt 2002, 89). Simplicity and timing are especially relevant in vertical relationships because the higher the number of actors involved in the decision-making and representing two or more companies on strategic questions, the more complex the strategy process is. Simple strategies are then the best, because it is only through simplicity that realisation and appropriate timing and implementation can be ensured.

According to Larson (1992), *strategic integration* extends beyond routine administrative system linkages. For example, two partners may have joint technology development or coordinated R&D efforts. Information exchange is also extended from the transactional to the strategic level: there are incentives to invest in and sustain the exchange process on a long-term and future-oriented basis. (ibid., 92─94.)

It is recognised in the current literature on strategic management that there is a need to extend the view to cover inter-firm relationships. Venkatraman and Subramaniam (2002) describe three different eras in strategy development. It was originally seen as a portfolio of businesses, which refers to traditional strategic management: the dominant view was that the competitive advantages were achieved through economies of scale. Secondly, it came to be viewed as a portfolio of capabilities: it was predominantly based on the inimitability of processes and routines, and the key drivers of competitive advantage were economies of scale and scope. Finally, strategy could be seen as a portfolio of relationships, which extends the thinking from the company to the relationship and network levels. The dominant theme is network centrality with blurred company boundaries. The key drivers are economies of scale and scope, but also economies of expertise, which come from leveraging knowledge and internal capabilities more broadly in relationships and networks. (ibid., 461─462, 467.)

According to Teece et al. (1997, 521─522), a strategy consists not only of a formal and informal organisational structure, but also the organisation’s linkages to its external environment, and both internal structures and inter-organisational linkages are important in determining how competences and capabilities co-evolve. Hamel and Prahalad (1994) also suggest that competition often takes place within and between coalitions of companies, not only between individual businesses. A strategy includes resource accumulation and leveraging rather than just the allocation of scarce resources: it is a stretch as well a fit. The fit between short-term objectives and near-at-hand resources should not be too tight because a perfect fit guarantees atrophy and stagnation. (ibid., 25─26, 160.)

Strategy is thus a dynamic concept, and strategic integration is related to capability development, i.e. the development of new products and services or entering into new businesses, in which both the supplier and the customer are involved. A capability requires complex skills and collective learning that ensure superior coordination of functional activities (Anderson & Narus 1999, 125). However, this kind of capability development is not automatically achieved through operational integration, and according to Florida and Kenney (2000, 302) it requires clear strategic decisions and actions. In vertical relationships it may mean what Teece et al. (1997, 516) call dynamic capabilities: the ability to integrate, build and reconfigure internal and external competences in response to rapidly changing environments.

Johnson (1999, 5) views strategic integration as progressive involvement between two firms in a relationship, implying combined resources, expanded joint capabilities and enhanced competitive positions for the partners. One party plays a clear role in the other firm's strategic picture. Therefore, partners need to adjust their strategic goals and objectives intentionally. The firm has a strategic mindset regarding its partners, and views the particular relationship as an asset and a strategic resource. (ibid.) Strategic integration is clearly more long-term-oriented than operational integration. If it is to be successful the partners must have an important, even critical role in each other's business, and both parties must also understand that role.

Johnson (1999, 15) also emphasises the dyadic and mutual aspects of strategic integration: varying dependence structures might reveal a different strategic picture. His results also showed that expectation of relationship continuity, dependence and flexibility had a positive effect regardless of the uncertainty faced by partners. Strategic integration happens in the right type of relationship (ibid., 14), in which partners have the ability and willingness to develop dense collaborative ties (Larson 1992, 99). Progression to strategic integration requires an organisational capacity to commit to mutual orientation, which in turn requires the commitment of resources and time to developing knowledge of the partner's business through learning and adaptation (ibid.). Considerable variation in dependence, flexibility or expectations of relationship continuity may make strategic integration between parties difficult to achieve. It is important to find a joint strategic mindset that will allow mutual understanding to be developed and performance to be based on long-term capabilities and competences.

The literature on strategic management so far has given relatively little attention to the informal aspects of integration: the emphasis has been on formalisation and planning rather than on more informal mechanisms (Cannon & Naryandas 2000, 417–418). However, strategic integration may be both formal and informal in nature, and these forms are reviewed in more detail in the next subchapter. Informal integration is much more than voluntary activities, however, in that it has a wide array of behavioural and social aspects. It has been recognised that many successful strategic alliances are, in fact, based on self-regulating rather than formal governance mechanisms (Spekman & Celly 1995, 163, 171, 178). For example, there are various core dimensions of strategic alliances, from goal compatibility, strategic advantage, interdependence, commitment, communication and conflict resolution to the coordination of work and planning (ibid., 160─165). Partners in strategic alliances make substantial investments in developing long-term collaboration, and they have a common orientation towards their individual and mutual goals (ibid., 160). Firms engaged in alliances and other cooperative arrangements operate as joint teams: they aim at improving conditions in the network together. This is important when extensive knowledge exchange is required in a situation in which two or more companies agree to make use of each other's technology. (Ford et al. 2003, 113.)

The strategic-integration perspective extends the strategy concept across organisational boundaries. It is not only a question of recognising and understanding each other's individual strategies, it also requires a mixed strategy in which both parties' interests and targets converge. Building a joint vision and strategy enables mutual capabilities to be utilised effectively, thereby increasing future value-creation potential.

2.4.3 Formal and informal integration

Hierarchical and vertical or horizontal alignments refer to formal integration, whereas voluntary activities refer to informal integration. The term informal in business relationships implies individual, random and unplanned cooperation, whereas formal refers to overt, planned and managed cooperation (Easton & Araujo 1992, 76), i.e. it is rational, intentional and explicit decision-making. For example, Håkansson and Snehota (1995, 116─117) state that in order to achieve formal control over certain processes a firm must decide whether some activities should be integrated or disintegrated within the frame of the company. Formality may cover various types of arrangements and ties, from ownership ties to relatively short-term contracts between parties.

An extreme form of *formal integration* is institutional integration, which means the legal control of relations or structural arrangements between the exchange parties (Mattsson 1969, 46). Formal integration traditionally implies legal ties and exercised power between actors, whereas formal-legal integration may offer an alternative in a situation in which trust is low. Written, long-term contracts represent a less extreme form of formal integration. (Hertz 1992, 108–110.) According to Hertz (ibid.), the loosest form of formal integration is the formalisation of the relationship, which may be written or unwritten, in terms of agreed rules and procedures.

The term *informal integration* is not very commonly used in the current literature, and there appears to be no clear definition. Informal integration in this research is connected with interdependence and compatibility between parties. Perceived resource dependence and compatibility rather than formal governance determine the direction of the integration. Drawing on social-exchange theory, Mummalaneni (1995, 234, 237) distinguishes close, personal and friendship relationships from formal or role relationships. Key individuals may have an important role in informal integration between companies. It is not very easy to define because, at the extreme, the term informal may include all kinds of socialisation and activities that strengthen togetherness outside the formal business relationship.

The socialisation of a relationship does not automatically mean that it is informally integrated. However, socialisation or "social integration" has an important role in the integration process. For example, Cunningham and Homse (2002, 205) define social integration as an atmosphere of co-operation, trust and closeness, and the legitimate exercise of power in relationships. The degree of formality/informality may still vary under "social integration" and sometimes it is quite difficult to clearly show when formality turns into informality or vice versa. However, it is important to make a distinction between informal integration and informal relationships. Although the latter may be close, personal and friendship-type relationships, the concept of informal integration implies more than just closeness or personal ties between individuals. It implies an increased level of synchronisation and fit on the relationship level achieved through social interaction, but not in fixed and predetermined terms. What is important is that the parties are able to adapt and show flexibility on a mutual basis. Thus informal integration does not only refer to highly socialised relationships between individuals, as might appear at first glance: it also incorporates relationship coherence, synchronisation and fit, the ultimate outcomes of which are integration benefits in terms of improved efficiency and effectiveness.

Regardless of the degree of formality, informal integration is required. According to Larson (1992, 97), stable and sustainable relationships with a high degree of cooperation and collaboration are governed by social control arising from norms of trust and reciprocity. A relationship between independent companies may be more integrated in reality than a vertically integrated organisation (Håkansson & Snehota 1995, 117). It is worth noting that a formal alliance or other formally binding arrangement does not alone determine the integration in either operational or strategic terms. Integration is not necessarily purely formal or structural, and may involve many other physical, administrative, economic, technical and social processes (Hertz 2006, 210).

Formalisation is one coordination mechanism in marketing channels through which activities can be controlled. However, it also has some negative aspects with regard to the supplier and customer organisations. A low degree of formalisation often typifies an organic organisational structure, while a higher degree is associated with the mechanistic organisation (Lawrence & Lorsch 1967, 6). However, we do not know exactly how much formality or informality a vertical relationship requires. It may be that too much formalisation makes it too mechanistic and hierarchical. On the other hand, too little may make it too organic and difficult to manage. It could be assumed that informally integrated business relationships feature in dynamic and highly specialised networks that are more flexible. Changing and developing networks in the form of fairly loose coalitions are often informal in nature, and information exchange between partners may be a crucial determinant of efficiency and effectiveness (Gadde & Håkansson 2002, 427─428). Increased specialisation may mean that vertical or other types of formal integration are not necessarily the best possible alternatives. New quasi-organisations, which are in fact tightly connected, highly specialised, informally integrated relationships, may emerge due to increased competitive pressure, for example.

Larson (1992, 98) suggests that economic transactions cannot be isolated from the social world in which they take place. Neither the over-socialised nor the under-socialised model is appropriate in ideal economic exchange. Actors are over-socialised when portrayed as governed exclusively by values and norms, and under-socialised when portrayed as isolated, rational economic units. (ibid., 97.)

Consideration of only the formal or the informal dimensions of integration gives quite a narrow and limited picture, and both are required in vertical relationships. Formal integration refers in the current literature not only to legal ownership arrangements, but also to formal contracts between independent organisations, and even the formalisation of a relationship in terms of unwritten rules and practices. Formal integration in this research means contractual arrangements or legal ownership structures, while unwritten rules and practices refer to the process of institutionalisation, which in turn is an important precondition of integration.

2.4.4 Customer and supplier integration

This section deals with the third structural element, customer and supplier integration. *Customer integration* (e.g., Jacob & Ehret 2006) means that the supplier integrates the customer into its own activities, processes and strategies, and the initiative comes from the supplier. There are four main themes: *1. customer integration as a marketing or customer-service strategy, 2. customers as participants, 3. customer integration as a supplier's value-management concept and 4. customers as value co-creators*. With regard to the first of these, and given Håkansson's (1982, 386, 388–389) division of marketing strategies into problem-solving[2] and transfer strategies, customer integration could be considered a transfer strategy according to which the seller tries to develop very close links with customers through the use of coordinated planning systems, stocks and logistics. In order to follow this strategy, the selling firm needs high-level skills in both transfer and adaptation. (ibid.) Figure 2 shows four different marketing-transfer strategies.

Customer integration thus defined does not mention problem-solving strategies, referring only to transfer or logistics strategies. The boundaries between the different types are not necessarily clear, either. Håkansson (1982, 389) admits that in real situations the firm's strategies will often be mixed, and that different customers require different ones. Market dynamism makes the choice of strategy challenging and complicated in that decisions and choices cannot be fixed or predetermined.

Wouters (2004, 586–588) draws on Håkansson's model and distinguishes four types of *customer-service strategies*: customer integration, logistical precision, customer adaptation and standard customer service. An industrial supplier following a customer-integration strategy is able to provide a high level of customer service, to which the market is sensitive. The scope of activities is wide and includes the whole customer process. A high degree of integration means sharing know-how and information regarding planning, stocking and transportation. It is supported through both formal and informal communication channels, and both parties meet regularly and discuss short- and long-term issues. (Wouters 2004, 586–587.)

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[2] There are four problem-solving strategies in the context of marketing: low price, product development, customer adjustment and customer development (Håkansson 1982, 386).

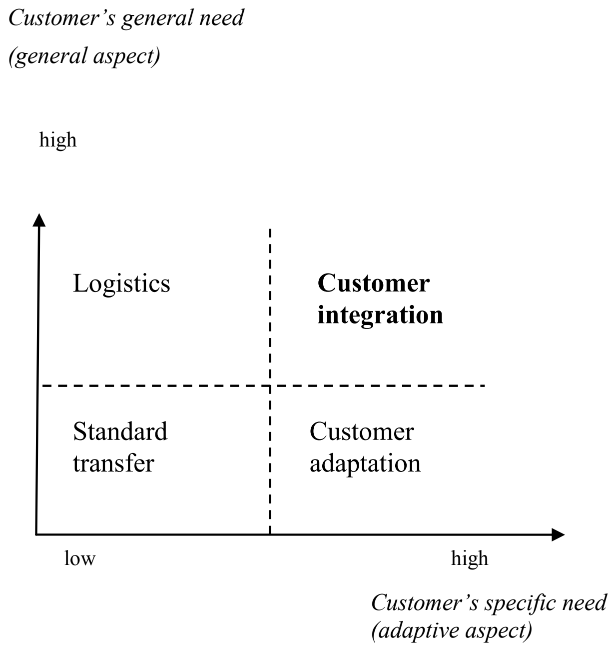

Figure 2 Marketing-transfer strategies (adapted from Håkansson 1982, 386)

Wouters' (2004, 588–589) results suggest that many organisations seek ad hoc solutions: the activities are not focused or based on a real strategy. In such a situation there is a risk that the company will be passively driven into expensive customer adaptation. Many organisations perform well in terms of customer responsiveness: the customer really is king. Strategic alternatives other than adaptation may thus be preferable. (ibid.) In fact, it could be questioned whether customer adaptation is a separate strategy in that other strategies always involve it on some level.

Secondly, *customer participation* involves treating customers as co-producers or co-developers. This idea draws on new institutional economics (Kleinaltenkamp & Jacob 2002, 150) (see Figure 3). Customers are integrated in terms of customising products and services, and are treated as external production factors (Jacob & Ehret 2006, 107; Jacob 2006, 47–50). Customer integration means active customer participation in the production of goods and services in that the customer is at least partly able to influence the vendor's internal processes (Eggert & Helm, 2000). When it results from (mass) customisation it may intensify the relationship between supplier and customer and increase customer loyalty (Piller & Moeslein, 2002). Customers are considered co-producers mainly in industrial markets, and more as co-designers in consumer markets (ibid., 9; Piller et al. 2004, 437).

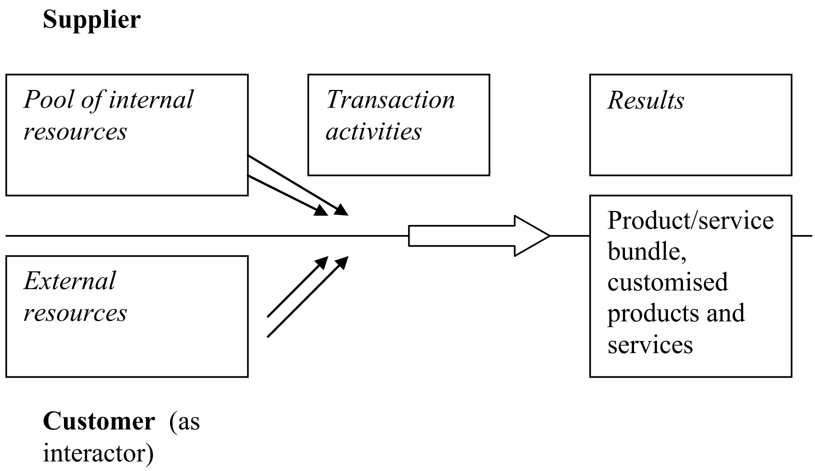

Figure 3 The customer-integration process (adapted from Jacob 2006, 46; Kleinaltenkamp & Jacob 2002, 153)

This model focuses on how the supplier could manage the production or service process more efficiently. For example, service blueprinting or modelling has been suggested as an appropriate tool for analysing different processes in which customers are involved (Fliess & Kleinaltenkamp 2004, 393, 396, 399; Eggert & Helm 2000, 9). Although the idea of service blueprinting is to portray the service system objectively so that different people can deal with the process regardless of their roles (Zeithaml & Bitner, 2000, 206), the model still focuses on the supplier perspective, not on mutuality. With its emphasis on active information exchange and the separation of customer-induced from customer-independent activities (e.g., Fliess & Kleinaltenkamp 2004, 392─395, 397) the model remains normative in nature and is suitable mostly for operational management. The aim is to find proper tools and techniques for suppliers so that they can increase their knowledge of their customers and consequently customer participation in their processes.

Customers could also be treated as active co-developers by integrating them into the supplier's innovation process. According to Wecht (2005), customer integration is a wider concept than customer participation, and is a mutual process. The participating customer still has a relatively passive role and the process is not mutual: the initiative often comes from the manufacturer's side. On the other hand, the integrated customer has an active role as a co-developer, and by implication there is more mutuality. (ibid., 35─36.)

Wecht studied suppliers' early innovation projects and the customers' roles as co-developers. He found different customer roles: sensor, specialist, specifier and selector. These roles differ from the traditional lead-user role, which emphasises the recognition and satisfaction of customer needs and expectations at an early stage of development. (Wecht 2005, 4, 157, 159─166.) The process of early customer integration goes on in the context of the ‘strategy, structure and culture’ organisational framework and takes two forms: structure and process. The strategy may focus on either effectiveness or efficiency. (ibid., 127, 171, 190, 195─200.)

According to Jacob (2006, 47─50), customer integration implies the supplier’s ability to achieve settled goals through control, configuration and communication with its customer, and is a product of the existing organisational resources, staff qualifications and experience gained (ibid). However, the customer’s own ability, motivation and willingness to integrate are also important aspects.

Thirdly, customer integration is seen in terms of *a supplier’s value management*, the basic principle of which is to produce more value by solving problems with customers (Kleinaltenkamp 1995, 77─83; Kleinaltenkamp et al. 1996, 14). This could thus be considered a value-centric approach, when the supplier’s internal resources are combined with the customer’s resources in transactional activities. The value functions include control, design and management, and the areas cover products, processes and resources. (Kleinaltenkamp & Jacob 2002, 150─153.) However, this model focuses on value functions, not on value distribution among partners. How the value is distributed between the supplier and the customer is equally important.

The fourth approach treats *customers as value creators*, which means that value creation is no longer the task of the single company, but it is determined jointly. Customer integration also widens the resource base when customers provide a bridge between the internal and the external resources (Gouthier & Schmid 2003, 120─123, 135─136). When a customer has a certain role in the supplier’s innovation and development it implies the continuous development of value webs in integrated value systems (Reichwald et al. 2005), and not the mere enhancement of value produced by the supplier.

Interaction between the parties is an essential element of integrated value creation. Wikström does not use the term integration, but argues that value is created through supplier-customer interaction (Wikström 1996, 363). Interaction assumes a deeper meaning when it is more than ad hoc: it is then relevant and benefits both parties. Both actors are involved, and expand their traditional roles of customer and supplier. Customers are thus not only part of the value-creating process and of the activities of the supplier, they are also considered valuable resources bringing their experience, knowledge, visions and preferences into the whole interaction process. (ibid., 360, 370─372.) There is a shift from the single-firm perspective to the mutual perspective: how parties can jointly create more value, i.e. relational rents.

The idea of customers as value co-creators draws on Prahalad and Ramaswamy's argument that customers create joint co-creation experiences (Prahalad & Ramaswamy 2004a, 7, 10─13; 2004b). When customers are active players and value co-creators they become part of the company's emergent social and cultural fabric. Companies and lead customers have joint roles in many ways, and this requires active dialogue with customers with multilevel access and communication. (Prahalad & Ramaswamy 2000, 80) Not only do the parties collaborate, share practices and co-innovate, they also have shared destinations, joint goals and joint leverage of competencies: co-created value (Prahalad & Ramaswamy 2004c, 200.) The active and efficient use of both the supplier's and the customer's resources, in turn, enhances the potential of customer integration in terms of developing strategic competences and creating value for both parties.

Table 2 covers various issues related to customer integration: as a marketing strategy, as customer participation and as a supplier's value management. The focus is on the supplier, the idea being to identify and then enhance the customer's role in the supplier's activities. Value creation in vertical relationships overlaps with the concept of strategic integration. Value management and co-creation are written in italics in the table because the authors do not explicitly use the term customer integration, although their views represent the view of strategic customer integration as understood in this study. Value-co-creation emphasises mutuality, and it brings the whole relationship onto the strategic level, with joint targets and combined roles. Despite the mutual orientation, it still remains mostly a supplier-driven activity. Moreover, existing research has paid relatively little attention to the means of motivating a customer to participate or co-act, or of solving customers' problems in a mutual spirit.

Table 2 A summary of the customer-integration themes

Author	**Key idea/theme of customer integration**
Håkansson (1982) Wouters (2003)	*Marketing strategy:* Customer integration as one of a firm's marketing strategies (transfer strategy) A firm's customer-service strategy, capability of providing a high level of customer service
Fliess & Kleinaltenkamp (2004) Jacob & Ehret (2006) Eggert and Helm (2000) Wecht (2005)	*Customers as participants:* Customers as external production factors in the supplier's service process Reducing uncertainty and enhancing relationship transparency in service processes Strategy, structure and culture form the organisational framework for binding customers at an early phase of the innovation project
Kleinaltenkamp & Jacob (2002)	*Value management:* Combining the supplier's internal resources with the customer's external resources to produce value
Wikström (1996) *Prahalad & Ramaswamy (2004)*	*Value co-creation:* *Value is created in supplier-customer interaction in which both parties expand their traditional roles, the focus being on the customer* *Joint value co-creation experiences between customer and supplier with shared destinations, joint goals and joint leverage of competencies, the focus being on the customer role*

The idea of the customer as a participant, a co-producer and a co-developer is mostly related to operational integration, which emphasises effective and productive activities and processes. However, the role of the customer in that process may vary considerably: if it is only marginal it is hardly a question of integration. The concept of customer integration presented in the current literature is sometimes slightly misleading, because "customer integration" viewed only as customer participation does not necessarily mean that the relationship is strategically integrated. It does not usually differentiate between operational and strategic integration. Value creation is a complex and strategic phenomenon, and it lacks measurement even though it is an essential element in integration. It is necessary to understand the value-creation processes and strategies of both the supplier and the customer simultaneously, because strategies are assumed still to be very much organisation-specific.

Supplier integration (e.g., Fliess & Becker 2006) means that the customer integrates its supplier into its activities, processes and strategies, i.e. the initiative comes from the customer. It has received less attention in the current literature than customer integration, having been studied in the supply-chain context. There are two main themes: *supplier integration as a purchasing strategy and suppliers as participants*. Håkansson (1982) divides purchasing strategies into problem-solving[3] and transfer strategies. As he considered customer integration to be one of the firm's marketing-transfer strategies, in the same way he suggests that supplier integration is one of its *purchasing-transfer strategies*. It involves the coordination of planning and stocks, and there is often less focus on the supplier's technical service. As a strategy the aim is to keep and maintain key suppliers, and it is also important to refrain from taking the option of changing supplier. Integration requires close co-operation, which is based on high technical competence and close social distance. Purchasing and marketing are seen as integrators and as a link between different technologies. The aim is to make the link between purchasing and marketing as efficient as possible. (ibid., 393–394.) Figure 4 shows four different purchasing-transfer strategies.

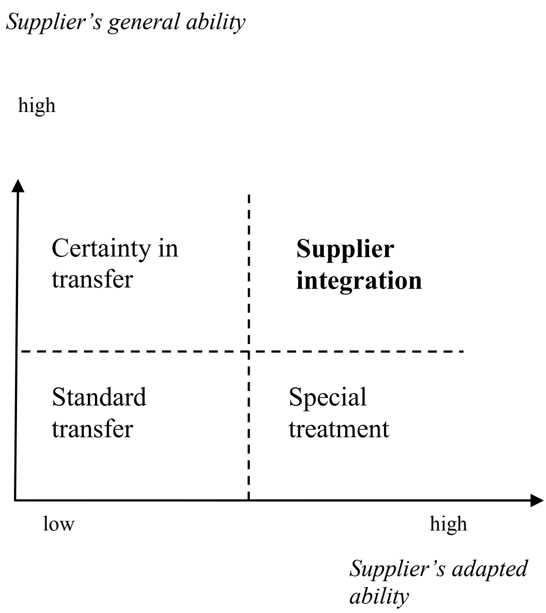

Figure 4 Purchasing-transfer strategies (adapted from Håkansson 1982, 391)

Supplier integration as *supplier participation* covers many aspects. According to Fliess and Becker (2006), it means that suppliers are co-

[3] There are four problem-solving strategies in the context of purchasing: low direct costs, external specialist, low indirect costs and supplier development (Håkansson 1982, 391).

developers in the customer's processes. Many managers still view supplier integration as a kind of black box, and identifying the problems of controlling the co-development process has been considered particularly important. Three co-development designs are put forward: contract development, coordinated development and joint development, together with three success factors in the co-development process: trust, communication and joint decisions. (ibid., 28─29, 41─42.)

Giunipero et al. (2006, 833) define supplier integration in process-oriented terms as "the process of incorporating or bringing together different groups, functions, or organizations, physically or by information technology to work jointly and often concurrently on a common business-related assignment or purpose". An essential element is bringing people together to solve common problems and to create a common understanding of the goals and purposes. There are various ways of achieving it, including forming cross-organisational teams, implementing information systems, setting integrated performance objectives, developing process-focused organisations, co-locating suppliers and customers, and setting up buyer-supplier councils. The aim is often to lower costs through making the process more efficient. This puts the focus on the strategic role of supply managers: they need to possess good communication, technical, and financial skills. (ibid., 833─834.) This view reflects the idea that the driver in supplier integration is the supply manager of the buying organisation. The connection with innovative co-development seems to be an unexplored area in the current literature, in which the focus has been on lowering costs and improving process efficiency rather than on developing new innovative solutions.

Supplier integration and purchasing integration are closely related, although the latter is more internally focused activity. According to Narasimhan and Das (2001), it facilitates supplier integration, and refers to company-internal integration in strategic purchasing practices and goals. Firms achieve supplier integration through purchasing practices such as early supplier involvement. Strategic purchasing practices typically have an external orientation to the purchasing-supply interface. Purchasing integration thus acts as a catalyst in the co-development process and the external deployment of purchasing practices, when the idea is to establish and maintain a strategic linkage between external and internal practices and competitive priorities. (ibid., 593─595, 607.)

Petersen et al. (2004) found that a key aspect of integrating the supplier into the product-development process was to ensure that managerial practices enhanced the effectiveness of teams developing new products. Team effectiveness requires agreeing targets and metrics jointly. The level of responsibility given to the particular supplier in the development process must be decided beforehand. It is not only the capabilities of the supplier that matter, but also the culture, which may enhance or restrict the buying firm's ability to interact effectively. This study supports the view that input from a selected supplier facilitates better decision-making, and promotes better design and improved financial performance of the development project. (ibid., 15.) However the authors did not determine how strong and long-term the customer-supplier relationships were: it was project-team effectiveness that was under investigation, not the relationship itself.

Bowersox et al. (1999) view supplier integration as part of the broader concept of supply-chain integration, which involves coordinated performance and has close ties in the whole chain backwards to the supplier, the suppliers' suppliers and so on. It has four dimensions: strategic, operational, financial and relational. On the strategic dimension are the complementary goals and objectives of the partners and a shared or common vision of the total value-creation process; the operational dimension refers to operational synchronisation and system linkages intended to reduce duplication, redundancy and idle time; the financial dimension concerns the structuring of a joint financial venture with a supplier; and on the relational dimension lies supplier-relationship management, which promotes the active participation of suppliers in the strategic planning and decision-making, such that they would become part of the supplying firm's extended family. (ibid., 25, 63–72.) Supply-chain effectiveness requires suppliers to become an essential part of the supplying firm's processes and strategies. It is a question not only of cooperation and co-development, but also of expanded planning and decision-making beyond each organisation's own boundaries.

It appears from the literature on supplier integration that both intra-firm purchasing integration and supply-chain integration matter. The strategic value of the right suppliers should also be considered: it is important for the partners to be able to share a vision of the total value-creation process and to achieve goals jointly. This aspect was not as heavily emphasised in the literature on customer integration. Table 3 gives a summary of the supplier-integration perspectives.

Table 3 A summary of the supplier-integration themes

Author	Key idea/theme of supplier integration
Håkansson (1982	*Purchasing strategy:* Supplier integration as one of the supplying firm's transfer strategies, which means coordinated planning and stocks
Fliess & Becker (2006)	*Suppliers as participants:* Supplier integration as a co-development process involving three designs: contract development, coordinated development and joint development with suppliers
Giunipero et al. (2006)	A firm's supply managers have a key role in bringing people together and creating a common understanding of effective supplier integration
Narasimhan and Das (2002)	Purchasing integration facilitates external supplier integration and acts as a catalyst in the co-development process
Petersen et al. (2004)	Focus on managerial practices that increase the effectiveness of customer-supplier teams in product development
Bowersox et al. (1999)	Supplier integration as part of supply-chain integration, coordinated performance and close backward ties with suppliers, suppliers' suppliers and so on.

The notion of suppliers as value creators is still an unexplored but important area of supplier integration. It means that the supplier recognises and fully understands his/her role in the customer's value-creation process. The concept of supplier integration has mainly remained on the operational agenda, and strategic aspects such as building a joint strategy and vision have been mentioned mainly in the context of supply-chain integration. It may still offer a lot of opportunities. Integrating suppliers may be easier than integrating customers. As already stated, suppliers are, generally speaking, ready to adapt more or orient more towards their customers than vice versa. Both customer and supplier integration partly overlap with strategic and operational integration. Still, it is important to make a distinction between the two, because it may help us to identify and describe the direction of the integration - whether it is going forwards or backwards in the supply chain. The direction may also indicate which party has the more powerful role in the relationship, which is valuable information in relationship governance and management.

2.5 Integration processes in vertical relationships

2.5.1 The overall change process in vertical relationships

Customer-supplier integration is embedded in organisational, relationship and network change. It is part of the overall relationship-development process, and it is necessary to understand this in order to form a picture of the process of integration. This process may be intentional and planned, or it could be unintentional and unplanned. A single relationship may go in one of two opposite directions, towards either integration or disintegration. However, not all change in relationships is related to integration: the integration process implies a change to higher mutual dependence, which results in long-term commitment.

Van de Ven (1992, 169) gives three meanings of the term process: first, it is a logic that explains a causal relationship; secondly, it is a category of concepts or variables that imply a sequence of activities; and thirdly, it is a sequence of events that describes how things change over time. Viewing change as a sequence of activities is the most common approach, but it is typically inadequate in dealing with complexities (ibid., 172). According to Pettigrew (1997, 338), only the evolutionary-change alternative explicitly and directly observes the process in action, and is able to describe how some issues develop and change over time.

Change in industrial networks and relationships may be static or dynamic (Håkansson & Henders 1995, 141─142.) Static change means specific and separate moves, and the start and the end can usually be defined. In the former case the actors make moves in the market based on their perceptions of the market game. Dynamic change, on the other hand, is a continuous development process: it is fundamentally never-ending, and it cumulatively constitutes a process that creates further conditions for change. It arises from the interaction of actors using certain resources to perform specific activities. (ibid.)

According to Halinen et al. (1999, 781─784), change emerges on the level of dyadic relationships, which are its generators. There is a distinction between confined change and connected change. Confined change always remains within a dyadic relationship, while connected change means that change in one business relationship also influences some other relationship(s) or network-level change. Change in a business relationship may incorporate periods of stability when only incremental change occurs, or it may be revolutionary when underlying structures of actor bonds, activity links and resource ties are fundamentally altered (Halinen et al. 1999, 784─785). The change process is thus circular, which implies both incremental and radical changes in a dyadic relationship: in other words, actor bonds, activity links and resource ties are possible. (e.g., Halinen et al. 1999, 789.)

The concept of dynamics is closely related to the change process. Halinen and Törnroos (1995, 499) suggest that the term dynamics in the context of buyer-seller relationships should be viewed as a time-related force that produces change or includes it. It is a process of change over time, which always happens in a specific context (ibid., 501). Forces of change and forces of stability ultimately create network dynamics (Halinen et al. 1999, 792), as well as relationship dynamics.

A change in the level of integration varies with the content, intensity and symmetry of the relationships (Hertz 1992, 106). Integration could be seen as an important change process in networks, which actually means the transformation from loose co-operation to a higher level of internal fit. It involves a higher degree of synchronisation between partners. It makes it possible to act collectively: there is a joint mission, joint planning and development and/or an increase in social contacts, for example. (ibid., 210.)

Dynamics and change are not opposite phenomena to stability: in fact, there are rather stable relationships that may also involve dynamics and change. According to Geersbro et al. (2007, 3─5), stable relationships create successful adaptation to relational uncertainty. They divide stable business relationships into four categories: high-vitality relationships, opportunistic relationships, habitual relationships and repetitive relationships. High-vitality and opportunistic relationships are characterised by dynamic change: the former are lively, energetic, strong and enduring while the latter take advantage of the moment. The supplier always has a share in the customer's business, for example, but this share may change regularly. Repetitive and habitual relationships are static and routinised. The habitual relationship offers differentiated value, however, while the repetitive relationship does not. (ibid.) Relationship stability defined by Geersbro et al. refers primarily to continuity: the relationship may change but the expectation is that it will continue and provide a certain amount of stability. Thus stability does not exclude change, but if change occurs it remains incremental.

Incremental and evolutionary change always occurs within the established structure of integration. Depending on the strength of the change, evolutionary development may lead to either integration or disintegration within that specific structural dimension. However, change also happens between different structural dimensions. On the relationship level, for example, there may be change from operational to strategic integration or vice versa. Change in one dimension of the integration structure thus may or may not lead to closer integration or alternatively disintegration in other dimension.

The integration concept is related to both the structure and the change process, although the relation to time may be quite different depending on the perspective. The process could be seen in three ways: it may be a separate stage in some overall development process, a linear process with separate developmental stages, or a holistic and iterative, not linear, development process. The integration process referred to in this research is holistic and iterative: how relationships develop and evolve over time to become more integrated, or alternatively more disintegrated. The first two alternatives largely treat integration as linear sequential development or progression. For example, Van der Vaart and van Donk (2004, 26–27) distinguish three different stages of integration: transparency, commitment and coordination, and integrative planning. The aim in all these stages is to remove all boundaries or barriers in order to ease the flow of material, cash, resources and information.

According to Dwyer et al. (1987, 21), a relationship develops in the following phases: awareness, exploration, expansion and commitment. When it develops towards commitment, interdependence or mutual dependence between seller and buyer increases and deepens. The authors identified the following sub-processes during the exploration stage: attraction, communication and bargaining, and power and justice. Norms and expectations between parties develop during the expansion phase, and at the commitment phase shared values, governance structures and contractual mechanisms support joint investment in the relationship. Commitment represents the highest stage of relational bonding, whether or not there is formal continuity (ibid., 19, 23). The development from expansion to commitment reflects the integration process in a vertical relationship. However, an integrated relationship implies both formal (explicit) and informal (implicit) continuity, not one or the other.

Still more often integration is seen as separate stage in overall business-relationship development, but is then rarely given any deeper meaning. Larson (1992, 83) categorises integration in a dyadic business relationship between an entrepreneurial firm and its partner as operational integration, strategic integration and social control. According to Larson's model, integration is the final stage in the relationship-development process, while Yorke (1990, 356–357) identified the following stages: ignorance, interest, initiation, involvement and integration.

Batonda and Berry (2003) view the integration of operations and strategies as part of relationship maintenance, which in general requires inter-organisational adaptation, the integration of operations and strategies, increased commitment of resources, long-term rewards based on mutuality, and trust. Relationship development, in turn, includes the inter-organisational planning of activities and responsibilities and value creation through synergistic combinations (Batonda & Perry 2003, 1461–1462, 1464). However, the process of integration is not a separate stage in relationship development: integration or disintegration happens all the time. There is no absolute point at which we could say that the organisation has become integrated (Hyvönen 1990, 20), and this could be assumed also to be valid in relationships.

According to Hertz (1992, 106), the degree of interdependence in a network reflects the degree of integration between firms, the level varying according to the content, intensity and symmetry of the relationships. Integration could thus be seen as an important change process in a network, which means, in fact, a transformation from loose co-operation to a higher level of internal fit. It involves a higher degree of synchronisation between the partners. This process makes it possible to act collectively: there may be, for example, a joint mission, collective planning and development, and/or increased social contacts. (ibid., 210.)

2.5.2 The process of institutionalisation

The process of institutionalisation is important when studying inter-firm relationships, their governance and integration. Not all institutionalised relationships are integrated, but all integrated relationships are, to some extent, institutionalised. According to Hajba (1982, 90–91), the verb to institute implies the maintaining of a certain value system or ideology and a constituted system of roles and norms. Social institutions are also characterised by a certain amount of stability and repetition in actions. Institutionalisation, in turn, implies the formation of permanent models, rules, laws, habits and rituals regarding social interaction. (ibid.) Ford et al. (2003, 56) refer to institutionalisation as a mature and stable relationship stage at which both parties achieve certain stability in terms of learning, investments and commitment. Institutionalised practices in the context of one relationship may affect a company's whole organisation and hence the development of other relationships (Ford 2002, 72).

Institutionalisation involves two main sub-processes: *routinisation* and the *development of shared norms*. Routines are capabilities indicating what is regular and predictable in business behaviour (Dosi et al. 2000, 4, 12). An organisation may learn to leverage productive routines through replication, which in turn may become routinised (Szulanski 2000, 69). There is a distinction between static and dynamic routines: whereas static routines regulate ongoing activities, dynamic routines regulate the search for improved routines and methods, i.e. developed processes (Pisano 2000, 150─151). Routines resemble the skills of individuals in that they are an essential part of the organisational memory and accumulated stock of know-how. An efficient routine is not unique: it is imitable, transferred from one context to another. Routines thus serve as a coordination mechanism on three levels: information processing, competences and know-how, and conflicting interests. (Coriat 2000, 214─216.)

Routinisation aims at efficiency and coherence in a vertical relationship, which could also be considered one of the aims of integration. According to Håkansson (1982), routinisation first leads to clear expectations concerning partner roles and responsibilities. Over time these mutual expectations cease to be questioned and the relationship becomes institutionalised. Institutionalisation may finally lead to common market or industry traditions, practices and codes, which often cross rational, organisation-specific, decision-making boundaries. (ibid., 17, 21, 109.) According to Grant (1996), routinisation is widely related to knowledge sharing. It does not simply mean the codification of tacit knowledge into explicit rules and instructions: if everything is based on codified information, a substantial amount of knowledge can be lost. Coordination achieved through routinisation may also rely upon informal procedures when roles are understood commonly through interaction, constant repetition and signals. (Grant 1996, 379.)

Routinisation is necessary not only for institutionalisation, but also for inter-firm integration. According to Teece et al. (1997, 519─520), integration requires the replication of organisational processes across companies: it reflects a certain coherence and rationality between processes and systems, i.e. organisational routinisation. However replication may be difficult because it requires systemic changes not only within the organisation, but also among inter-organisational linkages. (ibid.) It could be assumed that integrated relationships are always to some extent institutionalised, but institutionalised relationships are not necessarily always very integrated.

Stable relationships with a considerable amount of routinisation may also lead to problems if they are operated and managed at low cost and with little managerial involvement. This may create the impression that the other party is no longer responsive or committed. Paradoxically, this may occur when the importance of the two companies to each other is great. Another problem is that institutionalisation may sometimes lead to overdependence on a partner leaving itself open to exploitation. It may also hinder and affect other business relationships if an institutionalised relationship is taken for granted by other network members. (Ford 2002, 67, 72; Ford et al. 2003, 56.)

A further process of significance concerns the *development of shared norms* between parties. Norms are expectations about behaviour on different levels, such as in societies, individual firms and groups of individuals. (Heide 1992, 34.) In a relationship they are behavioural rules that guide the actions of individuals (Lindblom 2003, 73). They are extensions, elaborations and qualifications of rules, habitual and regular behavioural patterns that are relatively stable and expected by the group's members. They represent shared and mutual expectations, which give participants confidence. They both facilitate and restrict freedom of action, but at the same time they make parties behave consistently, and keep the relationship stable. (Ivens & Blois 2004, 241, 256)

Norms may be discrete or relational. Discrete norms refer to transactional exchanges, inherent in which are expectations about individualistic or competitive interaction. Relational norms, in turn, are based on expectations about mutuality, which enhance the wellbeing of the relationship as a whole. (MacNeil 1980, 59─70; Heide & John 1992, 34.) They are mutually agreed, implicitly or explicitly, accepted rules of behaviour, which have developed over time (Spekman et al. 2001, 23). They are collaborative in nature, and require consensus. Thus both buyer and seller are expected to learn about each other's needs, share their knowledge and experience, work for mutually beneficial outcomes and jointly anticipate changes. However, there may also be consensus concerning non-collaborative norms in a dyad, which may happen when opportunistic behaviour is likely or when products are easily standardised. (Spekman et al. 1997, 832─833, 849─850)

Institutionalisation is the collaborative process of governing and guiding the relationship either intentionally or unintentionally. It is closely related to institutional integration, which may be either formal, informal or both. The process of institutionalisation is related to both relational and transactional exchange, and it incorporates two main sub-processes: routinisation and the development of shared norms. Routinisation leads to clear expectations, which in turn guide the decision-making and increase efficiency and stability. Shared norms are behavioural rules and practices, which guide the decision-making and actions in a vertical relationship. An integrated relationship is based on relational and mutual norms.

Transactional exchanges are based on discrete norms, which do not reflect the idea of integration very well. However, such exchanges may well be long-term and institutionalised if both parties share a vision of discrete exchanges based primarily on competition. On the one hand, institutionalisation may restrict flexibility and increase inflexibility: if inflexibility takes over, conflicting views may emerge. On the other hand, it fosters confidence and consistent behaviour, which in turn increases stability, predictability and efficiency in the relationship. This, again, binds the customer and supplier tightly together, and may lead to integration. Some degree of institutionalisation is thus needed, but too much may lead the relationship in the opposite direction, to disintegration.

2.5.3 The model of actors, activities and resources

The network model of actors, activities and resources (the ARA model) developed by the IMP School is utilised here to describe the process of integration in vertical relationships. The aim of the model is to explain and enhance the development of dyadic-relationship behaviour in the channel context. It draws on various theoretical approaches focusing on social dimensions and behavioural aspects. The process of integration is related to the overall change process in relationship development, and could be seen as the most advanced phase implying a high level of commitment (e.g., Dwyer et al. 1987, 21). The model seems to suit the integration context because it focuses on long-term relational exchange development, which may result in relationship integration.

Although the model acknowledges economic effectiveness, it is not perhaps the best in terms of explaining and understanding effective economic exchange between two parties. An effective relationship structure could be seen as the outcome of both a formal and informal relationship-development process. Although the ARA model does not explicitly refer to structures, empirical research may give some indication of how its components in terms of actors, activities and resources are related to the structural dimensions of integration: i.e. the kind of structures the process leads to. The process and the structure are thus not separate phenomena, but are closely connected and intertwined.

Actors may be individuals, groups of individuals, parts of firms, firms or groups of firms (Håkansson & Johansson 1992, 29). In this research actors mean individuals, teams and companies. Actor bonds develop through both individual- and collective-level bonding between two companies. *Activities* refer to sequences of acts, which may be internal or external to the company, and lead to the exchange, combination or creation of resources. Activity linking refers to the coordination process by which technical, administrative or commercial connections and linkages are created. *Resources* include physical and non-physical, or tangible and intangible assets, and resource tying refers to relationship-specific investment and adaptation.

Ford et al. (2003) argue that three processes, interaction, coordination and adaptation, determine the formation of actor bonds, activity links and resource ties. *Interaction* between individual actors leads to actor bonds, *coordination* leads to activity links and *adaptation* to the formation of resource ties.

Adaptations are relationship-specific investments, which may refer to either adapting to the customer's own offering or creating the ability to make use of the supplier's resources (ibid., 40, 71). The formation of solid actor bonds, tight activity links and strong resource ties implies increased interdependence and involvement between two companies. The combination of bonds, links and ties may offer new future-oriented business opportunities. (ibid., 71–72.) Actors are related to identity, activities to productivity, and resources to innovativeness (Dubois 1998, 19).

The interplay between actors, activities and resources could be seen as the driving force behind the development of business relationships (Håkansson & Snehota 1995, 26–34). The key task in customer-supplier integration is to identify the elements that produce integration effects in a particular customer-supplier relationship. From the integration perspective not all actor bonds, activity links and resource ties are equally interesting: it is the optimal combination of these three dimensions and the identified target areas that determines the realisation of the team effects in a relationship. Figure 5 depicts actors, activities and resources from the integration perspective.

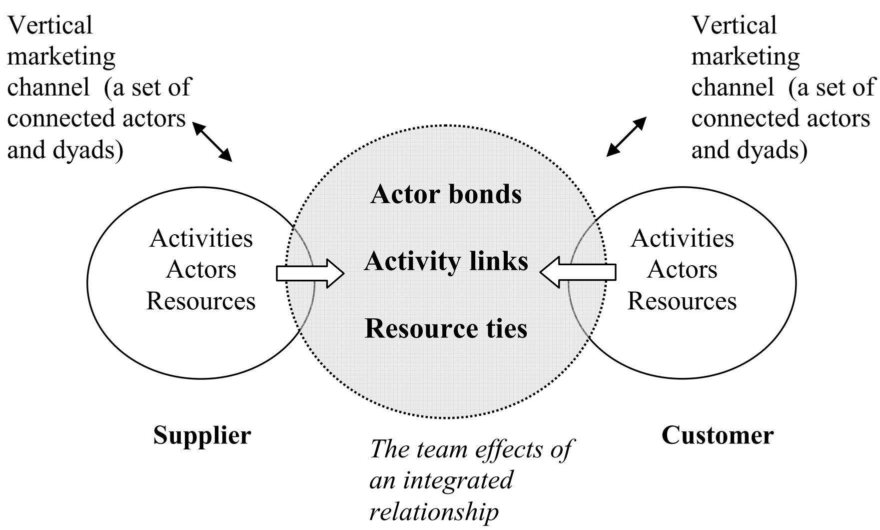

Figure 5 Actors, activities and resources from the integration perspective (adapted from Håkansson & Snehota 1995, 37; Håkansson & Johanson 1992, 29)

The realised team effects show whether or not a relationship is integrated. These effects may be economic or non-economic. Non-economic effects refer to behavioural and capability aspects, which in turn may have an indirect effect on the economic effects. Economic effects have efficiency and effectiveness aspects. Traditionally, the effects of integration have been considered in terms of efficiency rather than effectiveness. Efficiency aims at economies of scale and scope, and is often achieved through standardisation (Håkansson & Snehota 1995, 53–54). It refers to the efficient use of current resources: getting the most out of what is available (Anderson & Narus 1999, 203; Möller & Törrönen 2003, 111). Effectiveness, in turn, means adding market value by creating new resources, and implies the ability to invent and produce solutions that provide more value than the existing market offering (ibid., 112). While efficiency primarily refers to cost efficiency effectiveness also takes revenue into account.

Effectiveness refers to the added value a particular relationship is able to produce. According to Håkansson and Snehota (1995, 396–397), value does not simply mean economising and saving costs, but also incorporates the continuous development of relationship benefits through actor bonds, activity links and resource ties. On the other hand, what suppliers and customers value is subject to continuous change (ibid.), as is what partners perceive to be important and valuable. In a strategically integrated relationship the value creation is not merely a question of value management on the part of the supplier and the customer separately, although both firms may maintain their own goals and viewpoints. What is more important is to achieve value co-creation, i.e. to produce new value mutually and collaboratively, and to combine both firms' perspectives in a new, joint view.

Håkansson and Snehota (1995) argue that the more the dyadic relationship is understood and developed, the greater the magnitude of the team effects, which provides opportunities to develop capabilities, resources and activities in order to achieve integration. By team effects they mean that co-action over time may become a dynamic force that takes advantage of the future value-creating potential of the two parties connected and involved in the relationship. (ibid., 37–38, 386–387.) The dyad is not just the sum of its elements because of the existing activity links, resource ties and actor bonds. The relationship has become integrated because jointly the two companies can achieve team effects by performing activities and utilising resources, which they could not accomplish in isolation. (ibid., 36–37.) Team effects thus refer to the outcomes of relational bonding, linking and tying on both strategic and operational agendas. For the strategic agenda it means increased value-creation potential or long-term effectiveness in a relationship, requiring strategic decisions from both organisations to enter into new business areas together, for example. In operational terms it means increased efficiency through optimisation of the division of work, possibly implying decreasing costs and removing overlapping activities.

Actors, activities and resources together form a powerful quasi-organisation in a vertical marketing channel, which is nevertheless subject to constant change: towards either deeper integration or disintegration. It is important in this sense to understand the interplay between or the combination of actor bonds, activity links and resource ties, which could be seen as the driving force behind deeper integration or disintegration.

Actor interaction, activity coordination and resource adaptation are essential, particularly in informal processes. Actor interaction is related to behavioural practices, which may lead to strengthened bonds between individuals and companies: actor bonding happens at the stage of the institutionalisation process when the relationship becomes more integrated. Activity coordination requires an appropriate combination of both formal and informal control mechanisms: the wider the scope of activities, or when key activities are coordinated, presumably the greater the need for a variety of control mechanisms. A wide scope of activity coordination, with the emphasis on key activities, reflects the degree of operational integration in particular. The extent of resource adaptation increases when resource dependence between the partners is high. It often requires strategic decision-making regarding the roles and responsibilities in a relationship, i.e. it reflects the degree of strategic integration.

An integrated relationship requires all of the three model components, although different ones may be more valuable in terms of a specific structural dimension. Depending on the dimension of the integration, the role and importance of each component may still vary.

2.5.3.1 Actor bonding

Actors have five different characteristics: 1) they perform and control activities and/or resources; 2) they develop relationships with each other; 3) they base their activities on direct (formal) or indirect (informal) control over resources; 4) they aim at increasing their control over the network; and 5) their knowledge and experience of activities, resources and other actors in the network vary (Håkansson & Johanson 1992, 28-30). Companies as actors operate through individuals. *Actor bonds* develop through interplay on both individual and collective levels. Companies and individuals are never independent or isolated, but are bounded in their different perceptions, knowledge and capabilities. An individuals' capacity to recognise, communicate, learn, teach and develop is transferred to the collective level. (Håkansson & Snehota 1995, 33, 47, 194.)

According to Ford et al. (2003, 39─40), companies must overcome social, cultural, technological and time distances in order to create and develop actor bonding. This happens through effective interaction between individuals. Mainela (2007, 16) suggests that the individual level is often hidden inside collective or organisational behaviour in studies on business relationships. She divides (2007, 13) individual acting into organisational role acting and personal acting, both of which are needed. Individual action eventually generates relationship development on a more collective level (ibid., 1). The more important a specific relationship is, the more important are the individuals who interact with each other (Håkansson & Ford, 2002, 137). Actor bonding on the individual level forms the basis for such bonding on the collective level, and vice versa: collective-level bonding may affect individual bonding.

Håkansson and Snehota (1995) relate two processes in the development of actor bonds: *identity construction* and the *formation of trust and commitment*. Identity is largely interpreted and perceived by the partners concerned, for example, and is not only comprised of objectively measurable product features. A large corporation is almost always a multi-actor with different identities among its counterparts. The identity of an actor thus reflects the interpretation of that actor's own and its partners' behaviour. Relationships acquire and construct not only a company identity, but also a joint or collective identity, of which the parties are an integral part. (ibid., 192─197, 199.) A proper identity match between the two parties is a prerequisite for interaction aiming at resource combination and activity co-ordination (Gadde & Håkansson 2001, 101).

The formation of trust and commitment is another process in the actor bonding. Business relationships always require some degree of trust, and the trust-building process in turn requires social interaction and personal contacts. (Håkansson & Snehota 1995, 197─199.) Trust could be seen as a necessary condition for commitment, which in turn enhances the integration process. It should be borne in mind that commitment and trust in a relationship may vary widely, irrespective of how formally integrated it is. According to Ford et al. (2003, 40), actors are sometimes open in their dealings, and sometimes they behave with guile. The behaviour of the two companies is not always predictable. Every single relationship will develop a history of how the actors have treated each other and how trust and commitment have been built up. (ibid.) Håkansson and Snehota (1995) emphasise, in addition to trust and commitment, a discretionary mutual orientation in actor bonding, which requires shared interests related to activities and resources. Actor bonds are also an important aspect of collective or mutual learning: they are used not only as vehicles of learning, but also as vehicles of teaching. (ibid., 199, 201–202, 264.)

There are several types of trust. The ARA model focuses on informal, personal-level trust, which is based on moral integrity and confidence in the other party's goodwill. As already discussed, it is only one dimension. Achieved commitment, which reflects both parties' perceptions of the likelihood that the relationship will continue (e.g. Andersson et al. 1994, 10), is an important outcome of trust. However, it is assumed in this research that an integrated relationship cannot be built merely on goodwill, perceptions, confidence, moral integrity or any other implicit assumptions that are often associated with the terms trust and commitment. A contract as a trust-enhancing mechanism is always required, although the formality may vary and its role may remain relatively limited. Nevertheless, the contracting process and the outcome, i.e. the contract, reflect the willingness of both partners to operate openly, honestly and on a mutual and reciprocal basis.

Actors in a relationship do not necessarily control each other in the traditional sense, but they do have the capacity to influence. Actor bonds cannot be developed merely virtually. Furthermore, bonds on various organisational levels may become so tight and organised that they constitute the institutionalisation of the relationship, a kind of collective bonding. Thus the relationship may become more informally integrated. As a result of the actor-bonding process both parties may share common norms and expectations, which is relevant as far as informal integration is concerned.

In sum, actor bonding develops in continuous interaction between both companies. The interaction may develop into a mutual learning process, which enhances integration. Both parties then learn to better identify their roles and responsibilities in the relationship. They possess enhanced capabilities to become more integrated in terms of efficiency and effectiveness. The role of individuals is important: interaction between them determines how common expectations and norms develop, and also how formal negotiation proceeds. Individuals also set the goals and implement them together, thereby giving it a certain role in strategic integration as well. Strong and multi-faceted actor bonding between individuals may lead to collective bonding, i.e. the development of a collective identity in the relationship. Thus bonding between individuals is always, to a greater or lesser extent, a prerequisite for collective-level bonding and enhanced formal and informal integration.

2.5.3.2 Activity linking

According to Håkansson and Johansson (1992, 30), *an activity* occurs when one or several actors combine, develop, exchange or create resources by utilising various existing resources. There are two main kinds of activities: transformation and transfer activities. Transformation (i.e. production) activities are always directly controlled by a single actor, whereas transfer activities link the transformation activities of different actors and are never under the control of one actor. (ibid.) Effective and optimal activity linking is a key determinant in terms of whether a relationship becomes operationally integrated.

Activity refers to a sequence of acts, and activities are either internal or external. The traditional approach to internal activities refers to production, i.e. transformation activities, while external activities also involve others outside the company. However, not all internal activities, i.e. transformation activities of the company, are core activities. (Håkansson & Snehota 1995, 52.) From a business-relationship perspective, the distinction between internal and external activities, as well as the scope of core activities, assumes a different meaning: it is a question of combining and linking activities between companies rather than viewing core activities as separate, belonging to one company alone confined within clear organisational boundaries.

Håkansson and Snehota (1995) make a distinction between activity structure, activity linking and activity pattern. *Activity structure* refers to the way in which a single actor, a company, carries out its activities, and reflects the advantageous balance between standardisation and differentiation. *Activity linking* is a form of coordination achieved by mutual adjustment and adaptation: the links may refer to different technical, administrative, or commercial connections between the two companies in a dyadic relationship, for example. The *activity pattern* or chain refers to a larger sequence of transformation activities spanning several companies. A dyadic activity link could be considered a basic element in a larger activity chain. Activity links not only coordinate activities between two actors, they also integrate a single company into a wider activity pattern. (ibid., 26─30, 56, 59.)

Interdependent activities across firm boundaries may be complementary or similar. Complementary activities imply vertical or sequential interdependence, whereas similar activities imply horizontal dependencies due to the sharing of common resources. (Dubois 1998, 23.) Activity linking refers to the division of work between parties: activities are organised within a relationship thus resulting in a certain division of work, but this is not the only option. It is also utilised to create unique performance (ibid., 20─21, 27). According to Ford et al. (2003, 40, 102─103), activity linking refers to interlocking behaviour in the two companies, and may be directed towards the flow of products, services, information or administrative routines. It mostly takes place through day-to-day rationalisation. Developing activity linking between companies requires interlocking mechanisms that take into account both firms' behaviour patterns. However, it may sometimes mean radical change, as in process re-engineering.

According to Gadde and Håkansson (2001), the activity chain is a mixture of tight and loose linkages. Minimising costly adaptation allows activities to be highly standardised, although in some cases unique activity configurations with tight linking may be preferable. Thus economies of scale can be achieved through both standardisation and specialisation. The efficiency of activity chains may differ depending on the similarity and complementarity of the activities, which reflects the division of labour among the actors, among other things. (ibid., 60–62, 64) When activity standardisation is considered important for reasons to do with cost efficiency, differentiation is considered important in terms of integration and effectiveness. Highly standardised and unique activities are combined in order to achieve not only economies of scale, but also adaptive and effective customer solutions bringing higher revenues. (Håkansson & Snehota 1995, 59–60.)

Activity linking is primarily related to operational integration. It mainly concerns the efficiency aspect: how existing activities can be combined and linked in a more cost-efficient way. It is not only a question of day-to-day rationalisation or standardisation, however, but also refers to unique connectivity and tailored solutions, i.e. specialisation and the enhanced division of work in the activity chain. Specialisation may also have value in that the effective division of work enhances operational integration. Therefore, successful activity linking from the integration perspective could be seen as the appropriate combination of both standardised and specialised activities. Reducing unnecessary activities that do not add value in a relationship may enhance operational integration. The role of activity linking thus refers not only to streamlined and standardised but also to improved and specialised connectivity between parties.

2.5.3.3 Resource tying

Resources comprise various elements, tangible or tangible, material or symbolic. Industrial companies in particular are large and complex resource units. (Håkansson & Snehota 1995, 30, 132.) A company's required *resource collection* is tied to various resource combinations, which may be provided either internally or externally through relationships. Business relationships could be considered mechanisms that permit companies to access and develop resources. (ibid., 133, 135.) From the integration perspective, customer and supplier resources complement each other. Their value thus depends on their heterogeneity - how resources can be combined and leveraged (ibid., 135). Strategic integration in particular refers to effective resource tying, meaning that both parties are dependent on each other's tangible and intangible resources. In the context of integration, the relationship itself is considered a strategic resource or asset.

Just like activities, resources can also be divided into transfer and transformation resources, which are mutually dependent. Transformation resources are controlled by a single actor, whereas transfer resources are not because direct control is transferred from one actor to another. (Håkansson & Johanson 1992, 32.) Möller and Wilson (1995, 593─595) argue that the management of a firm's resource collection essentially means integrating its internal and external resources in order to achieve competitive advantage.

According to Håkansson and Snehota (1995), *resource ties* blur the traditional and clear distinction between internal and external resources. They reflect the partners' knowledge and skills with regard to resource provision and use. It is not just a question of possession, or even of acquisition and access, it is also a matter of how the resources of the two companies are brought together, confronted and combined in order to maintain competitiveness. The use and value of heterogeneous resources thus depends on different resource combinations and constellations. (ibid., 30─31, 135, 137, 147) Developing new resource combinations requires knowledge and experiential learning, and the joint exploitation of combined resources is enhanced through learning and adaptation (Håkansson & Johanson 1992, 32). Resource tying refers to relationship-specific investments and adaptations. Adaptations do not need to be balanced between the companies, but they create mutual dependence and may limit the possibilities of adapting to others (Ford et al. 2003, 40).

Different types of relationships require different amounts and types of resources. According to Gadde and Håkansson (2001), arm's-length relationships can be handled with limited resources, whereas high-involvement relationships are based on investment logic. However, such resource-intensive relationships only make sense when the benefits exceed the increased costs. Benefit realisation often requires non-standardised solutions and customer-specific adaptations. (ibid., 138─139.)

Resource constellations refer to resource usage through the vertical marketing channel, and are aggregated resource structures. Resources may be combined, put together and changed in new, dynamic and innovative ways. However, at the same time a resource constellation provides stability that favours coordinated and collective learning. (Håkansson & Snehota 1995, 31, 138, 141–142.)

Basically, resource tying refers to resource interdependence and heterogeneity between companies, which assumes increased significance in an integrated relationship. A single firm is not able to possess all the resources it needs, and has to cooperate and adapt in order to gain access to those it does not have. Interdependent organisations are externally controlled, and have to interact with others that have control over the resources they need (Pfeffer and Salancik 1978, 257). Resource tying in an integrated relationship requires a combination of both parties' physical and non-physical resources, the latter including human (e.g., skills and knowledge), organisational (e.g., values and culture) and relational (e.g., customer-supplier relationships) resources. Relationships in themselves could be considered resources that allow companies to access, mobilise and combine their critical resources and processes (Snehota & Tunisini, 2003, 17–19). The distinction between human, organisational, and relational resources is no longer very clear in integrated relationships: the development of shared norms may be the result of tying them together.

An integrated relationship involves the constant challenging and questioning of the existing resource structure of both companies. Combining and utilising resources in new ways facilitate the creation of new advantages and opportunities. Effective resource tying implies such combination and confrontation, so that both parties involved in the relationship are able to maintain and enhance their competitiveness and future value-creation potential in the market on a long-term basis. Therefore, resource tying is related to strategic integration in particular.

2.5.3.4 The interplay of bonds, links and ties

Actors control resources and perform activities, whereas activities link and coordinate resources (Dubois 1998, 18). Connectivity between activity links, resource ties and actor bonds forms a complex and dynamic change process in a business relationship: they are all interconnected and they cannot be treated as separate elements of integration. Understanding the interplay between bonds, links and ties also increases our understanding of the relationship-integration process. The process of integration is holistic, and incorporates all of the model components: actor bonds, activity links and resource ties, and their various connections.

Different combinations of bonds, links and ties could be seen as change vectors. Three types of change vectors with regard to the connectivity of activity links, resource ties and actor bonds have been distinguished: structuring-restructuring (heterogenising), specialisation-generalisation and hierarchisation-heterarchisation (Håkansson & Snehota 1995, 275─281). *Structuring-restructuring* is related to the connectivity of links and ties that have effects on existing actor bonds. Structuring implies economising and using existing activity links and resource ties in a more elaborated way, i.e. it is a result of the rationalised use of resources. The existing web of actors is stabilised and strengthened by the structuring. On the other hand, restructuring happens when the same functions are performed as before, but more efficiently with fewer resources. The current state of affairs is questioned, and new solutions are sought outside the existing structure in new combinations of resources and activities. However, restructuring rarely denotes the complete rejection of the existing structure: it emanates from the firm's innovative behaviour and novel combination of activities and resources, and tends to lead to new actor bonds or to some reshaping. (ibid., 276─278; Håkansson & Lundgren 1995, 303─ 304)

Connectivity of links and bonds has effects on resource ties, which refers to *specialisation-generalisation*. Specialisation means that actors focus on specific activities, which are more closely connected to an existing actor structure, and the resource ties are strengthened and become more specific. Generalisation, on the other hand, implies attempts to broaden the scope of activities through an orientation towards customers or suppliers with rather different types of technology. Resource ties are then weakened and substituted by general technology interdependence. (Håkansson & Snehota 1995, 278─280.) Specialisation-generalisation thus refers to a changed division of work between companies (Håkansson & Lundgren 1995, 302).

Connectivity of bonds and ties has effects on activity links, which refers to *hierarchisation-heterarchisation*. Hierarchisation means an actor's hierarchical control over activities through formal bonds or ownership. Activity links are strengthened and hierarchisation happens. Resource heterogeneity creates opportunities to combine activities in a new way: making new activity links and weakening the existing ones, which refers to heterarchisation. The lock-in of a certain resource to some specific activity is broken, and it is substituted with another. (Håkansson & Snehota 1995, 280─281.) A tendency towards hierarchisation means that control of critical resources will become more concentrated over time. The opposite, a tendency towards heterarchisation, means that firms may seek to reduce the critical nature and importance of some resources and to get rid of them. (Håkansson & Lundgren 1995, 303.)

Håkansson and Snehota (1995) further argue that structuring, specialisation and hierarchisation tend to reinforce each other: they constitute a typical pattern of network development in which gradual and evolutionary changes dominate. Restructuring, generalisation and heterarchisation tend to be the typical pattern when a radical or revolutionary change is taking place. (ibid., 284.)

Actors and activities could be seen as facilitators enabling the combining and leveraging of resources in a particular relationship. The proper combination of bonds, links and ties matters if the relationship aims at closer integration. There may be considerable variation in integration potential, depending on whether the relationship is based primarily on actor bonds, activity links or resource ties. According to Gadde and Håkansson (2001), activity linking is related to the procedures, routines and systems between the two companies. If relationships are dominated by activity links, they are often directed toward successive improvements only. Most changes then take place through day-to-day rationalisation aimed at making the relationship as lean as possible. On the other hand, those dominated by resource ties and changes in them aim at creating more value by making better use of, and binding and matching each other's resources. (ibid., 144─145.)

The three change vectors, structuring-restructuring, specialisation-generalisation and hierarchisation-heterarchisation, offer one way of evaluating how a relationship develops. The optimal combination of bonds, links and ties reflects the idea of an effective and efficient relationship, which is at the same time more integrated. Integration may increase or decrease depending on the change vectors described above.

2.6 A summary of the customer-supplier integration framework

The customer-supplier integration framework comprises three main parts: the *context, the process and the structure of integration* (Figure 6). *The context* means that a specific business relationship is always embedded in its business environment, which forms the first contextual element of integration. *The business environment* comprises the vertical marketing channel, the wider market environment of both the supplier and the customer, and all the third actors who may influence the development of a specific relationship. The development of a specific business relationship is always embedded in its wider network and marketing channel, which guides and directs the integration process, either implicitly or explicitly. Relationship embeddedness implies that firms, relationships and networks are both socially and historically constructed: their dependence on each other is related to the past, the present and the future (Halinen & Törnroos 1998, 189).

The nature of the relationship forms the second contextual element of integration. It is more or less set at the governance and development stage. Relationship governance creates a basis for customer-supplier integration. Three main concepts were identified as being relevant in an integrated relationship: power and control, dependence and interdependence, and trust. Depending on the relationship, power positions between parties may be balanced or imbalanced, and reflect the degree of interdependence. As the existing literature shows, highly imbalanced relationships with unilateral dependence hardly ever imply mutual orientation and trust. Mutual commitment, trust and reciprocity are nevertheless necessary requirements if a relationship is to become more integrated. On the other hand, trust only complements contracts: alone it is not sufficient as a governance mechanism. Moreover, relationships may be complex or simple, stable or unstable. They may be local, international or global. Different relationships are at different development phases: some of them have continued longer than others, and some have been internationalised while others have remained local. Therefore, it is necessary to understand the nature of the relationship in order to determine whether or not it has the capacity to become integrated.

The processual view on integration implies that it is not a separate phase in relationship development, but an evolutionary change process. Further, it is a process that may also go in the opposite direction, to disintegration. *There are* three main processes, according to the ARA model: *actor interaction, activity coordination and resource adaptation.* Interaction between individuals strengthens actor bonding, which in itself involves two central sub-processes, the construction of identity and the formation of trust and commitment. Activity coordination often implies efficient system linkage, in which shared information has an essential role. Resource adaptations imply a high degree of interdependence between partners: the more interdependent they are, the more willing they are to adjust and adapt in the relationship. This creates strong resource ties and leads to the relationship becoming strategically integrated.

The process develops towards closer integration on both the operational and strategic levels when actor bonds, activity links and resource ties are combined effectively and efficiently on a long-term and mutual basis. Understanding the constant interplay between bonds, links and ties is necessary in an integrated relationship. No model component alone is sufficient, and all of them are needed in understanding the process of integration, although the importance of each one may vary.

The overall process of institutionalisation is a key factor: not all institutionalised relationships are integrated, but all integrated relationships are, to some extent, institutionalised. Two sub-processes are related to institutionalisation, routinisation and the development of shared norms: the former focuses on efficiency and coherence in a relationship, while norms develop when the parties share expectations about behaviour.

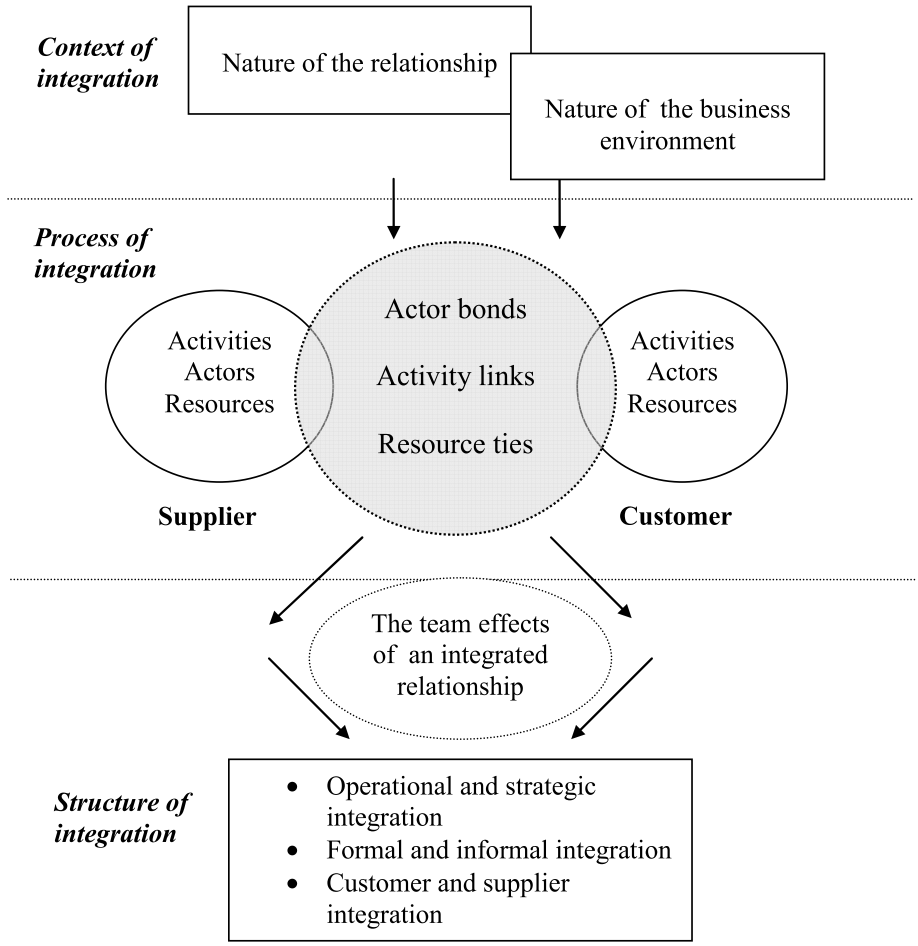

Figure 6 A customer-supplier integration framework

The structure of integration comprises the following dimensions: operational and strategic integration, formal and informal integration, and customer and supplier integration. Operational integration refers to effective and efficient activity coordination, which is wide in scope and is focused on key activities. Ultimately, operational integration implies the optimal division of work between partners, but the focus is on current activities and operations. In turn, strategic integration implies combined resources, enhanced joint capabilities and competitive positions between the supplier and the customer, and resource tying is an essential aspect of it. Both partners in a strategically integrated relationship are open to new business opportunities, and are ready to move into new areas or to withdraw from current businesses.

Formal integration refers to institutional or legal integration, and to formal contracts or arrangements between partners. Although formalisation of the relationship is sometimes viewed as the loosest form of this type of integration, in this research it refers rather to institutionalised practices. Informal integration implies high perceived interdependence and compatibility, which are often achieved through social relationships and interaction between individuals, which in turn increases the sense of togetherness between the partners.

Customer and supplier integration both reflect the direction of the process in the marketing channel. Customer integration means that the supplier integrates the customer into its own activities, processes and strategies, and is primarily implemented on the supplier's initiative. *Supplier integration* means the opposite, and is primarily implemented on the customer's initiative. The current literature mostly emphasises customer participation and co-development only on the operational level. However, both could be brought onto the strategic level, which means that customers/suppliers would be viewed as value co-creators and joint relational strategy developers, not only as participants merely implementing the determined and decided strategy in either organisation.

The notion of an interacted structure between a customer and a supplier is adopted in this research. According to Ford and Håkansson (2002), interdependent actors form an interacted structure, which is the outcome of the various interaction processes between companies. The roles are often multiple and unclear. The companies may have their own goals, but they are at least partly incorporated into the goals of their counterparts. (ibid., 254─256.) Structures and processes go hand in hand, and structure is always an outcome of the integration process. The processual perspective concerns how the integration/disintegration starts, changes and disappears over time, or changes into other forms, while the structural perspective refers to the elements and characteristics of the established form, which is the result or outcome of the integration process. Incremental change may still happen within the established structure. An established structure does not mean a static or unchanged state of affairs; it is rather that change occurs within it. On the other hand, change may also be revolutionary or radical, which in turn changes the entire structure.

Integration in itself has no value unless both parties in a particular relationship are able to cooperate on a long-term and mutual basis and to focus on the team effects. *The team effects of an integrated relationship* may be economic or non-economic in nature. Economic effects refer to effectiveness and efficiency, the enhancement of which is implied in the process of integration. Non-economic effects such as accumulated mutual learning and developed joint capabilities are also important because in the long term they may indirectly create value and produce economic effects. They are often indirect in nature, and their value is difficult to evaluate in the short term. A customer-supplier relationship has become truly integrated only when the economic and the non-economic effects have been realised on both operational and strategic levels.

3 RESEARCH DESIGN AND METHODOLOGY

3.1 The qualitative case study

The purpose of this study was to develop a conceptualisation of customer-supplier integration, which required a deep and comprehensive understanding of the phenomenon. This was acquired through describing and analysing customer-supplier relationships in the forest industry, and a *qualitative research approach* was considered the most appropriate for the purpose. According to Creswell, qualitative research aims at building up a complex and holistic picture by analysing the words and reporting the views of informants in detail: it takes the reader into the multiple dimensions of a problem (Creswell 1998, 15). It involves the study of phenomena in their natural or local settings, the aim being to make sense of and interpret them in terms of the meanings the actors create (Denzin & Lincoln 1994, 2).

According to Stake (1995), there are three major differences between qualitative and quantitative research: first, between explanation and understanding, second, between the personal and impersonal role of the researcher, and third, between knowledge discovered and knowledge constructed. In qualitative research the first of these means that a holistic understanding of the phenomenon is achieved by treating an individual case as unique and particular and in its context, and the second that the researcher has an interpretative role in the experiential understanding, acquired through what Stake calls thick description. The third point means that knowledge is a specifically human construction. Constructivist thinking does not mean avoiding generalisations, but it encourages us to provide interpretation, and to seek patterns of both unanticipated and expected relationships. (Stake 1995, 37, 39, 41─43, 99─100, 102.) Thus qualitative research is emergent rather than tightly prefigured. The research questions and data-collection process may change, or they may be modified during the research process. (Creswell 2003, 181.)

The logic of generalisation is different in qualitative and in quantitative studies. The local research setting of qualitative research is not normally thought to be representative or typical of a known population. However, theoretical ideas have relevance beyond the data, and the emphasis is on comparative methods, and on metaphorical or analytical thinking, reading and writing. (Coffey & Atkinson 1996, 159, 163.) The aim is to search for particularity rather than generalisation in a statistical sense.

A case study is an exploration of a time- and place-bound system, and requires the collection of detailed, in-depth data from multiple sources of information. The case being studied may be a programme, an event, an activity, or individuals. (Creswell 1998, 61.) It is an empirical enquiry that "investigates a contemporary phenomenon within its real-life context, especially when the boundaries between phenomenon and context are not clearly evident." (Yin 2003, 13.) Yin (ibid., 9) further suggests that the case study is a proper method when "how or why questions are being asked about a contemporary set of events over which the investigator has little or no control." It is not always viewed as a methodological choice, but rather as a choice of case in order to advance our understanding of the studied phenomenon (Ghauri 2004, 109). It comprises both the process of learning about the case and the product of that learning (ibid.). However, it may be problematic to define what a case really is (Yin 2003, 23; Stake 1998, 87), and the same problem arises over the unit of analysis.

Case studies may be explanatory, explorative or descriptive in nature. Explanatory studies explain the presumed causal links in real-life interventions, descriptive studies describe an intervention and the real-life context or illustrate certain topics within evaluation, and explorative studies develop pertinent hypotheses and propositions fur further enquiry. (Yin 2003, 1, 6, 15.) While quantitative research seeks explanation and control, qualitative research seeks an understanding of complex interrelationships, which is often achieved by means of thick description, particularly of actor perceptions (Stake 1995, 3, 42). This research is mainly descriptive, but it also has explorative and theory-developing elements. On the descriptive side, the deep understanding of customer-supplier integration obtained allows better description of the phenomenon in a real-life context, illustrating where and when integration occurs. It is explorative in that the aim is to build a conceptualisation of customer-supplier integration. Although no testable hypotheses or propositions are offered, the theory development comes from identifying and analysing elements constituting customer-supplier integration and generating ideas for further investigation.

This research follows a *multiple-case study design* and is holistic in nature: in other words, there is only one unit of analysis and the focus is on the general nature of the case. Embedded case research involves several units of analysis in a single case or analysis of multiple cases. (Yin 2003, 42–43, 52–53.) Multiple-case designs have many advantages over single-case designs, which are vulnerable because all the eggs are put in one basket. The evidence and analytical benefits of multiple cases are often considered more compelling and robust, and the generalisation rests on replication rather than sampling logic (ibid., 46, 53). Multiple cases are preferred in theory-generating studies because they allow case comparisons and cross-case synthesis (Halinen & Törnroos 2005, 1291). One argument for switching from the single to the multiple case is to create more theory-driving variance and divergence, rather than to create more of the same (Pauwels & Matthyssens, 2004, 129). Variance and divergence are created in this study through the selection of different cases representing various product areas, and business areas, types and cultures. The cases offer local, international and global perspectives.

However, multiple-case studies also have some weaknesses. They may not offer rich theoretical insights (Dyer & Wilkins 1991, 616), or then the value of rich holistic description is ignored (Halinen & Törnroos 2005, 1292). Single-case studies have been favoured over multiple-case studies because they more readily question old theoretical relationships and develop new ones. It has been said that comparisons within the same organisational context would offer deeper theoretical insights than just paying attention to general constructs across different contexts. (Dyer & Wilkins 1991, 613─614.) The theoretical impact of multiple-case designs often comes from comparative logic, which is the aim in this study, too. Irrespective of the number of selected cases, case studies may rely on the comparative logic of replication and the extension of theoretical insights. (Eisenhardt 1991, 621─622, 626.)

Multiple cases focus on cross-case replication, which is achieved by means of theoretical sampling. The goal of theoretical sampling is to choose cases that are likely to replicate or extend the emergent theory. (Eisenhardt 1989, 535, 537.) Different perspectives on the problems are selected in order to develop an understanding that encompasses all instances of the case under investigation (Denzin & Lincoln 1998, xiv; Creswell 1998, 62). The researcher deliberately selects both typical and atypical cases (Pauwels & Matthyssens 2004, 129), or cases that represent different aspects of reality (Gummesson 2000, 95).

Stake (1995, 3) makes a distinction between intrinsic and instrumental case studies. The interest and understanding in an intrinsic study lie in the particular case within its own world, and the primary purpose is not theory building. An instrumental case, in turn, illustrates how the theory is manifested. It provides insight into an issue, or aims at generalising. The case itself, although looked at in depth and in its context, is not the primary interest, but plays a facilitating and supportive role in understanding the phenomenon. (Stake 2000, 437.) The cases examined in this research have instrumental value in that they have produced a conceptualisation of customer-supplier integration, i.e. how the theory is manifested. Each case was studied deeply within its context. Within-case analyses served as a basis for the cross-case comparisons.

Time and the temporal dimension are often essential elements of case studies. For example, Jensen and Rodgers' (2001, 237─239) typology of both qualitative and quantitative studies takes into account both the time perspective and the nature of the design, i.e. holistic versus embedded. They refer to snapshot, longitudinal, pre-post, patchwork and comparative case studies. A snapshot is conducted at single point of time; a longitudinal study is a time-ordered analysis of events that occurred during a period of the entity's history; the pre-post study provides evidence of the outcomes of a particular programme, policy or decision; and patchwork studies integrate several case studies of a particular, single entity at different points of time. This study is a comparative case study, which integrates the findings from several studies by means of cross-unit comparison as opposed to within-unit synthesis. (Jensen & Rodgers 2001, 237─239.)

The case-study approach is often a viable option when the intention is to reveal the complexities and dynamics in business markets. However, there are some challenges, such as deciding on the attitude to time, comparing the cases, and coping with the complexity of the phenomenon. (Halinen & Törnroos 2005, 1293─1294, 1296.) Longitudinal research facilitates the study of processes in that data is collected at many points in time (Halinen & Törnroos 1995, 502). It often begins with a retrospective case history, which aims at both describing the phenomenon and understanding the context and events leading up to the current situation. After this, real-time data-collection methods such as observation can be taken into use. (Van de Ven 1992, 182.) This is not a longitudinal study, but the temporal dimension still plays an essential role. Time aspects are taken into account in that data was gathered in real time and retrospectively.

Qualitative multiple case studies allow the researcher to choose from among three types of *reasoning logic*: deductive, inductive and abductive. Abductive reasoning, which is somewhere between inductive and deductive logic, is followed in this research. (Coffey & Atkinson 1996, 155.) This means that the theory is first used as a theoretical lens in the empirical process: as the empirical data is analysed the results are contrasted back to the theory. According to Gummesson (2000, 63), deductive logic starts with theories, concepts and hypothesis formulation, whereas inductive research starts with real-world data from which categories, concepts, patterns, models and theories emerge. With abductive reasoning the empirical research has a central role in the generation of ideas and concepts. There is dynamic interaction between the data and the theory, and theories are seen as heuristic tools guiding exploration and interpretation of the social world. (Coffey & Atkinson 1996, 156─157.)

Abductive logic is often seen not as a separate type of reasoning, but as an essential part of the research. It has been argued that after the initial stage all types of research become iteration between deductive and inductive logic. The term abductive just means iteration or the combination of the inductive and the deductive. (Gummesson 2000, 64.) The term systematic combining is also used, which is close to abductive reasoning and means that the theory is confronted with the empirical world throughout the research process. The evolving framework directs the search for empirical data, and empirical observations may require further redirection to the theoretical framework. (Dubois & Gadde 2002, 555–556.)

In sum, there is more than one approach to case-study research: studies may be qualitative or quantitative, or a combination of the two. Different researchers have different attitudes towards generalisation. For example, Eisenhardt and Yin represent the more positivist view, according to which the process is directed towards the development of testable hypotheses and theory that are generalisable across settings (Eisenhardt 1989, 546). Stake, in turn, represents the more interpretative view, which aims at rich and thick description. The principle adopted in this study is that the logic of generalisability in case research is based on the depth and comprehensiveness of the studied phenomenon (Easton 1995, 475), and the main aim is to develop the theory. A deep understanding of each individual case is a prerequisite for the application of a comparative logic across cases.

3.2 Case design and selection

This study was conducted in the forest industry and covers both paper and wood products. Six different cases were selected, representing different product and business areas. Five product areas and six business areas are covered. Each case comprises one supplier-customer relationship, and the supplier is always the same global forest-products company, Papyrus. The six case studies all have their own features, histories and contexts. Given the aim of the research to develop a conceptualisation of customer-supplier integration, a multiple-case-study design with cross-case comparisons and analyses seemed best suited to generating theoretical insights and analytical generalisations.

The selection of cases is important in multiple-case studies. In this research it was a multi-phase process. The first step was to conduct several discussions at the supplier's organisation, the global forest-products company. Creswell's (1998, 62) recommendation in selecting cases that give different perspectives on the problem, process or event was followed. Inherent in multiple-case design is the issue of how many cases are selected: the more cases and individual studies there are, the less depth there is in any single case. (ibid., 63.) Six cases were an appropriate number in that it would be possible to study each one in enough depth, and at the same time to take into account the different perspectives emerging across them. In addition, drawing partly on Stake's (1995, 4, 6) suggestion, the cases were chosen with a view to maximising what could be learned. Balance and variety are important, but the opportunity to learn is paramount. The concern was not so much with the number of cases as with finding a combination that would show variety and open up different aspects of the integration concept. However, also similarities between the cases were looked for. Figure 7 depicts the case design and selection.

The case selection was complete by the end June 2005 and took two and half months, and a lot of time and effort. The author's own and the supplier's contacts in selecting the case customers were used, and several face-to-face meetings to discuss and select appropriate informants were held. The following criteria guided the case selection: first, the customer-supplier relationship had to have growth potential, or the relationship had to be important in some other way; secondly the relationship had to be long-term and committed rather than transactional; thirdly, both supplier and customer had to be willing to participate in the research, to devote their time and to guarantee access to the necessary data. The first two selection criteria were related to the assumption that integration mainly has relevance in growing, important and long-term relationships. The last one was more of a practical issue: it ensured that the research process was conducted as planned, and that available time and resources were utilised as effectively as possible.

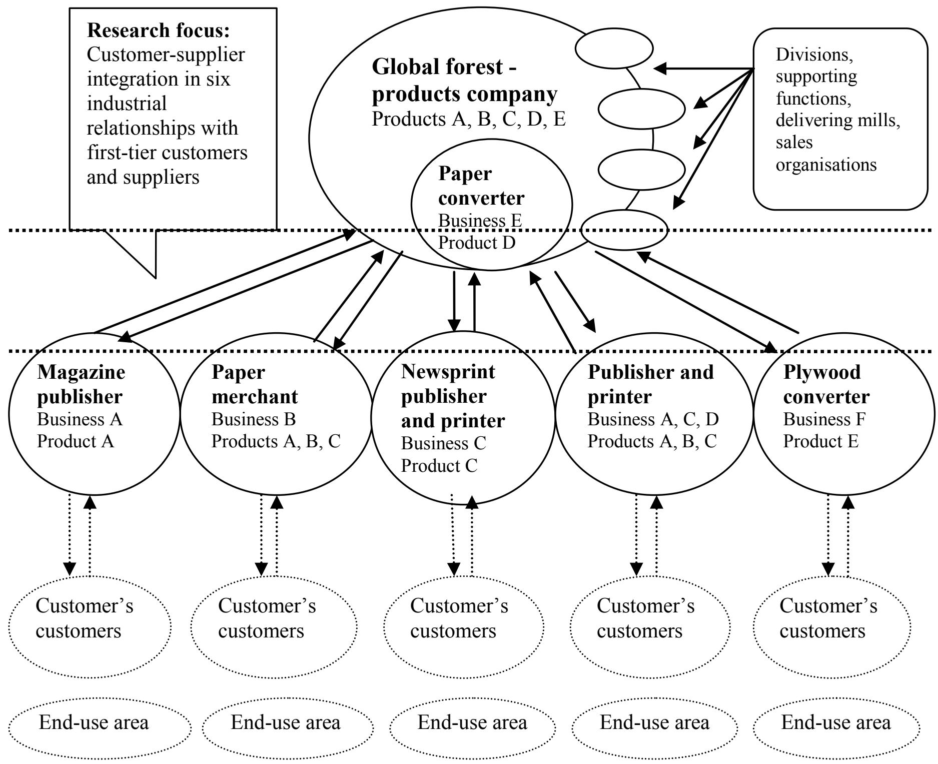

Figure 7 Case design and selection

The magazine publisher is one of the leading publishers of monthly magazines in the UK. The company is a subsidiary of a big media corporation. Papyrus had been doing business with this customer for over forty years and accounted for a relatively high proportion of its purchases.

The paper merchant is a big multinational European company, with an expansion policy focused on growing market areas such as Eastern Europe. The business relationship between Papyrus and the customer developed strongly during the 1990s and continued until the 2000s. This case focuses more closely on one important market area, the UK.

The newsprint publisher and printer is a media company located in Finland engaged in publishing, printing and distributing. The relationship between Papyrus and this customer started in the 1970s and remained local and stable. Papyrus has been its main supplier since then.

The publisher and printer is a media group that was formed in the late 1990s, operating in several European countries and in several areas. The emphasis in this study is on print media. During the previous five years it had expanded its magazine operations geographically. Its business relationship with Papyrus developed and expanded in the late 1960s and during the 1970s. Papyrus is one of its selected key suppliers.

The paper converter is one of the leading global suppliers of self-adhesive label stock. It started production in the early 1970s at the same time as its relationship with Papyrus started. The customer has been growing by expanding its operations worldwide. The relationship is vertically integrated in that both supplier and customer belong to the same corporation.

The plywood converter is a high-quality product and service provider and a special distributor in the UK transport business. This business relationship began in the early 1970s. The customer remains a local actor for the most part. It offers machining services to Papyrus.

On the whole, the case-selection process was successful because I could utilise my own experience and I had a certain vision of the kind of cases I was looking for to meet the purposes of the research. People were motivated to participate in the study, and no extra efforts were needed to convince them. However, the selection of informants was not always easy because there were many people interacting with each other in both the supplier's and the customers' organisations. It was crucial to identify the right key informants in order to ensure quality and relevance in the data.

3.3 Data collection and analysis

Silverman (2005, 110–112) suggests four major methods or ways of collecting and analysing data in qualitative research: observation, analysing texts and documents, conducting interviews, and recording and transcribing. These methods are often combined. For example, case studies may involve both observation and interviewing. Data-collection methods are not mere techniques, and are closely connected with data analysis in terms of making sense of problems in a broader societal context. (ibid., 11, 22.) Face-to-face interviews were used as the main data source in this research, complemented with public and company-internal or confidential written material. In addition, free discussions with management were held and the author's own practical business experience in the forest industry was utilised. The public written material included annual reports, Internet pages and press releases, and the company-internal and the confidential material comprised e-mail correspondence, business letters, customer-satisfaction survey results and visit reports. The purpose of using various sources of data was to validate the findings and to make better sense of the phenomenon of customer-supplier integration.

The interviewees in both the supplier's and the customers' organisations were selected based on the following criteria: the interviewees on both sides had to know each other well and to be in regular interaction with each other, and to have an important role as decision-makers in the specific relationship. Roughly equal numbers of interviewees in both organisations were aimed at, and then decided how many interviews were needed in each case and in each company. Seventeen face-to-face interviews during June-October 2005 were conducted, of which ten were in the supplier's organisation and seven in the customers' organisations, in other words between two and four interviews per case. One telephone interview was carried out afterwards. The interviews were held in Finland and the UK, in Finnish or in English. Each one lasted between 90 minutes and two-and-a-half hours. Each face-to-face interview was transcribed word-for-word and ended up with 449 transcribed pages. The interviews are listed in Appendix 1.

The selected interviewees had long and robust experience, nineteen years on average, in the organisations they represented: the customers twenty-one years and the suppliers eighteen years on average. However, their experience in their current positions varied considerably across and within cases, from two-and-a-half months to twenty-nine years: the customers over six years on average and the suppliers seven-and-a-half years on average. In addition, in some cases the interviewees had previous experience in a different business area.

The first contact with the interviewees was to agree the place and time of the interview. After that an introductory and preparatory letter by e-mail was sent to the interviewees in which the research topic and the themes to be covered in the interview were briefly introduced. The needed time for the interview was also estimated. The interviewees were asked to fill in and return the background information sheet. In the meantime gathering written material on each case started and access to the necessary databases containing relationship-specific written data were gained.

Due to time and resource limitations the interviews were conducted in two countries: Finland and the UK, but was still able to obtain both multinational and local perspectives depending on the case. One informant left the company during the research process and it was possible to have only one interview and telephone discussion with him. In that case more written data were used in order to validate the findings rather than bringing in a new informant. A lock-out situation in the paper mills caused some agreed interview schedules to be revised. What was positive, however, was that the informants remained highly committed during the empirical research process. The arranged meetings and timetables were kept, and the people were available for further discussions. Some informants took the initiative to telephone to the author or send an e-mail in order to clarify and explain their thoughts. The author also had the opportunity to meet some of them after the interviews had been conducted.

The interview themes are presented in Appendix 2, grouped as follows: background information, the customer-supplier relationship and its development, the integration process in terms of actor bonds, activity links and resource ties, and dimensions of operational and strategic, and formal and informal integration. It was not possible to make a clear distinction between operational and strategic, or between formal and informal integration during the data-collection phase, and these connections were clarified in the data analysis. When conducting the empirical study a preliminary definition of integration was used based on Snehota (2003, 15): the overall capacity to combine and connect different and heterogeneous elements.

The active-interviewing technique was used, which according to Holstein and Gubrium (1995) means that the interviews are viewed as reality-constructing, meaning-making occasions. In this process understanding *how* the meaning-making process unfolds in the interview is as critical as *what* is substantively asked and conveyed. The *hows* refer to the interactional, narrative procedure of knowledge production and not merely to the interviewing technique. Treating the interviewee as an active participant allows the interviewer to encourage shifts in position during the interview so as to explore alternative perspectives and stocks of knowledge. (ibid., 4, 37.) The active interview is close to interactive interviewing, which is an interpretive method for gaining an in-depth and intimate understanding of people's experiences. Interactive interviewing is thus viewed as a collaborative communication process. (Ellis et al. 1997, xx.)

Specific interview reports were compiled, which were sent to each interviewee (with the exception of two) for their comments. The interview reports comprised 106 pages altogether, seven pages per report on average. Feedback was collected mainly through telephone discussions, but also through e-mails. All confidential information was removed, but the confidential versions were stored for further analysis. At the same time all the written material was collected, printed and stored.

There were some limitations connected with the data-collection process, however. The interviewing period was relatively short, and probably a longer period would have helped to refine the themes further during the data-collection phase. Nevertheless, a preliminary analysis of each interview was attempted to make before conducting the next one. Time was also devoted to modifying the questions and themes slightly. In one case English was not the mother tongue of the interviewee, and in another there were some problems understanding the dialect, but the author was able to clarify the thoughts of the informant afterwards by e-mail correspondence and in an additional meeting with him. Accessibility and the amount and quality of the written data sources varied to some extent case by case. In general, however, quite a lot written material was available, but it was time-consuming to select the most appropriate data. The time period covered in the written data was limited from three to four years, varying from 2001 to 2006 depending on the case. The key issue was not that the time period should be exactly the same in all of the cases. The author considered it more important to find out the general development path of each relationship: its history, current state and future prospects. This relationship development formed the basis and context for studying and understanding integration in each case.

The collection of data was a multi-phase process, which partly overlapped with *the analysis process*. In fact, there was no clear separation between the collecting and the analysis. Analysis continued throughout the collection process and beyond. Each case-study report was the result of the careful analysis of each individual interview report and the gathered written material. Again, these reports were sent for comments, and feedback was gathered by telephone and e-mail. No major changes were made to the reports at this stage, but some issues were further specified and refined. Writing the case-study reports belonged to both the data-collecting and analysis phases. In fact, it served as a tentative analytical tool because the author had to choose between the issues that were relevant to integration and those that were not.

In addition to the meetings and discussion observational notes were kept during the research process. The descriptive notes from the reflective notes were separated (Creswell 2003, 189) on every meeting, discussion and interview. Descriptive notes refer to the reconstruction of dialogue, portraits of the participants, and accounts of particular events and activities, whereas reflective notes refer to the researcher's personal thoughts, feelings, ideas and impressions (ibid.). In qualitative research this kind of data-collection procedure may be extremely important for further data analysis: it is not only what is said, but also how certain things are said that is important.

There are two options for data analysis: analysing it holistically within the entire case, or focusing on a specific aspect, with several units of analysis and an embedded design (Creswell 1998, 63; Yin 2003, 40–43). The author generally opted for holistic analysis. Through data collection the researcher constructs a detailed description of the case, analyses the themes and offers interpretations or assertions. This research took the typical form of a multiple-case study in that first a detailed description of each case and themes was provided, in other words a within-case analysis, and it was followed with cross-case analyses. (Creswell 1998, 63.) The within-case write-ups and descriptions had a central role in terms of generating a deeper insight into customer-supplier integration. Case descriptions usually help researchers to cope early in the analysis process with what is often an enormous amount of data (Eisenhardt 1989, 540), and this was the case in this research, too.

The comparative method used in this research enabled to test the provisional assumptions in several cases (Silverman 2005, 213). Cross-case synthesis aims at the development of a uniform framework (Yin 2003, 134), which was the aim in this study. Analysis forces one to look beyond one's initial impression and to see the evidence through multiple lenses, thereby enhancing the probability of capturing the novel findings (Eisenhardt 1989, 541). However it is crucial to have understood the dynamics of each particular case *before* proceeding to cross-case explanations. Cases cannot simply be idly lumped summaries of similarities and differences in some common variables of interest. When analysis reflects good practice, multiple cases are our best resource for advancing our theories about the way the world works. (Miles & Huberman 1994, 207─208.)

Analysis and validation go hand in hand in qualitative research. Techniques such as theoretical sampling, triangulation, pattern-matching logic and analytical generalisation have a role not only in theory generating but also in the evaluation, validating the results throughout the study. (Pauwels & Matthyssens 2004, 140.) One of the concerns of validity is conflation between method and interpretation, and rigour in both the application of methods and in the interpretation is required (Lincoln & Guba 2000, 178─179). Validity can be increased in various ways, such as through the triangulation of data and methods, respondent validation, constant comparison, deviant-case analysis and comprehensive data treatment (Silverman 2001, 233─241).

Triangulation is considered to be important both in qualitative research (Ghauri et al. 1995, 93) and in case studies (Ghauri 2004, 115; Stake 1995, 107; Yin 2003, 97─99). There are four types: data triangulation, investigator triangulation, theory triangulation and methodological triangulation (Yin 2003, 98─99). Data and method triangulation often ensure validity in qualitative research (Silverman 2001, 233). Data triangulation means that the events or facts of the case study are supported in more than a single source of evidence, the aim being to increase the construct validity of the research by using multiple sources of evidence (Yin 2003, 44, 97, 99).

Data triangulation, respondent validation and comprehensive data treatment were applied in this research. Data triangulation here means convergence of the evidence gathered and analysed from multiple data sources. In order to ensure respondent validity the interviewees were contacted several times during the research process and gave their comments and feedback, and case reports were compiled. Comprehensive data treatment in this case means that each interview was transcribed word-for-word, and the transcriptions were read several times. All the written material was read through at least twice, and was compared with the interview data. The interview and case reports were read several times and by several persons. During these several rounds new themes and categories emerged, but on the other hand some of the collected data had to be rejected.

Silverman (2001, 226) argues that reliability is also a concern in qualitative research, and is not limited to quantitative research. There are several ways of enhancing reliability: keeping notes all the time and expanding them after field sessions in observational studies, and tape-recording all the face-to-face interviews and presenting long extracts from the data in the research report. Interview reliability can also be enhanced through the pre-testing of the interview schedules. (ibid., 229–230.)

Crucial pauses and overlapping speech were transcribed as accurately as possible, which proved to be valuable afterwards. On the other hand, more time could have been devoted to pre-testing the interview schema: the interviewees did not always understand the questions in the same way. Time was also left for free discussion and explaining what the questions meant. No extracts from the data appear in this research report because not all of the interviewees wanted to be quoted word-for-word. The author respected their wishes, not least because the themes being discussed were often confidential and sensitive. Accurate notes were kept during the whole research process covering the interviews and the face-to-face and telephone discussions.

The existing theory served this research in two ways. First, the theories and perspectives guided the study and gave direction in terms of which issues to examine: the theory thus served as a theoretical lens. Secondly, the research results and analyses were considered in the light of the previous theory, which thereby served as a generalisation tool. (Creswell 2003, 131.) The outcome of the study reflected how well understanding developed during the whole research process, i.e. how the theory and empirical evidence interacted with each other.

The aim of the research was to develop an analytical conceptualisation, i.e. it was descriptive and theory-developing in nature. Therefore, the methods used in research aimed at theory development were also applicable here. According to Halinen and Törnroos (2005), the ultimate goal of theory-developing research is to draw implications on the basis of cross-case analyses, which are both supportive and critical of existing theory and models. An important aspect is the evaluation of the validity of the study, in other words assessing how convincing the evidence is. (Halinen & Törnroos 2005, 1296)

Interpreting and understanding the individual cases, in other words the thick and rich description obtained helped in gaining deeper insights and in developing the analytical description. This approach is close to what Stake (1995, 85) calls naturalistic generalisation: learning and interpreting from single cases to other cases. The researcher adds his/her own experience to support and validate the reader's naturalistic generalisation. Each case had a supportive role and an instrumental value in arriving at a better conceptualisation of the phenomenon of customer-supplier integration.

Facts never speak for themselves, no matter what the method is: they are always theoretically impregnated. We observe facts through lenses made up of concepts and theories. (Silverman 2001, 1, 11, 23.) High-quality analysis requires consideration of all the relevant evidence, and also of all major rival interpretations. The analysis should address the most significant aspect of the study and the researcher should use his/her own prior, expert knowledge. (Yin 2003, 137.) Arriving at high-quality analysis is a process starting with a pre-understanding and moving towards a better understanding of the phenomenon. This refers to the hermeneutical circle or spiral, which is an iterative learning process. Intentionality affects our selective perceptions and path, and both conscious and unconscious intentionality influence pre-understanding and understanding. (Gummesson 2000, 71─72.) Pre-understanding in this research refers to both the previous knowledge of the informants and the insights and experience of the author acquired before engaging in the programme. Understanding, in turn, refers to the further insights gained during the research process (ibid., 57): research is always also a learning process.

3.4 A summary of the research process

Table 4 summarises the research process. This is a simplified picture, because in reality many phases overlapped in a complex way. It was an iterative and cyclical learning process rather than linear and straightforward with clear steps. Nevertheless, the table gives a rough idea of how the study advanced and how much time each phase required. The darkest cells show where the focus was in a specific period of time. For example, the empirical-investigation phase was a relatively intense period at the beginning of the process and the analysis and writing gathered pace towards the end. The lighter cells indicate moderate intensity. For example, the literature review and theory development extended more or less throughout the whole research process. Reading the literature continued until the end of the research process: it was therefore not a separate phase, but was closely connected with the empirical data-gathering ─ according to the principles of abductive reasoning. In addition, the author drafted various manuscripts at various times, and produced several versions simply in order to learn about writing style and the research process as a whole.

Table 4 A summary of the research process

Year	**2004**		**2005**		**2006**		**2007**		**2008**	
Months	*Jan*	*Dec*	*Jan*	*Dec*	*Jan*	*Dec*	*Jan*	*Dec*	*Jan*	*Dec*
Literature review			Literature review			Literature review				
Theory development					Theory development			Theory development		
Empirical investigation				Empirical investigation						
Analysis & writing						Analysis & writing		Analysis & writing	Analysis & writing	

4 CASE DESCRIPTIONS AND ANALYSES

This chapter describes and analyses the cases based on the framework presented in Chapter 2.6. A short within-case analysis is given at the end of each description. The following cases are included in the study: magazine publishing, paper merchanting, newsprint publishing and printing, publishing and printing, paper converting and plywood converting. The paper-converting case represents a vertically integrated relationship in which the supplier as the label-paper producer and the customer as the converter are separate business units. All of the cases represent different business and product areas. The data were gathered from various perspectives so that the concept of integration would be treated comprehensively and holistically. The descriptions and analyses are based on the interview data (Appendix 1), free discussions, and public and internal written material.

The supplier in each case is the same global forest-products company. It is one of the world's leading producers of uncoated and coated magazine paper, and also one of the biggest newsprint manufacturers in Europe. The main customers for magazine paper and newsprint are publishers and printing houses. The supplier is also among Europe's leading fine-paper manufactures and one of the world's biggest manufacturers of label papers. Customers for fine paper include merchants, printers, publishers and converters, whereas label papers are supplied to industrial converters. The supplier's paper production is located worldwide, and its wood-products production is mainly in its home country or neighbouring areas.

The case descriptions show how this global supplier, Papyrus, and its six major customers selected for this study perceived the particular customer-supplier relationship. Although the focus is on perceptions regarding integration in business relationships, the concept of integration and its exact meaning were still rather limited during the data-collecting and analysing phases. The case descriptions and analyses made it possible to deepen and extend understanding of the integration concept in the context of industrial business relationships.

4.1 Magazine publishing

4.1.1 Overview and relationship development

The customer is one of the leading publishers of monthly magazines in the UK. It is a subsidiary of a big media corporation, which was established in the early 1900s. The customer's main activities include publishing and the distribution of magazines and periodicals, publishing representing close to sixty per cent of its business and distribution slightly over forty per cent. It operates mainly in the UK, publishing monthly magazines for the most part, but also weeklies. It is responsible for around twenty magazines, printed at various printers and printing houses. In recent years the customer base has grown through acquisition and the establishment of joint ventures. The company has regularly launched new magazines, but it also aims to expand into new business areas. Currently it is also a significant player in digital publishing both within and outside its current magazine portfolio.

The relationship between the customer and the supplier began over forty years ago and has been developing positively until the present day. The supplier's share of this customer's purchases was always relatively high and continues to increase, although it fell slightly and temporarily in the early 2000s. The mutual importance is still high. The increased share was mainly due to the customer's growth-oriented policy: new magazines mean more demand for paper. However, some of the new launches used paper bought from other suppliers.

This relationship was traditionally mainly based on export, as it is today. The customer takes delivery of a wide range of products from several of Papyrus' supplying mills. Nowadays there is also a local mill in the same country producing paper to suit the customer's needs. The customer mainly buys coated high-bright grades, and one mill, which is not the local mill, delivers half of the volumes required. The Papyrus management believed that investment in a local paper mill would increase customer commitment in this relationship: the shorter physical distances would facilitate quick reaction to customer demands. It was also assumed that it would be easier for the customer to order paper from a local mill than from a more distant mill abroad.

In the customer's view strong business relationships require openness, transparency, trust, honesty, and striving for the same goal. It was mentioned that these elements were on a good level in this relationship. The customer firmly believed that Papyrus was willing to produce the kind of paper it wanted, and to consider its needs. Although well-functioning day-to-day operations are essential, it was also important that Papyrus had the capability to be a long-term and committed supplier. From the customer's perspective, commitment to the supplier meant commitment to buying paper as specified for their magazines, and the supplier was committed to offering the best quality and service combination available.

Brand quality matters in magazine publishing. From the customer's perspective, not only should magazines have a good reputation, their paper suppliers should also have a good image and standing in the market. An essential aspect of the supplier's brand and image was its strong commitment to quality products. In addition, the environmental aspects of wood sourcing were considered to be increasingly important in the UK.

The occasional difficulty did not disturb this relationship, and both parties were able to solve the problems. For example, during a labour dispute the customer did not run out of the paper and did not need to down-page its magazines, although it needed help from its parent company and had to make some changes regarding paper grades. In general, the customer was satisfied with how these occasional problems were solved, but at the same time recognised that giving Papyrus sole-supplier status would be too big a business risk. From the perspective of Papyrus' business, predictability in terms of bought volumes was considered important because it helped in terms of capacity planning. This particular business had been relatively stable and predictable without excessive fluctuations or changes from one year to another. The customer felt that its responsibility was to share information with its suppliers, for example regarding what was happening in the advertising markets. Sharing information increases business predictability.

Although the relationship was functioning well, the customer recognised that there had been certain, less favourable changes. Traditionally, both companies had worked very closely together. There was a high level of interaction and communication, and the supplier paid careful attention to the needs of the customer. Nowadays, however, all suppliers work in a similar, much closer way. When there was a clear oversupply of magazine paper in the market the price negotiations were tough. In addition, a decrease in the amount of advertising had an effect in terms of diminishing pagination, which in turn resulted in declining paper consumption.

4.1.2 The process of integration

Actor bonds

Two levels in actor bonding were distinguishable: the individual level and the collective or company level. On the company level Papyrus is a global actor, whereas the customer operates mainly locally, although it is a subsidiary of a big and international media corporation. Therefore, this relationship was not merely between a big global supplier and a small local customer. The customer had a kind of gate-opener's role when Papyrus started doing business with its parent company. Traditionally, however, the relationship between the Papyrus sales company and the magazine publisher has been long-term and close, and this is focused on in this study. Figure 8 illustrates this organisational-level bonding.

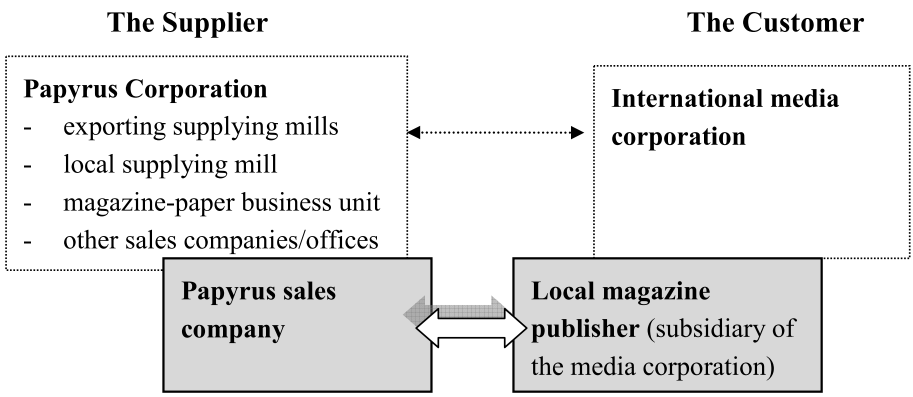

Figure 8 Magazine publishing: organisational-level bonding

On the individual level different key actors interacted on both operational and strategic levels. The Papyrus key-account manager and the operations manager responsible for paper supply were clearly the persons who interacted the most. However, the Papyrus sales director and the customer's manufacturing director were also in regular contact. Ease of doing business was considered important, which referred only to system functionality and easiness, but also to effective interaction between individuals: people should match in terms of chemistry, and both parties must share a joint vision concerning how to do business together. It was felt in Papyrus that in order to ensure ease of doing business the supplier's local sales people should have enough decision-making authority locally. Nowadays they do seem to have the authority to make independent decisions, and the supplier thought that its sales people were perceived as trusted negotiating partners in the eyes of customers. It is not only authority, but also knowledge and competences that are crucial. Local sales people were not guided operationally from head office, and the role of the Papyrus corporate management mainly involved the enforcement and empowerment of the local message, and directing according to the agreed strategic guidelines.

The internal division of work in Papyrus largely determined how the actors interacted and communicated with this customer. The parties had a systematic form of communication. Meetings were planned in advance for the whole of the coming year. The key-account manager in Papyrus was responsible for daily operational issues and information was shared both formally and informally. Formal forums included key-account meetings, annual mill review meetings at the sales company, telephone discussions, and e-mails and business letters, while informal information exchange took place at events such as dinners and lunches: for instance, the customer arranged an annual lunch for its key suppliers.

The number of face-to-face meetings had slightly decreased during the past three years, however: the parties met every sixth week instead of every third. In the customer's view this decrease in face-to-face communication had not caused any problems given the regular meetings and the fact that the agreed meetings dates were usually kept. Nevertheless, the customer did expect the amount of face-to face communication to decrease further in the future because of the sales reorganisation and Papyrus' office move to a distant location, which it feared could have a negative effect on the relationship. Papyrus lost some experienced staff, and the customer thought that the transition while new staff members were being recruited was particularly confusing on account of the number of contact persons. Once the situation was normalised, one contact in sales, one in administration and one on technical issues would be enough. Thus the customer wanted to keep the number of contact persons quite limited.

Arranged mill visits made it possible for the customer to discuss matters with and give direct feedback to the Papyrus production and development staff, but naturally this dialogue did not happen on a daily basis. In general, the customers were located worldwide, and direct and regular communication between them and the producing paper mills was not possible, and not even attempted. Daily communication between the customers and the mills was channelled through the local sales offices of Papyrus.

Activity links

From the perspectives of both the customers and Papyrus it was important to implement daily activities efficiently. Some attempts to increase efficiency had already been made. The daily routines were relatively stable in the production of monthly magazines, whereas with the weeklies more interaction was required because paper was ordered and needed more frequently. The paper produced had to meet order-specific requirements, and at the same time quality and efficiency in the whole supply chain had to be maintained. Logistics capabilities had to be on a high level to make sure that paper was delivered to the printer on the due date. Good communication between parties was required at every phase in order to ensure that the magazines were published on time. Efficient daily operations also depended on the operational staff at both organisations having all the necessary information available during each phase of the order life cycle. The customer emphasised the importance of having qualified operational staff, an efficient key-account system, and regular account meetings in order to enhance continuous and active information exchange. They also considered it necessary to meet regularly, to discuss paper demand, and to have a look at future trends, targets and growth areas. Therefore, operational efficiency in this relationship referred not only to product-delivery reliability, but also more broadly to aspects such as service capabilities and communication.

Stock management was one of the key aspects of this relationship. This meant optimising stock levels so that excess capital was not tied up in stocks and that stock rotation was smooth. Several meetings, mainly on the initiative of Papyrus, were held internally and also with the customer. The vendor managed inventory (VMI) model had been already taken into use for one weekly magazine, which meant that Papyrus was managing paper-stock levels on behalf of the customer. According to the model customer invoicing is based on paper consumption, and at the same time the customer has access to the system in order to view the stock level. Both parties were of the opinion that the VMI model increased supply-chain transparency. There were still some barriers hindering the development toward close activity linking in the day-to-day operations: invoicing and order handling were still largely manual, and thus far there was no EDI connection between the parties. It was not considered worthwhile developing tailored relationship-specific systems aiming at closer system integration in dyads, the need being for shared systems to cover the whole sales or purchasing network. Developing such systems on the network level was not an easy task due to the confidentiality of information and tight competition in the market.

Papyrus emphasised the importance of the long-term forecasting of paper demand: accurate forecasting made everyday business on both sides much easier in that there was less need for daily routine communication. This was not considered a difficult process, but accurate figures required good knowledge of the customer business at the supplier's sales office. This operating model was not yet very automatised in this relationship, and the customer still mainly gave manual input into the delivery and order processes by forecasting paper demand regularly and then ordering according to the forecast. Accurate forecasting, whether done by the customer or Papyrus, was thus one determining factor in optimising supply-chain and stock management, and ultimately in improving activity linking in this relationship.

Resource ties

Papyrus and the customer did not share any specific joint physical resources. Information could, generally speaking, nevertheless be considered a joint resource. For example, the Papyrus technical staff shared technical information with the customer. However, technical support was not officially a joint resource, and each company had its own people. Papyrus and the customer had some joint activities aimed at people development: for example, there was mutual education in that the customer's people were trained mainly at the local paper mill, and the Papyrus sales people at the customer's production facilities. Both parties believed that there would be no increase in shared resources because other customers might then think that this particular relationship had become too special. A certain amount of arm's-length distance was considered necessary.

During the previous ten years there had been a lot of discussion on the sharing of order-processing and stock-management systems. From the customer viewpoint this would have certain advantages: stock-level information would be real-time and Papyrus would no longer need to send separate reports to the customer. The VMI model would be of particular help in weekly magazines, where pagination is constantly updated.

The customer felt that one common system irrespective of the supplier or customer would be ideal. At the time each major paper supplier had its own paper-management system and people needed time to learn to use the various alternatives. The VMI model is only applicable in situations in which paper for a specific magazine is bought from a single supplier, otherwise access to data on competitive suppliers and customers must be blocked. The customer still appeared to be quite keen to keep full control of the product, although it was ready to discuss alternative solutions and the division of work. It was not self-evident that it was ready to buy the stock-management and other services Papyrus had on offer.

4.1.3 The structure of integration

Operational and strategic integration

Operational integration requires enhanced activity linking between parties. However, is not just a question of system linkages, and primarily means the effective and efficient division of work and interaction. The division of work regarding stock management had been under constant discussion for several years. There was a clear need, at least for Papyrus, to eliminate the overlapping of activities and unnecessary cost factors. The company was willing to take more responsibility for stock management because there was great pressure to reduce costs in the whole supply chain. Although Papyrus believed that in the future there would be more integrated solutions, and that suppliers in general would increasingly take care of their customers' stock management, this kind of development did not seem self-evident in this relationship. Stock management had not been outsourced from the customer to Papyrus on a wider scale, and no other activities had been outsourced from the customer to Papyrus or vice versa.

Strategic integration means that both parties have to adapt to and invest in a particular relationship. It involves the joint setting up and implementation of visions, business strategies and goals. As far as Papyrus was concerned, one essential joint aim was to maintain the competitiveness and viability of the printed media. This was why it also emphasised the need to get involved in the customer's decision-making process at a very early stage. Although there were, in fact, no jointly agreed strategies and goals both parties were willing to discuss and share their own future plans, and both seemed to be aware of each other's financial position. However, it was not considered necessary to share every piece of strategic information in this relationship. Papyrus emphasised that business must be advantageous for both parties, and that this should be a common goal. However, cost reductions alone were not sufficient, and it was important to seek new relationship benefits at the same time.

The business cultures and core competences of the parties were considered to be quite different. On the other hand, it was recognised that the customer's growth-oriented policy and the dynamic nature of magazine publishing increased the need for Papyrus to understand not only the business drivers of this customer but also the new, emerging trends in the industry as a whole. Papyrus also emphasised that it was not possible to maintain only one general or global operating model with its customers: different business cultures should always be taken into account to some extent.

Therefore, it seemed to be challenging to take the next steps in both operational and strategic integration. Although both parties had shown commitment to each other for a long-time, joint planning and decision-making still appeared to be problematic. Was the future key issue to maintain competitiveness in the form of excellent paper quality and respected branded magazines? How was it possible to match the goals of both the supplier and the customer? No clear, unambiguous answer was to be found. What was certain was that it very much depended on the end customers and consumer preferences and needs. Third parties also played a crucial role in this relationship. Papyrus considered publisher relationships clearly more important than printer relationships, whereas the customer considered printer relationships more important than paper-supplier relationships. Integrated stock management requires seamless cooperation between paper suppliers, paper printers, and publishers.

Formal and informal integration

Formal integration refers to planned and intentional decision-making in a relationship. It refers to the importance of formal contracts between parties, and also sometimes to formalised practices and procedures. In this case the meetings were planned well in advance, and traditional business letters were still used. The general feeling in Papyrus was that formal agreements did not seem to play very significant role due to the company's flexible approach to customer demand, although their importance was viewed somewhat differently. Sales emphasised the need to write down what had been agreed, but corporate management viewed formal agreements more as future-oriented mutual promises to continue to do business together. Agreements between magazine publishers and paper suppliers are not always binding on customers, who may have a more dominating role in that sense.

The importance of formal agreements and the formalisation of relationships are also culture-specific. It had not been very easy for Papyrus to establish customer contracts and to make decisions concerning its new projects and initiatives. Instead, it emphasised the importance of having a long-term, guaranteed supplier status with this customer, which it thought was reflected in its growing supplier share. However, it was not self-evident that the customer would still increase its dependence on Papyrus: increasing formality in this sense did not seem to play a very big role.

Rather, the key issues concerned the maintenance and enhancement of informality. *Informal integration* refers to the kind of social aspects that enhance fit and togetherness between parties. In this case, maintaining a social atmosphere that enabled both parties to feel trusted and confident was vital. This would be especially important as both parties developed and changed, and also given the changing business environment. On the other hand, the importance of formal agreements may increase in the future if long-term cooperation becomes threatened.

There were long traditions of doing business together, and certain norms and values concerning how to behave in this relationship. It had become quite institutionalised in terms of the existence of clear, informal processes. The customer emphasised that informal aspects such as openness, transparency, trust, honesty and striving towards the same goal made the relationship stronger. All of these aspects had featured strongly, but there were some signs of disintegration. The supplier emphasised trust, interaction, communication and proactiveness. The clear expectation seemed to be that the business would continue without the need to base the relationship on a legal or formal contract.

4.1.4 Case analysis

The process of integration seemed to be quite equivocal and no clear development trend could be seen in this relationship. Both parties were able to maintain close connections and actor bonds between individuals. On the other hand, activity links and resource ties were weaker and there was no indication of their strengthening. Sharing information was a valuable resource, but the case showed that all other suppliers and customers were operating in a very similar way. Therefore, it seems that this relationship had already lost some of its specificity in relation to the other paper suppliers. There had been some informal integration, but there seemed to be some emerging disintegration.

The customer called for more innovativeness from Papyrus, but specific development areas remained somewhat unclear. Environmental issues were considered to be important. One potential development area concerned the long-term forecasting of paper demand. In the current situation the customer mainly had to produce the input: estimate paper demand and place orders accordingly. This process could be made more accurate and faster by considering the appropriate division of work between the parties. On the other hand, the business had been relatively predictable from one year to another and the annual volumes were relatively stable without too much fluctuation. This strengthened the feeling in both parties that the business would continue as before.

The structure of integration is the outcome of the integration process. In this case it was related to the key question of whether the printed media would be able to maintain its competitiveness in the future. If the tendency was towards more digital publishing, then paper companies would lose their positions in their customers' businesses. Therefore, it may well be possible that in the future joint strategies and goals will become more important than searching for joint operational solutions. Operational integration must therefore follow strategic integration, and not vice versa, if even closer integration is the option preferred by both parties.

With regard to *customer integration, supplier integration, both, or neither*, this was a well-functioning and long-term business relationship rather than an integrated relationship. On the other hand, Papyrus had made several attempts to involve the customer in various project initiatives and offerings. However, the relationship was traditionally based more on the customer than the initiative of Papyrus, since the customer had the power regarding the products and services it wanted to buy. Therefore, any attempt by Papyrus to integrate the customer may be a challenging task unless it can offer a robust argument showing how customer integration will meet customer needs and expectations, and how it would benefit the customer as well. The primary aim of the customer seemed to be to maintain the status quo - a well-functioning relationship with its important paper supplier and no involvement in a tight or too time-consuming integration process.

Operational integration had not been very easy to achieve and the division of work had thus far remained very much the same. The parties were not yet operationally integrated. Although there had been attempts to make changes, no joint decisions had been taken. Some incremental modifications had been made, however. Both parties recognised that too close integration could cause difficulties regarding their other supplier and customer partnerships. Papyrus had steadily increased its share of this customer's business, but the customer was also dependent on other suppliers. Operating as a joint team would not necessarily be beneficial if it endangered other business relationships. Therefore, closer operational integration is closely related to the network context - other supplies, customers and third parties - in a relationship such as this one with paper printers. The possible driver of the integration process emerges not only from the company, and general industry developments play a part.

Papyrus believed it would increase *strategic integration* in the form of local investment in production capacity. Local investments are not especially relationship-specific, and they also benefit other customer relationships. On the other hand, the customer did not put special emphasis on the importance of local production: local investment has no value in itself unless the customer clearly notices improved service and decreased costs. The general ability of Papyrus to offer a full range of paper products to this customer was more of a relationship-strengthening factor. There was little information available regarding how much each party had been intentionally adjusting its own strategic goals and objectives in this relationship. In general, customer-specific adjustments are not very easy to implement in paper production.

Cost efficiency in the supply chain is not enough in itself: the customer's expansionary business policy may have put pressure on Papyrus to reconsider its role. It believed that paper purchasing would be even more centralised in the future, with fewer, selected suppliers per customer. This meant that each party's strategic role would probably be up for reconsideration. However, that was not a job to be done internally, and the parties should jointly determine what level of integration would be needed in this relationship. The views did not seem to be similar in this case.

With regard to *formal and informal integration*, informality had the bigger role, and was based on somewhat institutionalised procedures, practices and norms. The contracts covered one year, which is common practice in this business. However, there was as yet no decision about or contract covering long-term co-operation. The customer was probably not willing to become formally dependent on this single supplier. Indeed, sole-supplier status was not considered realistic from the supplier's perspective either. In the context of this relationship prices had remained relatively stable, although there was clear oversupply of magazine paper and price negotiations were characterised as difficult. The relationship had been at least partly guided by market mechanisms and competition. Both parties also emphasised the importance of having some kind of formal record of what had been agreed. In sum, although the relationship was characterised by close and continuous interaction, the level of informal integration remained relatively modest.

4.2 Paper merchanting

4.2.1 Overview and relationship development

The customer is a multinational company and one of the biggest paper merchants in Europe. With a presence in four continents it operates in almost forty countries. It has about two hundred thousand customers and it delivers one and a half million tons of paper every year. Its main business is the distribution of communications-support materials, which is divided into print and office paper, visual communications and packaging, and promotional products. The case study takes into account both local and significant market area: the UK, and multinational perspectives.

Although the company has announced plans to diversify beyond the distribution of paper and office supplies, paper distribution is still its main business area, with a focus on the two most promising: packaging and graphic supplies. The growth strategy is to expand into the market areas in which paper consumption is rapidly growing, such as Central and Eastern Europe, and outside Europe Asia and South Africa. This external growth strategy is based on targeted acquisitions in regions with the potential for increased paper consumption, growth, and profitability.

The company has had financially difficult times, but in recent years there have been significant improvements in terms of results and financial structure. Market conditions are again currently relatively difficult: paper volumes have been declining and there has been downward pressure on prices due to overcapacity in the market for fine paper. Despite these difficulties, the customer has been able to strengthen its market share in its main areas.

The business relationship between Papyrus and this merchant customer developed strongly in the late 1990s when the customer became more international and concentrated its supplier base. At that time Papyrus was also concentrating its sales on this customer, and its purchase share had been growing strongly since the late 1990s. Today both parties are important to each other: not only is the merchant one Papyrus' major customers companywide, Papyrus is also one of its major suppliers. The biggest volumes concerned are in coated papers.

This relationship began long before the formation of the current organisation on either side, and both firms have since faced several mergers and acquisitions. However, it began to grow significantly during the 1990s. The demand for coated paper grew strongly over the years, particularly from 1999 when many new countries were added to the specific agreement, the customer's sourcing initiative. In the UK the relationship had developed in three stages during the previous ten years. First, in 1996, the customer launched its coated paper under its own brand name, and secondly, in the late 1990s, Papyrus was chosen as a supplier of uncoated paper. The third wave emerged a few years ago when the company strengthened its position in the office-supplies market, and the parties co-operated in the launching of the supplier's own brand of office paper.

Paper distributors can be classified into four groups: independent merchants, integrated merchants, paper producers and dealers in office supplies. Independent merchants are not related to any specific paper producer, while integrated merchants are subsidiaries. Paper producers, generally speaking, have also started to sell direct to certain customers, which have traditionally bought through merchants. Dealers in office supplies sell paper and other products, often at very low prices. The customer in this case was an independent merchant. Papyrus is not active in merchanting business, which is generally speaking characterised as a relatively dispersed form of purchasing.

Independent merchants are considered to be important selling channels for Papyrus' fine papers because they have the capacity to stock and deliver a wide range of papers in smaller quantities to end customers. Papyrus sells almost all of its sheet papers through merchants in the UK, while in other parts of Europe more paper of certain qualities is nowadays sold directly via other channels, such as office-equipment manufacturers (OEM), office-supplies companies, converters or manufacturers (in the envelope business). Merchants still have almost half of the business, in office papers but their share is generally decreasing while that of office-supplies companies, which have large warehouses and are able stock and manage big volumes of paper, is on the increase. Papyrus often uses merchants instead of selling directly for financial reasons. A merchant may take a bigger financial risk than a paper producer in selling paper to a big purchaser.

Both companies collectively handle huge amounts of paper every year. On the other hand, these big volumes are dispersed into numerous customers' customers, which vary in size but are generally small. Even its biggest customers represent only a very small proportion of the case customer's total business. The majority of all merchants' business is relatively short-term and contracts are re-discussed and re-negotiated constantly. Therefore, efforts to minimise order-handling costs are given priority, as is improving efficiency in the whole supply chain. As a distributor the customer expects a good level of service and delivery reliability from its paper supplier. Service is a very important differentiating factor, especially since nowadays the products of the different suppliers are very similar. An essential element in this relationship is that Papyrus has been able to offer a wide range of different products and product categories.

4.2.2 The process of integration

Actor bonds

The business relationship was international and multinational, the focus of business between the parties being Europe. It was characterised by multi-level interaction between actors on different organisational levels, in different countries and from various cultures. The head offices of both companies were located in Europe, but in different countries. This study focuses on both the multinational and local perspectives, the prime target of the investigation being the business relationship in the UK. Figure 9 shows the organisational-level bonding.

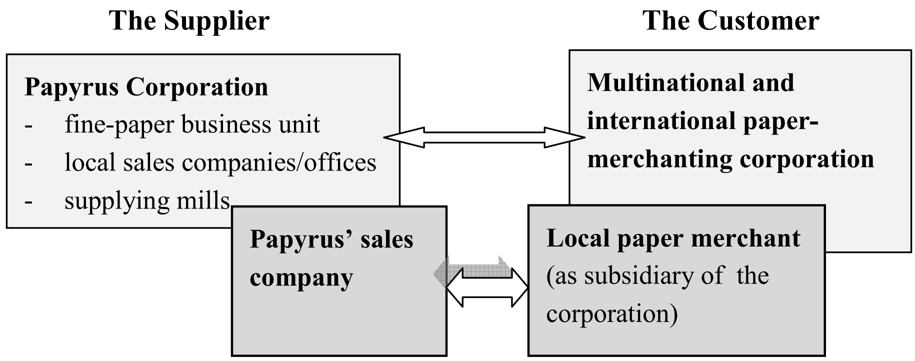

Figure 9 Paper merchanting: organisational-level bonding

Both parties emphasised the importance of good and personal relationships: the merchanting business was still very much people-oriented. Positive interaction was considered to be especially important in merchanting given the increased complexity and the accelerated rate of change. Continuous and frequent interaction was also required in the daily operations given the many small purchases and continuous deliveries, with many things happening simultaneously.

The customer did not consider Papyrus a very easy company to contact, especially on the corporate level, and felt that the amount of communication has decreased at the senior-management level. This was related to changes in the top and senior management, which affected the key decision makers at Papyrus both on the corporate level and in the fine-paper business. In this new situation it seemed that getting things done depended very much on the initiative of the customer, and that Papyrus was so occupied with internal matters that it had less time for its customers. However, joint CEO meetings proved to be very helpful. Papyrus also recognised that there was still a need to intensify the personal and face-to-face communication, especially on the top- and senior-management level.

Although much of the daily communication was via telephone and e-mail, this customer still considered face-to-face meetings the best method: it made it easier to sense the feelings of the other party, and it was more human. Intensive communication did not refer only to frequency, but also to the depth of information exchanged. This meant discussing what way Papyrus wanted to go, what way the customer wanted to go, and what the joint direction would then be. Both parties had started to share the kind of information that was classified as very confidential a couple of years previously, and still remained confidential with other customers. Papyrus wanted to see itself as a proactive partner, not as merely reacting, reflecting and fulfilling the wishes of its customers. As an influential player in the market it was not ashamed of bringing its own arguments into the discussion.

In the UK both Papyrus and the customer thought that the amount of face-to-face communication had increased during the previous three years with this supplier, which was due to business growth and the increased joint efforts and projects. Papyrus established a small customer team in which the key-account manager had the important role of meeting and encouraging the customer's sales people on a regular basis. The customer had a certain role as a gate opener to businesses and customers to which Papyrus could not, or did not think it reasonable to, sell directly.

Papyrus considered its sales reorganisation in the UK a test of this relationship, when new and probably inexperienced people were employed. People interacting with each other on both sides should have the right skills and competences, and their personalities should match. It was important for Papyrus to have the right people in the right positions. Successful interaction and communication required individuals with the ability to understand and to listen, but also to make things happen, to influence and contribute. It was necessary to build connections and communicate directly with experts, not only through certain intermediaries such as sales people, who were normally at the customer interface. Papyrus also considered it very important to create a good atmosphere and a good spirit and co-operation at all levels in both organisations. However it seemed to be a challenging task to match the competences in every case, although there had been improvements.

Activity links

Key activities in this relationship included buying, stocking, selling, and distributing paper. It was the responsibility of Papyrus to ensure delivery reliability, meaning that the required products were always delivered on time to the customer's premises: only then could the customer guarantee delivery reliability to its own customers. About eighty per cent of this activity was stock sales, but there were also some direct sales from the mills. Supply-chain efficiency and accuracy, as well as decreasing the overall stocking costs, were very important elements in this relationship.

Papyrus and the customer had intense collaboration on both multinational and local levels in order to streamline their processes, and improve efficiency and decrease the total costs in the supply chain. Both multinational and local workshops were held covering the following areas: paper-demand forecasting, order processing with electronic data interchange, logistics efficiency, financial aspects, technical service and complaint handling, and joint marketing including dealing jointly with international end customers. The joint steering group, which consisted of top managers in both the supplier's and the customer's organisation met every three or four months. In the UK these efforts were probably most beneficial in logistics and demand forecasting. The customer thought that there was room for improvement in stock management: it would be beneficial to have access to the Papyrus stock-management system for coated reels. If this process were automated the stock levels could be reduced and old stocks used first.

Another major joint activity concerned the drawing up of promotional plans and taking a common approach to customers. Traditionally the merchants had strong brands: they did not want to be so tightly connected with the paper producers' brands. The customer felt that there were still some overlapping marketing and design costs because Papyrus had its own brands and the customer marketed exactly the same product with its own label and brand name. On the other hand, a couple of years previously Papyrus had convinced the customer to use its own cutsize brand in the UK, so this could be seen as one step in the development of joint branding. Papyrus also emphasised the importance of technical support and service for customers in this market: this support included training in technical matters.

Activity linking implies more efficient process management, and the use of existing system linkages and connectivity in day-to-day activities. Both parties aimed at increasing operational efficiency in this relationship. For example, EDI linkages decreased the need for manual and repetitive work, although high interaction was still required in the daily operations. Efforts to minimise order-handling and stock-management costs had already been made through the introduction of electronic systems, for example. Electronic invoicing was used in some countries, and more were expected to follow suit. Future operational integration would relate to the follow-up of sales performance, automatic order generation, and overdue invoices.

Resource ties

Papyrus and the customer did not share any joint physical resources at that time. They were considered difficult to manage given the need for clarity and certainty over the control of each one. Competition in the market was mentioned as another reason. Customers (and suppliers) may have been afraid of becoming too close as partners, thereby endangering other supplier (or customer) relationships. Jointly agreed marketing plans, which had been in operation for over five years, with funding (x per cent from the budget organised centrally and y per cent organised locally) could be considered a shared resource, but for competition-related reasons sharing did not seem to be realistic in this context, at least on a larger scale. Both parties believed that it might be possible in some areas in the future. For example, sharing warehouses or buildings could be useful and would be worth considering.

Resource interdependence was already high in some areas, but the resources were still mainly separate. For example, the customer had more responsibility for marketing activities, whereas Papyrus had slightly more in stock management. Papyrus also offered technical support due to the customer's limited technical service staff. This service was not outsourced or sold, however, but emerged gradually as a shared resource in the spirit of mutual partnership.

Both parties shared strategic information including profitability and cost figures at multinational level. Parties talked about future growth plans and investments. They also shared more sensitive information, because of the grown business it is important. On the other hand, sharing profitability and cost figures was still considered somewhat sensitive, although both parties seemed to have a clear understanding of the direction in which each other's profitability and business was going. Sharing such strategic information could be considered an important resource in this relationship.

4.2.3 The structure of integration

Operational and strategic integration

The parties became more *operationally integrated,* although the fundamental division of work remained the same. According to Papyrus, the customer had more responsibility in the area of joint marketing, and Papyrus took more responsibility for stock management. Thus both parties specified and revised their roles and responsibilities in the relationship, which they called joint process improvement. This made them operationally integrated. Papyrus also thought that sharing IT systems made the business more efficient and profitable with the elimination of the additional handling costs from the supply-chain operations.

Joint process improvement focused on the whole picture and not on separate activities in either the supplier's or the customer's organisation. It was emphasised that process improvement required the willingness to work on a continuous basis. Improving and evaluating joint processes was expected to be a natural part of everyone's daily work in both companies, and not just a specific programme or project to be finished at a certain point in time. Furthermore, the general feeling on both sides was that process-improvement efforts should not just be directed at day-to-day activities. On a larger scale the mutual interest lay in long-term targets on the financial side: reducing costs and improving profitability, while simultaneously improving the quality and efficiency of services in the long run. This referred to the joint enhancement of the strategic market position in both companies.

A very important aspect of *strategic integration* is the achievement of a good and prevailing strategic fit between the parties. Thus the policy of Papyrus was not to own paper merchants, neither was the customer's policy to support suppliers that were not involved in distribution. Both also had common goals with regard to market and/or customer share. The goals reflected not only the customer's wishes, but also what the parties ultimately agreed jointly.

Both parties emphasised the need to strengthen, invest in and foster the relationship in the long term, not only for spot business or on a transactional basis. Long-term in this context meant a very long-lasting partnership, even longer than forty of fifty years. However, it always takes time to reach the committed-relationship stage. Increased commitment makes things easier and more fluent: there is no need to spend a lot of time thinking whether the other party is serious, or will make a deal the following year with another customer (or supplier). If a speculative atmosphere prevails it is more difficult to put every effort into making things really happen. Maintaining and developing such a relationship requires constant hard work: confidence cannot be taken for granted. Consistency was viewed as a very important factor: it meant simply keeping your word and not promising too much.

Both companies operated in a mature business, the aim being to reduce costs in a situation in which prices were declining. Papyrus thought that the price negotiations had often been tough and sometimes frustrating. The reasons for this were mainly external: there was clear paper overcapacity in the market, which made the situation difficult for both parties. On the other hand, external factors were not totally responsible because the big players, as in this case, could and had to influence the market situation. Not only was there tough competition, the paper markets were also relatively transparent. Consequently, it was quite difficult to differentiate competitors on a long-term basis: they followed very quickly if something new was invented and developed. Achieving a long-term approach and innovativeness was sometimes difficult. Despite the difficult market environment, however, both parties characterised this relationship as a joint partnership.

Formal and informal integration

Both parties clearly felt that both informality and formality were required in this relationship. Informality in terms of mutual trust and commitment is necessary in a long-term relationship, but trust only creates the basis for commitment, it does not automatically mean commitment to joint business objectives. The customer emphasised trust, commitment and other informal aspects even more than Papyrus did, seeing a close connection between trust and integrity, which should go in hand in hand. Trust meant faith in a certain course of action. Commitment to a specific joint strategy and implementing that strategy required personal involvement and spirit, good feelings between people on both sides. Informality could thus be seen as an important prerequisite facilitating the implementation and realisation of the formal aspects according to agreed targets.

Both parties shared the view that some formality in the form of written contracts or agreements was needed, especially on the multinational level. The business was complex, and bigger than any of the organisations alone. All the promises of senior management did not always realised. According to Papyrus, contracts ensured the continuation of business and respect for the relationship. On the other hand, if the relationship had been deep and had involved a high level of mutual trust and commitment, increasing the formality would not have been very important. However, business on the local level is not usually as complex as overall corporate business management, which may require some more formalisation. In that context it was mentioned that joint process modelling served a useful purpose: it had been practised in some specific areas and functions, but still did not cover the whole relationship.

Although formal information flow was already very strong in this relationship, the customer sometimes found the approach and strategy adopted by Papyrus confusing. This implies that social relations and trust building were probably still at the development phase. In any management change it always takes time before trust and commitment between individuals can be built. Papyrus changed its top management and the customer felt that there was less trust than before: it was critical of the shorter decision-making time scale and of the general attitude of Papyrus in terms of how the whole system needed to be managed. Formal integration is of little help if the key individuals do not know each other well enough, differ too much in their opinions, or cannot agree on how things should be managed in a relationship.

4.2.4 Case analysis

The process of integration in this case focused on streamlining and making the supply chain more efficient through improved activity linking. The merchanting business is quite different from magazine publishing and printing, for example: very small order quantities are handled on a daily basis with continuous and frequent interaction. For both parties it was vital to reduce costs and to search for more efficient ways of managing the daily operations by means of enhanced system connectivity. Manual and repetitive work was already relatively automated, and it was even thought that increasing the level was not realistic.

Actor bonds seemed to be the weakest link in the relationship due to management changes, but it could well have been only a temporary phenomenon. It is evident that mutual trust and commitment still needed development so that the key individuals and senior management could intensify face-to-face communication, and share their views and interests. The resource ties seemed to be relatively strong. Although both parties aimed at utilising their resources in the best possible way, their joint resources were still very limited. For the future, development in this area was seen as a logical extension of the relationship, although there was still a question mark over how far resource integration could be developed without having negative effects on other business relationships.

There was an implied development in this relationship towards more balanced power positions, although Papyrus thought that the customer still had the more powerful position. In any event, the paper-merchanting case shows that parties can also deepen their integration without worrying too much about other counterparts' (customers and suppliers) opinions.

The structure of integration refers to the clear need for strategic integration: a long-term approach and enhanced joint strategic positions, which is beneficial for both parties. This may, in some cases, mean increased innovativeness and making changes quickly, although it may not always seem to be beneficial at first glance. The decision to integrate is somewhat easier when both parties are big and significant players in their respective markets. On the other hand, integration is not necessarily very easily achieved in complex and multinational corporations.

This relationship appeared to be *supplier more than customer integration*. However, both parties seemed to aim at more customer-supplier integration, thereby taking both perspectives into account and refining them as joint goals. At the same time, the customer was likely to aim at closer supplier integration by taking over some activities from Papyrus, for example, most probably in the area of marketing and promotional activities. On the other hand, developments could well go in another direction, towards customer integration, if the role of the merchant became more like that of a broker. This would require suppliers to tighten control in the supply chain in general, and to treat merchants more as subcontractors than customers. However these kinds of signs were not visible in this relationship.

Operational integration requires continuous efforts in terms of streamlining processes and reducing overlapping. At the same time, the mutual interest also lies in achieving long-term financial targets through profitability improvement. Cost reduction and improvements in service quality and efficiency should go hand in hand. Operational integration can be achieved only through the careful determination of the required service and quality levels, and the consequent division of work. Thus far no major changes regarding the division of work had been made, although there was some indication that both parties would maintain their specialisations: Papyrus in supply-chain issues and the customer in marketing and promotion.

Strategic integration in this case implied a good strategic fit between the parties, which made it possible to create common synergies. Papyrus did not own any paper merchants, unlike some other paper producers, and the parties did not compete with each other. Each company's own strategies were extended and integrated through working together and strengthening their joint strategic positions in certain markets and/or among certain end customers. The supplier and the customer thus shared common goals with regard to market and/or customer shares, although sharing profitability and cost figures was still seen as a sensitive area to some extent. On the other hand, it was said that no "bigger scheme" in the area of joint goals existed so far. The operational integration in this relationship, which had already started and was partly implemented, could be seen as a natural step toward closer strategic integration. Both parties aimed at operating as a joint team as far as the end customer was concerned.

Formal integration was developed as an outcome of the integration process. Joint arrangements and agreements were made in order to increase the efficiency and effectiveness of operational processes such as marketing and logistics. Commercial contracts were also considered important. Both parties entered into a relatively long-term commercial contract on a three-year basis, although it was not self-evident that these joint arrangements and contracts would really interlock or integrate them in the very long term. Efficient contract management seemed to have an important role, however, because of the rapid growth of business in terms of volumes in newly developing market areas. The multicultural and multinational nature of this business relationship may increase the need for formality.

The relationship was not yet very *informally integrated.* Practices, procedures and consistent ways of operating were still under development. Trust and commitment are basic elements for deeper integration, but thus far the stable and institutionalised stage had not been reached. The rules of the game were developing, and the roles and responsibilities were under revision and discussion. Therefore, the relationship was not based primarily on trust between individuals. The customer felt some lack of trust, and that Papyrus sometimes ignored them. It wanted the Papyrus senior management to be more involved, which would simply have meant investing management time and prioritising it over others. Bringing in more social and emotional aspects, listening to customers' feelings and enhancing and intensifying communication in frequent and deep face-to-face meetings were considered necessary, especially from the customer perspective. Interaction per se, however, has no value. Relationship managers on both sides must have the ability not only to understand and listen, but also to influence and contribute: to make things happen.

4.3 Newsprint publishing and printing

4.3.1 Overview and relationship development

The customer is a Finnish media group, active mainly in publishing, but also in printing and distribution. It comprises six companies operating in different business areas. The case company publishes and prints one of Finland's leading daily newspapers. Its product portfolio also covers facsimile Internet editions, online products, free newssheets, newspaper and other press distribution, and rotation and sheet press products. It had seven regular printing jobs that went to press once or twice a week. The customer had recently expanded its business operations through acquisitions, but had also made some rearrangements in order to increase its operational efficiency and business profitability. It was a local actor and dependent on the economic situation in its region, which had recently been developing positively. In general, media advertising in Finland had been increasing in recent years, although at slightly below fifty per cent the newspaper share was in a slight decline. Thus far the decline in newspaper circulation had also been only slight.

The relationship between Papyrus and this customer started at the beginning of the 1970s. At that time the local paper mill started its newsprint production and deliveries to this customer. The previous supplier, which was a competitor of Papyrus, closed down its paper production at the mill. The accepted tradition in the newsprint business has been that if a relationship is functioning well, the supplier and purchasing strategy remain the same. Thus Papyrus had been this customer's main supplier since the end of the 1970s.

This relationship developed in three phases. In the first phase the business was organised entirely through the paper-sales association, and the supplying paper mill remained relatively unfamiliar to the customer. Although Papyrus and the customer participated in the same meetings and negotiations, they did not have direct negotiations with each other. The second phase started in the mid-1990s when the paper-sales association was disbanded and the paper mills started to negotiate directly with their customers. This was a new situation for both parties in that neither had previous experience of direct negotiations with the other. Nevertheless, the negotiations went well and the agreement was signed. The customer would buy all the paper for its daily newspaper from Papyrus provided that delivery reliability, price, and quality remained competitive. For other press products the customer wanted to keep the option of using alternative suppliers when necessary. The third phase started soon after the mid-1990s when Papyrus centralised its commercial negotiations with its customers. The separate mills no longer had independent decision-making authority in product pricing.

Deliveries to this customer have doubled during the last ten years and today it is one of Papyrus' biggest domestic customers. In concentrating its newsprint purchases on this single supplier the customer sought volume benefits. Until the late 1990s it bought paper for its printing jobs from two suppliers. It then signed a long-term contract to print one of the main tabloids in Finland, and all the paper for this was entirely supplied by Papyrus.

A strong locality and a specific kind of neighbourhood characterised this relationship. The customer's operating policy was to promote the cultural and economic development and success of the province: it had supported the local arts since the 1960s, for example. However, besides focusing on the local news and locality the company also actively aimed at increasing its visibility and importance on the national level. Despite some management changes in both organisations, the parties maintained mutual trust and the perception that both parties benefited from the relationship. The concrete result of this long-term orientation was evident in the stable volumes. A difficult situation arose during the Finnish paper workers' labour dispute in the spring of 2005, however. Papyrus managed that situation well by running the customer's orders in advance and by agreeing to deliver paper from one of its other mills.

4.3.2 The process of integration

Actor bonds

The relationship was maintained mainly through the day-to-day orders and deliveries between one of Papyrus' supplying mills and the customer, which were located close to each other. There was no need for the customer to disperse its paper supply among various paper mills. There was regular contact between the customer and the Papyrus head office, which housed the top management of the newsprint unit and of the domestic sales function. Figure 10 shows the organisational-level bonding.

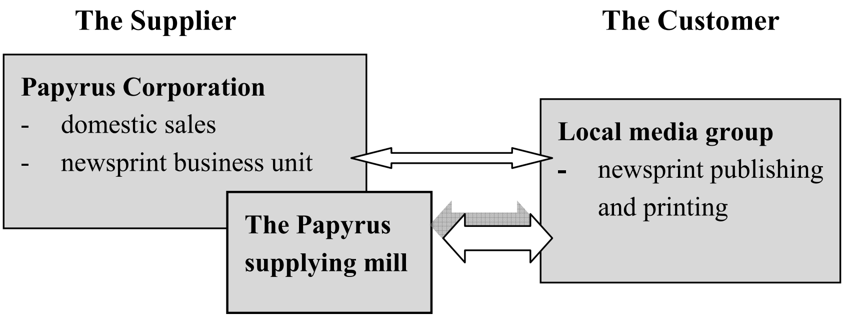

Figure 10 Newsprint publishing and printing: organisational-level bonding

There were only a few key individuals from both organisations involved in this business relationship, and they all knew each other very well. The Papyrus supplying mill and the customer interacted directly with each other in the daily operations. The key persons involved were the technical director in the customer organisation and the technical customer-service manager in the supplying mill, who met between four and six times a year and had monthly telephone conversations. In addition, the customer-service manager had contact with the managing director and the financial director in the customer organisation. The former was also in contact with the top and senior management of Papyrus. Actor bonding remained mainly informal and thus far there had been no need to establish a formal customer or account team.

Close interaction and communication was essential in this relationship. Face-to-face communication was considered necessary because then the feelings of the other party could be sensed, future trends anticipated, and business developments discussed. The Papyrus supplying mill wanted to receive even more information directly from the customer, however. Face-to-face meetings included annual delivery and price negotiations, trade fairs, and social events such as hunting and fishing trips. Technical customer-service personnel, the sales director and sales manager, and sometimes the production-unit director were involved in the commercial negotiations on Papyrus' side, while from the customer organisation it was the managing director, the technical director, and the financial director.

The sales manager met the technical director twice or three times a year. Commercial negotiations were held once a year, which also included more informal discussion on future expectations. In the daily operations the supplying mill's production planner worked with the customer's stock keeper on orders, deliveries, and inventories. The role of the technical customer-service manager was emphasised: he had long experience in this business and the willingness to solve customer problems actively, especially with regard to paper quality and other technical matters. However, although this key person had changed jobs recently, both parties felt that business continued as usual. This close and special relationship characterised by easy and straightforward communication had increased the level of honesty and the key actor's confidence that the partner would behave in a trustworthy and consistent way.

Changes in both organisations caused slight concern among the key individuals. For example, when Papyrus introduced centralised pricing, the customer feared that the prices would be fixed before the negotiations at the supplier's head office took place, and would be dictated from the top down. It also feared that its negotiating power would decrease. However, that fear proved groundless, and both parties still felt that they could really influence the negotiations. The customer's new managing director has been appointed some years previously. He questioned established practices and procedures to some extent, and concern about the relationship's future arose in both organisations. However, over the course of time the managing director seemed to be satisfied with Papyrus and became convinced about the long-term and committed nature of this relationship. It was normalised again when the chemistry between the key individuals started to work.

Activity links

Fast, accurate and reliable deliveries characterised this relationship. In practice, the customer received paper deliveries by lorry almost daily. The geographical location and the local-supply concept were clear logistics advantages, and ensured low delivery costs. Another important activity was to maintain constant paper quality with well-functioning production on the printing machine. The highest possible paper quality was not in itself the key issue, however: what was important was that the quality accorded with the customer's demands and expectations, but did not exceed them. Papyrus also emphasised customer-relationship management. It was not only the products and services, but also professional pricing and having the right people that mattered in this relationship. Daily operations ran smoothly because normally there was only one ordered paper grade and only two or three different reel widths, which helped in terms of production planning. Furthermore, order flow was relatively stable.

The responsibility of the Papyrus supplying mill was to take care of the customer's inventory. The VMI model was taken into use in the early 1990s. There were system linkages between the parties with regard to paper consumption, but invoicing was not yet generated automatically, although it was already based on consumption. It was very probable that the VMI model would continue given the customer's restricted warehouse capacity and the joint interest in keeping stock levels as low as possible. Automation was expected to increase in the future, and automatic invoicing was a distinct possibility. Physical reel tracking was another potential development area. The new order-handling system in Papyrus caused some extra work during the transition period, but the problems were temporary and system-wide, not relationship-specific.

Resource ties

There was a long tradition of mutual cooperation in this relationship. Not only did Papyrus serve the customer and meet its expectations, the customer was also ready to help Papyrus if required. For example, it participated in trial runs when the quality of the printed paper was tested on the customer's printing machine. Moreover, when raw materials changed or other modifications in the paper-production process were made, it was possible to test the new properties at relatively short notice at the customer's premises. Because of the short physical distances Papyrus received rapid feedback from these trial runs. However, the trials did not represent joint quality development, but were the supplier's own projects. Although the existing quality met this customer's requirements and needs, it was willing to provide its resources for Papyrus' quality-development projects,

About ten years previously there had been a paper reel-tracking project that could be considered joint development work. The customer developed a programme for reel tracking and sold the property rights to the supplier. This programme was taken into use in another printing plant as well. Apart from the trials and some development projects, there were no formally determined shared resources in this relationship: there was no need to utilise the other parties' resources on a continuous basis.

4.3.3 The structure of integration

Operational and strategic integration

Operational integration in this case was not primarily relationship-specific, but was related more to overall developments and practices in the industry. The emerging trend was that system linkages between paper suppliers and customers would increase, but how it would change the division of work remained open: this was well established and Papyrus was responsible for the customer's stock management. The day-to-day activities were relatively simple and ran quite smoothly. Apart from stock management, no other activities had been transferred from the customer to the supplier or vice versa. It was agreed that unloading trucks during the night was the supplier's responsibility, but thus far the customer had been satisfied with daytime unloading and the supplier's help had not been needed.

Strategic integration was related to the concept of the local mill, which created synergy effects. The parties openly shared their business views and discussed the changing environment and the pressures it put on both of them. The changing business environment in this context meant declining newspaper circulation, more prevalent electronic media, declining prices worldwide, and increasing imports of cheaper newspaper from Russia. It was agreed that there was no longer growth potential for newsprint in Finland and Western Europe. Although there were no jointly determined goals, the common shared interest was to maintain the newspaper as a viable communication medium for the future. The strategies and interests of both parties were not compatible by default because the customer was a relatively small player in global terms, whereas the supplier was clearly a global player. The customer's power was not in its size and volumes, however, but rather in the values and locality it represented.

Another concern for the future was related to the continuation of Papyrus' local supplying mill. The production concept was not based on recycled fibres, which as raw material is cheaper than virgin fibre. Papyrus was well aware of that fact that it would not be impossible for the customer to change supplier if necessary. The company emphasised that it also had relatively close alternative supplying mills that would serve the needs of this customer. Future integration was not self-evident in this relationship however, although the supplier stressed that the partners were the supplier and the customer and not just one mill and the customer. From the viewpoint of Papyrus, mill-specific integration would not be favourable, and the preferred choice would be to integrate the customer into the whole organisation.

Formal and informal integration

A basic assumption in this relationship was that it would continue on a permanent basis if it were functioning well. The customer thought that it was an unspoken agreement that the business would continue as long as both parties were operating and had confidence in each other. What had been agreed orally had been kept to, and in that sense *informal integration* was high. The key individuals who negotiated with each other remained mainly the same and mutual trust and commitment were very high. In terms of good and personal relationships both parties were able to keep their promises. It was not only a question of the reliability of Papyrus. From the mill's perspective it was important that the customer was reliable and consistent: it helped capacity and production planning at the mill, which in turn helped in maintaining high quality and delivery reliability. Despite its prevailing sole-supplier status, Papyrus thought that a trusting and committed relationship did not necessarily require that position, and that it was sufficient to maintain a key or main supplier status. The customer was committed to long-term cooperation with Papyrus, however, without any long-term formal contract. In its view a long-term policy ensured competitiveness for both parties, a view Papyrus endorsed. The achieved integration was thus a result of a long-term and mutual orientation. The relationship management was in the hands of key individuals who operated as an informal team and interacted and communicated with each other regularly: nominated key-account team was not considered necessary.

Formal integration did not play a big role in this relationship. Both parties shared the view that formal agreements just fixed the rough guidelines. If the targets were not achieved, no other party was blamed nor compensation demanded. The common practice in this relationship and business was that commercial contracts normally covered one year. Price negotiations were relatively easy and normally lasted for between one and two hours, one reason being that prices were normally agreed at a relatively late phase in January when the current market-price level for the coming year was already known. However, agreeing prices formally for a longer period of time was a challenging task because the market situation determined the level and there was not much room for manoeuvre. It had been possible to maintain relatively stable prices in this relationship, which was beneficial for both parties. The customer had a clear policy of not insisting on the cheapest price, but on the other hand it was not ready to pay the highest price. Papyrus also appreciated this policy: if drastic price adjustments were aimed at, the situation would be very challenging for both parties.

4.3.4 Case analysis

The process of integration emerged through close actor bonds and strong activity links, and also to some extent through resource ties. Information and knowledge in particular were viewed as resources. There was no specific development plan, and the integration rather evolved over time. The activity links reflected the local supply concept with smooth and easy ordering and almost daily deliveries. Automation would probably increase further, for example in the form of electronic invoicing. This would not be a relationship-specific investment, however, but a part of general development path. The actor bonds were strong, but the relationship management was low-profile and mainly informal. The power positions were relatively balanced, implying that neither of the parties had a dominating role and that both were able to influence the relationship. The key actors seemed to possess a substantial amount of tacit knowledge. The relationship was based on long-term cooperation involving trust and commitment in pursuit of mutual benefits rather than on competition. Therefore, the customer had not searched for alternative suppliers or entered the price competition.

Future integration was not self-evident, however, because of external environmental pressures. The supplying mill and customer were facing the constant worry of how long paper production would continue at the supplying mill. If local supply could not be maintained, it was evident that some disintegration would occur. The bond between mill and customer was specific, but was not necessarily critical if the supplier had an alternative offering and was able to show commitment to the relationship. Therefore, disintegration would not necessarily mean the end of this business relationship if only the supplier was able to offer alternative solutions.

The structure of the integration is the outcome of the relationship-institutionalisation process, and informal integration characterised this relationship. *More supplier than customer integration* was identified in that the customer concentrated its purchases on one of Papyrus' supplying mills. It was in the customer's interest to integrate and involve the supplier as its key paper supplier as long as this strategy held. *Operational integration* was quite strong, with an optimised division of work and easily managed and simple day-to-day activities. There was a need to make changes in the division of work between the parties, however. The supplier already took care of the customer's stock management at its printing house. The lack of a sales organisation as an intermediary between supplier and customer made the customer-supplier interface transparent.

The local supply concept could be seen as a form of *strategic integration*. The locality made it possible to minimise supply-chain costs. The publisher printed the newspaper without the involvement of third parties, which made the relationship relatively simple. From the customer's perspective, locality also meant that the company was a mark of the success and viability of the province. The strategy and future of the Papyrus supplying mill was related to corporate-level decisions, which was to some extent outside the power of the key individuals operating in this relationship.

Informal integration was high due to the strong and informal actor bonds. There was no need to intensify formality because mutual trust, understanding and commitment prevailed. Although both parties faced changes, they were able to maintain trust and long-term commitment. On the other hand, the informal integration process was long, and focused on trust, personal contacts and appropriate chemistry between the individuals.

Formal integration did not play a very big role, the formality rather lying in some implicit behavioural and management traditions and practices on both sides. Price negotiations were relatively easy: they were well grounded, took relatively little time, and the atmosphere was professional. Contracts were normally made for one year. The prices were agreed at a relatively late stage, when the current price level was already known. It was not realistic to agree on prices for a longer period in that the market situation dictated the general level and there was not so much room for manoeuvre. On the other hand, the parties could choose a time for the negotiations that was beneficial to both. When prices were agreed at a relatively late stage when the market-price level was already known, the process was simple and easy for both parties.

4.4 Publishing and printing

4.4.1 Overview and relationship development

This customer is a big European media group established in the late 1990s. It operates in several European countries in magazine, newspaper, book and educational publishing, the electronic media, press distribution, and specialised retailing. During the last ten years it has grown, internationalised and expanded geographically. In recent years it has expanded its magazine operations, especially in Central and Eastern Europe. The company has also grown through acquisitions: it bought a magazine publisher and an educational publisher in one European country. The growth has been based not only on the existing product and service portfolio, but the company has also developed innovative solutions in digital business and publishing.

The print media, which are under investigation in this study, consist of three companies: a publisher and printer of books, a publisher and printer of newspapers, and a publisher of magazines. The company has several newspaper and book printing plants. It publishes hundreds of magazines in over ten different European countries, including one of the leading daily newspapers, a tabloid and business daily, and regional and local papers and free newssheets in one European country. The customer buys newsprint directly, but magazine paper is also bought through its printing houses.

The business relationship between Papyrus and the customer developed and expanded in the late 1960s and 1970s when the customer started to buy magazine and fine paper. In the first years the companies cooperated intensely in paper-quality development when pilot printings were done on a new paper machine. Today Papyrus is one of the selected six key suppliers nominated by the customer and in terms of quantity is one of the biggest. In practice, all the key suppliers account for ninety per cent of this customer’s paper purchases. The biggest volumes bought from Papyrus are in newsprint and magazine papers, and fine papers play a minor role.

The customer almost halved the number of its key suppliers since the turn of the millennium. Its strong position was traditionally based on two factors: a wide product range and short delivery times, with the supplying mills located close to the printing plants. The importance of this customer to Papyrus lay primarily in the large volumes, especially of magazine paper and newsprint. This ensured capacity utilisation on the paper machines, but not necessarily constant profitability.

In recent years instability put this relationship under pressure. Purchase volumes were not very stable and there was significant variation from year to year. The customer's constant growth was not directly reflected in the volumes purchased from Papyrus, which rather reflected market conditions: paper overcapacity and the prevailing pricing policy. Both the publishing and the paper industry were facing the need to rationalise and change existing structures. Despite the difficult market circumstances, however, Papyrus affirmed its principle of always serving this customer in the best possible way.

4.4.2 The process of integration

Actor bonds

Local mills traditionally were and remained important actors in this business relationship, and the export share was on the increase. Moreover, the mills' role had changed during the course of time in that commercial negotiations had been centralised in the supplier's organisation. From the customer's perspective this was a positive thing in that fewer negotiating partners were involved in the process. In the early days the mills even competed against each other, which benefited neither party. Although the Papyrus sales function was not involved in the daily operations, it had an important role in negotiating and agreeing contracts. The supplying mills were in direct contact with the customer for domestic sales, whereas elsewhere in Europe daily operations were handled through its sales companies. Business-unit management was responsible for setting general guidelines and targets. Figure 11 shows the organisational-level bonding.

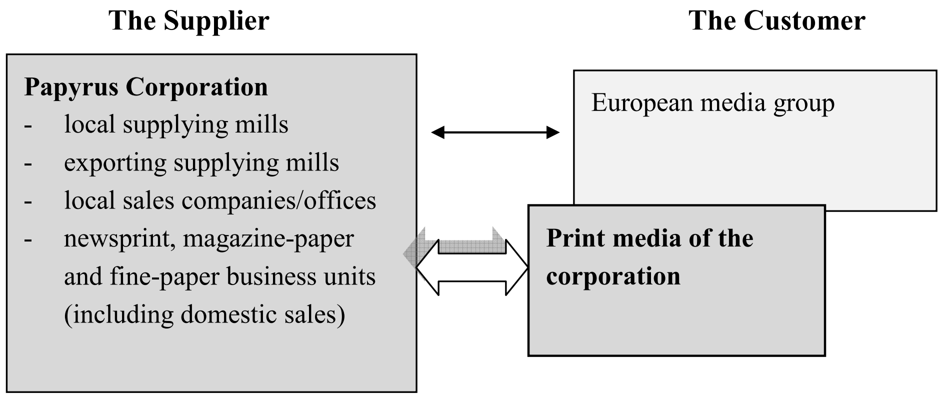

Figure 11 Publishing and printing: organisational-level bonding

The Papyrus sales director and sales manager met the customer's purchasing director regularly, once a month on average. However, there was some variation in that there were sometimes several meetings a month, and sometimes none. The amount of face-to-face communication had remained about the same, or had increased slightly during the previous three years. Face-to-face meeting was the most important form of communication, although the telephone was used more often. The Papyrus communication plan covered all major customers and guided the interaction. For example, the Papyrus sales manager and the materials manager in the customer organisation were natural counterparts who met and communicated with each other.

Both parties emphasised the need for face-to-face meetings and personal communication. Papyrus placed more importance than the customer on close, personal and trusted relationships, which could only emerge among highly competent sales people, with appropriate personalities and chemistries that matched in both organisations. It was felt that short-term price decisions should no longer be the sole determining factor in the relationship, and that the focus had to move to long-term planning and development. However, the importance of such close relationships was not always understood in Papyrus. For example, given the lack of concrete and direct measures of effective behaviour among sales people, it was not so easy to put a value on it.

In the customer's view there were three factors that could strengthen this relationship: personal and better contacts with the Papyrus top management, the introduction of a key-account-management system in both organisations, and centralised purchasing. Interaction and communication with Papyrus decision-makers was open on every level, mainly because both parties had known each other for a long time. For example, the purchasing director had known many of the Papyrus directors for several years, and met the CEO twice a year. Meetings on the CEO and senior-management level were a tradition in this relationship, and had concrete value: they made strategy and business implementation much easier on other levels in both organisations. Face-to-face meetings constituted a basis for mutual understanding, which is required in commercial negotiations and business development. Good personal relationships clearly helped this customer in difficult situations. For example, during one labour dispute there was quite a big risk to delivery reliability: Papyrus managed the situation well and the customer was not left without paper.

Activity links

Both parties shared the view that daily operations in this relationship had been relatively stable and predictable, especially in newsprint and magazine publishing. Order sizes and delivered amounts were greater in these areas than in book publishing, which involved many different small orders with frequent contacts. Daily activities were considered just as important as future planning from the supplier's perspective, but the customer thought that future planning and development clearly carried more weight and required more effort. As far as Papyrus was concerned, the efficient management and implementation of daily operations facilitated joint long-term planning and decision-making.

Papyrus thought that paper quality was no longer the decisive factor in purchasing decisions. It was quite rare for quality issues to be raised in commercial negotiations because good and constant quality had become the default position: nowadays it seems to be quite difficult, sometimes even impossible, to differentiate competitors in terms of quality. Therefore, it was thought that future key activities should focus on relationship management at all levels, and on finding favourable or at least satisfactory solutions for both parties.

The customer thought that maintaining good quality was still one of the key activities, and that it was important to find a competitive cost level that was acceptable to both parties. Changes and challenges in customer organisations also affect their key suppliers. The following changes in the customer's organisation were mentioned: a greater emphasis on profitability, centralised purchasing, and changing end-use habits with the increased popularity of electronic media. Papyrus, in turn, identified the following challenges: finding people with the talent and competence to work at the customer-supplier interface, differentiating in situations in which paper quality and technical properties were approximately the same, and understanding the supplier's future presence and role in the customer's growth. Meeting these challenges would require activity rearrangement both internally and between the parties.

There were system linkages and connectivity between the parties in their daily operations. For example, the follow-up of newsprint deliveries and consumption was based on EDI linkage. However, there were no tailored solutions between the parties, and systems development was effected through the adoption of standardised solutions that were applicable to many different suppliers and customers. Electronic invoicing will probably be introduced in the future. In terms of system linkages, the customer thought that Papyrus was on the same level as other paper suppliers - no better and no worse.

Resource ties

Both physical and non-physical resources had traditionally been used in this relationship. Both parties cooperated in paper-quality improvement, which involved Papyrus, the customer and the customer's printers. There had also been joint efforts in new-product development, electronic paper being one example. Although cooperation had been strong, there were no specific shared resources. The customer emphasised the increased importance of environmental issues, but at first this would primarily mean sharing more information concerning each company's environmental development. Combining resources in environmental certification was not yet considered a very relevant issue.

Information as a resource was not especially emphasised in this relationship. Various information sources were available, and the customer's role in transmitting or providing market information to Papyrus was generally on the decrease. Markets nowadays are relatively transparent in this sense. However, both parties recognised the importance of discussing each other's future interests and goals. They shared some confidential information: each one knew approximately what each other's profitability level was, although not the exact figures. Joint meetings helped to deepen understanding of each other's views of future developments. Therefore, the meetings dealt not only with past issues, and it was considered at least as important openly to discuss future prospects in order to be ready to face new challenges.

4.4.3 The structure of integration

Operational and strategic integration

Operational integration was not relationship-specific investment and adaptation in this case, but was in line with overall market developments and decisions concerning industry-specific standards, for example. It was enhanced mainly through the individual efforts of each company, and not through joint efforts. For example, the customer was planning to outsource stock management in newsprint and magazine paper to its suppliers. This outsourcing process covered all the key suppliers, but agreements were not yet in place. The position of Papyrus in that process was still unclear as the discussions and plans were at a very early stage. Thus far no other activities had been transferred from the customer to Papyrus, or vice versa.

In the area of *strategic integration* the parties had not determined joint goals, but retained their separate ones. They both thought that customer growth and success would have a determining role in the further development of this business relationship. The search for quick and short-term price remedies, the changed management and organisation and the prevailing paper overcapacity had had a negative effect. Both parties recognised the need to consider joint goals in the long term, and not only maximal short-term benefits. When short-term benefits outweighed long-term considerations, prices and yearly volumes varied considerably. Long-term business predictability deteriorated, which in turn prolonged the overall negative cycle.

The customer did not believe that the big players in the market, as in this case, were merely driven by market forces, because they constituted the markets. The biggest paper publishers and producers comprised a market force that was powerful enough to affect the general competitive situation. The results and outcomes depended very much on the decisions and behaviour of management, and on the messages given by key individuals in both companies. On the other hand, Papyrus thought that no single company could significantly affect the supply-demand balance. The parties differed in their views on whether the customer-supplier relationship could jointly strengthen their strategic market positions. Although strategic integration was not merely a relationship-specific issue, and was related to a wider network context, integration benefits could only be achieved if both parties were willing to operate on a mutual basis and to increase their mutual understanding.

Business instability may have brought some confusion about who were the proper decision makers in this relationship. Changes in key decision makers and multiple actors complicated it from both the operational and strategic perspectives. It could well be necessary to enhance operational and strategic integration by developing and investing in the customer-supplier relationship. Investment would not necessarily mean physical resources or new employees, but would first of all entail re-prioritisation and the more effective utilisation of existing resources. Management commitment from both companies would be required, and the willingness to invest time in developing this relationship.

Formal and informal integration

Both formal and informal aspects were considered important in this relationship, which nevertheless was not very formally or informally integrated. There was a long tradition of doing business and cooperating with each other. Some established practices and procedures continued despite changes in the key individuals involved. However, business instability and external pressure caused some insecurity and informal disintegration. Papyrus especially emphasised the importance of deep and personal relationships between individuals in building up the business relationship. Both parties recognised the need to strengthen mutual trust and commitment, and that trust could be established only between individuals. Papyrus in particular did not think that there could be trust between organisations, but at the same time it saw a company brand as a powerful trust-enhancing tool. The brand was not considered to be an image alone: it rather represented a way of working effectively together and minimising mistakes. It covered both the physical properties and the functional quality of the paper.

Formal integration was considered important, but the process had not yet developed to that level. Formal agreements had an important role in this relationship because large volumes were at stake. Such agreements showed the future direction, and that things were well prepared and planned, which in turn facilitated efficient implementation. Newsprint contracts normally covered one year, whereas for magazine papers it was half a year or a year. The negotiations had not been easy, and sometimes it took a considerable time before agreement was reached. One reason for these prolonged negotiations may have been the senior-management changes in both organisations, but the short-term thinking and adherence to individual targets could also have had an effect. The customer was aiming at long-term delivery contracts, which so far had eluded this relationship.

In the prevailing overcapacity situation the negotiations were often favourable to the customers, and the results thus depended very much on the supply-demand balance or imbalance. Attempts by Papyrus to achieve quick price solutions could have led the customer to demand lower prices in the subsequent round. This, in turn made the negotiations even more difficult and time-consuming. When short-term gain is the aim, business predictability deteriorates and the negative cycle will continue in terms of changing volumes and prices.

4.4.4 Case analysis

The process of integration developed through activity links and less through actor bonds and resource ties in this case. Mutual understanding had recently been difficult to achieve, which possibly resulted in ever loosening actor bonds. Deeper integration required first and foremost increased mutual understanding of the other's role, and consistent behaviour. The customer's growth in Europe may have resulted in loosened activity links because the linking was heavily based on the concept of local supply. System linkages followed the general level of systems development in both industries, so it was not a relationship-specific issue. It was estimated that system integration between customers and suppliers would increase in the future. The resource ties were not very strong because the position of Papyrus seemed somewhat unclear, being just one of the key suppliers. Competitive offerings were available and purchased, and this reflected a conscious strategy not to be too dependent on any particular supplier. Although it was necessary to discuss future development paths, the role of information as a non-physical resource was not considered very important. On the other hand, technical cooperation had traditionally been close, and was still considered important between the supplier, and the customer and its printing houses.

Competitive and conflicting elements were present in this relationship, and perhaps even at the cost of the cooperation. It was not a question of different suppliers competing against each other: the very relationship had become somewhat competitive. The customer's growth increased its negotiation power: it not only followed what was happening in the market, it was also able to take the initiative and contribute to its development. This increased power made the relationship more competitive. Unstable volume development and changes in the nature of the relationship perhaps already split the parties.

Further integration will depend very much on people and their competences in both the customer's and the supplier's organisation, and on how both parties manage to reconcile their conflicting views. The customer wanted to be more involved in the supplier's projects so that it could earn respect for its professionalism. However, if common interests are difficult to find and mutuality is hard to achieve, participation has no value in itself in the integration process.

The whole relationship was in a process of change, and the outcome was not clear. Therefore, the *structure of the integration* did not yet reflect any achieved state, although the relationship was, to some extent, relatively institutionalised. Such a relationship may be vulnerable when facing either internal, relationship-specific pressures and/or the external threats that emerge in a market environment. This relationship represented *neither customer nor supplier integration.* On the other hand, it seems that the supplier's interest was more to involve this customer at arm's length, not to integrate, so that big volumes would be bought and capacity utilisation maintained. When the customer aims at concentrating its supplier base it is not self-evident that just this supplier achieves a higher position. The enhanced role of Papyrus in this concentration process may mean greater supplier integration, but only if the competitive element can be reduced considerably. Closer integration, or alternatively disintegration, may also happen as an unplanned consequence without any clear strategy or intention.

Operational integration thus far was not very high because both parties mainly operated independently and discussions regarding the division of work had just started. This could also require system development. On the other hand, the relationship embraced very different business areas, thus the challenges and need for greater operational integration could have varied considerably depending on the business. For example, more interaction and contacts were still needed in book publishing. Greater operational integration is not only a question of a more automated way of working, although that may be part of it. It is crucial to discontinue overlapping and unnecessary activities and to find the most suitable and reasonable division of work between the partners.

Strategic integration was not very high either due to the conflict between short- and long-term targets. For example, both parties had different views on the appropriateness of each other's purchasing and marketing strategies. On the other hand, the long-term cooperation served as a basis for improving strategic integration in this relationship, if only both parties had been willing enough to deepen their cooperation. The customer was a future-oriented and growing company, and its paper purchases had grown significantly in recent years. Higher strategic integration would require a longer-term approach and a move away from the prevailing competitive element in the relationship. Joint effects and synergies will emerge only in the context of a longer-term and collaborative policy.

Although both formal and informal aspects were considered to be relevant, this relationship did not seem to be very formally or informally integrated. On the other hand, some informality in the form of good and personal relations had clearly benefited the customer in difficult situations. Informality in itself had not ensured commitment. There had been certain traditions and procedures, but whether or not they were still valid in the current changing environment was not clear.

It follows from the above that enhanced *formal integration* may be necessary. This would require, for example, more efficient and longer-term contract management in situations in which the results of negotiations still very much depend on the prevailing supply-demand situation. It was not possible to judge whether or not the agreed contracts had been favourable to both parties: they were probably a kind of compromise. When *informal integration* is relatively low for relationship-specific and external reasons, as in this case, the importance of formal integration may increase. Low informal and formal integration does not necessarily mean deteriorating relationship management among account managers: it rather reflects the lack of a joint view and contradictory views and feelings about how things should be managed on all levels in both organisations.

4.5 Paper converting

4.5.1 Overview and relationship development

The customer is one of the leading global suppliers of self-adhesive, pressure-sensitive paper-based and filmic label stock. The company started production during the 1970s. Pressure-sensitive labelling is currently its main technique, followed by glue-applied labelling. Its main customers are label-stock printers, and merchant customers are also significant selling channels in the sheet business. The end customers are global consumer-goods companies in various areas: food and beverages, personal care, home care, pharmaceuticals, retail trade, logistics and transport, oil and industrial chemicals, and digital labelling.

The customer had consolidated its label-paper supply in recent years with a view to achieving increased cost efficiency and better business profitability. Price competition in the label-paper market was generally hard. It had been growing and internationalising its operations through geographical expansion in the previous two decades and turnover had doubled in the previous ten years. It had nine factories and several terminals and sales offices in five different continents. The market for pressure-sensitive label stock was expected to grow rapidly in China and Eastern Europe, including Russia. Further, the customer was aiming at greater efficiency through centralised purchasing and the global coordination of its operations.

In this case the supplier and the customer belong to the same corporation and are business units of Papyrus. Both are significant global actors in their businesses. The relationship started in the early 1970s when the parent company of Papyrus bought the customer, which at the time was only experimenting with label-stock business. The business relationship developed strongly from the 1980s until the 1990s, heavily influenced by the CEOs of both companies. It had been relatively stable in recent years, showing a positive trend. The volume of business quadrupled between the early 1990s and the mid 2000s. The customer’s investments also gave a positive edge to Papyrus’ label-paper business. Both parties have profited on the whole.

Papyrus delivered label papers to the customer from four European mills, two of which were located in the same country. About forty per cent of their label-paper production was allocated to this customer - seventy per cent of its required purchasing volumes. Restricted production capacity for label base papers in Papyrus had affected the supply: from the customer’s perspective demand had outstripped supply in label base papers. This customer also purchased many label-paper grades from other suppliers since Papyrus only produced some of the grades required. Nevertheless, in terms of total volume Papyrus was the major supplier. The strong growth of the customer during the previous ten years was one of the main reasons why Papyrus made the decision to invest in label-paper production.

4.5.2 The process of integration

Actor bonds

This was a vertically integrated relationship in which both Papyrus as the label-paper supplier and its converting unit, the customer, belonged to the Papyrus Corporation. Both parties were big players in their businesses, fairly dependent on each other and in relatively equal positions. Although they had both internationalised and the customer had grown globally, the roots of the relationship were still mainly in one country. Figure 12 shows the organisational-level bonding.

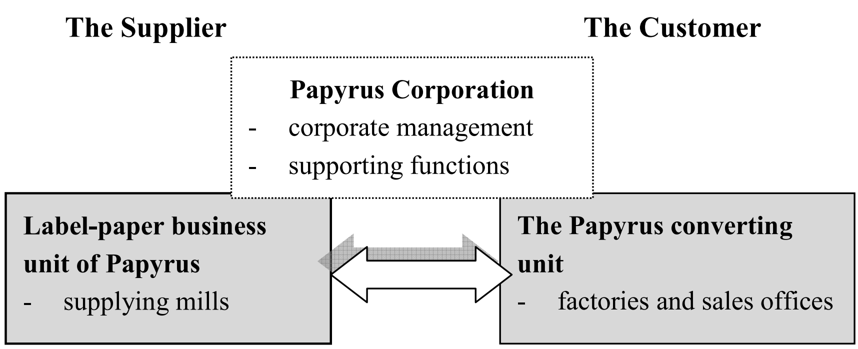

Figure 12 Paper converting: organisational-level bonding

Actor bonds between the parties were strengthened in the late 1990s when the key-account manager for this customer was appointed. The label-paper strategy team was established at the same time. Earlier the customer negotiated separately with every Papyrus mill. They all had independent sales strategies, and some even competed against each other. Belonging to the same company made cooperation easier in that it was natural for both parties to show flexibility and to discuss things openly. On the other hand, it also had some disadvantages: commercial negotiations are never simple, but they may have been even more difficult. It was emphasised that the relationship was a "real" business relationship, which had required some arrangements regarding contact persons in Papyrus label-paper sales.

There was systematic and organised planning and meeting on both the strategic and operational levels. The customer's procurement director and the key-account manager contacted each other weekly. The meetings were characterised as open and informal. Due to the customer's growth the number of face-to-face meetings had increased during the previous three years. The key-account manager communicated directly with the customer's sales organisation, which was also favoured by the procurement director. The customer's customers often visited nearby label-paper mills during their visits to the production plant. Although this customer had pursued some direct contacts with the end customers, the aim was not to have direct agreements with them.

Other key individuals apart from the key-account manager and the customer's procurement director met each other regularly. The top management of each business unit had yearly strategy meetings in which long-term plans for future investments and joint guidelines for volume development by grade were discussed. The head of the product group and the key-account manager of Papyrus' label-paper business unit, and the customer's development director and procurement director attended these meetings. The customer's CEO also participated when necessary.

Operative coordination meetings were held four times a year to discuss matters such as short- and long-term product development, operative technical service and customer feedback, ongoing projects, and new opportunities. The participants included departmental directors and product-development managers and engineers of the supplying label-paper mills, the key-account manager of the label-paper business unit, and the customer's development managers and procurement director. The customer's local sales people were not included. These coordination meetings were preceded by a video conference among the production managers of both companies. There were also logistics and capacity-planning meetings. The production managers met four times a year. There were specific development and follow-up meetings for the USA market, which clearly required more follow-up and coordination partly due to cultural differences. Not all the meetings were purely business-related, and social events such as joint dinners and rounds of golf were arranged.

Interaction in day-to-day activities happened directly between the supplying mills and the customer. The supplier's sales and customer-service coordinators and the customer's purchasing coordinators were in daily contact. The daily operations were relatively stable, although the key-account manager of label papers also had to spend time on day-to-day issues, away from his main task of long-term key-account management. The key-account manager and the mill representative visited the customer's factories in every continent regularly: Europe and the USA twice year and the Far East and Australia at least every second year (the key-account manager yearly).

In sum, relatively strong actor bonds on various organisational levels characterised this relationship. There were trusted, long-term and close relationships between key individuals, but they were not always personal. The individuals were well matched in terms of key visions and chemistry, which facilitated long-term relationship and business development. There were relatively few personnel changes at the customer-supplier interface, which made the relationship more trusting on the individual level. When problems emerged they were solved quickly and effectively through the establishment of a specific project and follow-up team.

Activity links

Under the direct-operating model the mills operated directly with the customers worldwide, thereby bypassing the Papyrus sales company. Accordingly, the customer was taking care of some activities, such as logistics, which in paper sales were normally the responsibility of the sales companies. Both parties felt that the direct model had made operational planning more flexible, had kept supply-chain costs at a reasonable level, and had ensured delivery reliability.

Due to the company-wide system development there was some modification to the model in European sales. The sales-company model had recently been adopted in the USA, meaning that the local sales company for label papers was operating with customers rather than supplying the mills directly. According to the customer, operational efficiency would deteriorate during the transition period, although handling increasing order flows in growing markets was a challenge in a lean organisation.

EDI-based messaging started about ten years previously when the VMI model was adopted. Label-paper delivery information in the Papyrus system and the stock and consumption figures in the customer's system were updated automatically in the company's mill and/or stock-management systems. The customer had the initiative in electronic business and some projects continued. Both parties emphasised that the utilisation of the system was not as advanced with their other customers and suppliers.

There were no joint or shared mechanisms allowing the other party direct access to a particular system: it was more or less a question of system connectivity and linkages. The sales, purchasing and logistics systems were different both for Papyrus' label papers and in the customer's organisation, and this would probably continue. The customer had been able to develop its own systems quite freely and there was no particular pressure to adopt common systems. The customer was going to adopt the same e-mail system as the Papyrus label-papers unit. It was also testing the Papinet standard for automated purchasing.

Intranet-based communication helped in terms of managing information flows. Information was easily available to both parties from a database containing reports of development projects, product specifications, reports of reel trials, price lists, and customer-visit reports. Papyrus had performed well in the yearly supplier evaluation conducted by the customer. Technical performance improved in the early 2000s, whereas commercial and general performance maintained a good or very good level. Significantly, Papyrus was able to meet the expectations and challenges of the customer: faster customer production required better product performance with regard to label papers.

Resource ties

The parties shared some warehouses and physical equipment, meaning that at one of Papyrus' supplying label-paper mills had a certain part of the warehouse reserved for the customer. Papyrus took care of some of the customer's logistics operations. There was an agreement between the parties on how much Papyrus charged the customer for electricity, heating and so on.

In terms of product development, Papyrus had some label-paper trial runs with this customer. There were practical reasons: given the location it was easy to get quick feedback from the customer. The trial runs normally took a few weeks and were also useful for the customer. Paper runnability improved and quality became more consistent. Sometimes third parties such as silicone and glue suppliers were involved. These trial runs could also have helped to further the product-converting process, in which feedback from both the customer and the customer's customers was monitored in these development projects. Product development in this relationship was very well coordinated. For example, the test results were distributed to other mills and applied effectively in Papyrus. Product-development resources were thus utilised efficiently across functions and companies.

There was no need for joint marketing to end customers, although Papyrus thought that using joint human resources in product development might have been useful. If one person had knowledge of each party's production technology, then quality-related problems could be solved more easily. However, the company also considered using shared resources slightly risky because the other customers could then perceive this customer-supplier relationship as being too close. Although the parties belonged to the same corporation, the customer had traditionally had its own systems and identity with its own brand. However, it now identified itself more strongly with the parent company, although the brand names remained the same.

4.5.3 The structure of integration

Operational and strategic integration

Operational integration was strengthened when the customer's stock management in Europe was transferred to Papyrus label papers about ten years previously, at the same time as the VMI model was taken into use. Papyrus ensured that certain minimum and maximum stock levels were maintained at the customer's factories according to actual consumption figures. The customer was very satisfied with that operating model because stock turnover had considerably decreased, less work was required, and information transparency was enhanced. This operating model is currently in use, to some extent, in the Far East and Australia. Papyrus had also carried out some paper-quality analysis for the customer.

Traditionally, Papyrus and the customer shared some tailored systems and models for label papers, which helped in managing daily operations. However it seemed that there was greater pressure from the Papyrus side to have more centralised systems and models in the future, which could have some unfavourable effects in terms of service quality and flexibility. This, in turn, could have caused operational disintegration in this specific relationship. Improving operational integration would maximise the benefits of relationship.

The basis for closer *strategic integration* lies in a strong relationship with a shared vision and strategy. In addition, mutual trust and long-term commitment to cooperation that is beneficial to both parties is essential. Papyrus label papers thought that the corporate decision and the clear message that the customer would be an essential part of the corporation in the future made this relationship strategically stronger and more integrated. The customer's pursuit of future growth created a certain faith that together both parties could be strong and profitable.

Future visions and development paths were very important in this relationship. In order to achieve a joint vision and strategy Papyrus label papers would still need a clearer understanding of the customer's business, although things had clearly improved in recent years: they had found a more systematic way of co-operating with each other. When the customer invested in the Far East the aim was that Papyrus could invest in local label-paper production there. The customer emphasised that guaranteeing local supply was important. The joint aim was to achieve long-term effectiveness and to maintain market competitiveness.

Both parties had their own strategies and goals in this relationship. The shared goals were normally related to investments, which meant increasing production capacity either by renewing existing paper machines or building new ones. Increased openness in communication about such investment decisions and targets gave a clear message to competitors, although implementing shared goals was, to some extent, hindered by the strong competition between the two global customers, both of which were served by Papyrus label papers. Despite this competition, both the customer and the supplier remained committed to long-term strategic cooperation.

Information on future growth potential and other strategic issues was shared more openly than three years previously. The parties knew approximately what each other's profitability was, but admitted that total openness and deep integration were hindered by strong competition in the market. Papyrus label papers aimed at diversifying its customer portfolio when new investments were made, and some of the increased capacity was directed at new customer relationships. The target was constant and smooth capacity utilisation: too much dependence on two big customers was not ideal because they might sometimes buy either too much or too little at the same time.

The customer thought that global steering and communication among top management was no longer at the level it used to be. On the other hand, the customer's organisation now reported directly to the CEO of the corporation, which, it was hoped, would facilitate improved global steering. Another challenge lay in the slower decision-making, especially concerning strategic decisions in the supplier's organisation. The rate of strategic change in the customer's organisation was faster than in Papyrus label papers, but the customer still needed its specific support and effort in its growth and internationalisation process. The customer considered it important for growth targets to be realised jointly in concrete actions between the two parties: Papyrus label papers was an important partner in product development, but still required more innovativeness and more effective utilisation of current resources.

Label paper as raw material accounts for about fifty per cent of the price of the end product, which is a remarkable proportion. The customer emphasised competitiveness and cost-efficient cooperation in this relationship. The right products could increase market share in a profitable way, but when the product did not meet market needs, the paper machine's high production efficiency does not help. Cost-efficient cooperation meant much more than efficiency with existing products and services in the supply chain. Supply-chain efficiency, stock management, and product optimisation were already self-evident service elements in this business, and as operative elements they did not guarantee future competitiveness, effectiveness and profitability.

Formal and informal integration

Although the both parties belonged to the same corporation, they emphasised that this was a real business relationship. There were no obligations on the customer to buy certain volumes from Papyrus. In fact, it had another main supplier for its main products, and Papyrus also sold label paper to another big and important customer. The customer needed other suppliers in order to ensure delivery reliability, and Papyrus label papers needed to ensure sufficient capacity utilisation.

In terms of *informal integration,* both Papyrus label papers and the customer considered the maintenance of mutual trust and commitment very important. The parties had a long and common history of joint cooperation, and co-action was based on a shared vision. Papyrus label papers thought that the big customer required from its supplier full commitment to the relationship. According to the customer, trust in this relationship meant first and foremost trust in each other's openness. There was no room for hidden agendas in an open atmosphere, and energy and resources were not wasted on speculating whether confidential information would be misused against another party. Long-term commitment meant sharing a joint strategy and vision for the future: it was commitment not only to the certain business, but also to the specific customer. The informality also meant that some social meetings and happenings were arranged.

This relationship was mainly *informally integrated*, and both parties thought that formal agreements had no great importance. On the other hand, a vertically integrated relationship is one form of formal integration. There were no binding long-term price or delivery contracts, although what was agreed was put in writing. Price negotiations were held separately. Agreeing prices had not always been easy, although one might assume that it was just a simple matter of internal transfer. Volumes were agreed on an annual basis, and prices were fixed quarterly. In addition, the customer presented its purchasing plans for forthcoming years. Both parties thought that a quarterly price review was a good thing because then the volumes were normally as planned. In terms of claim handling perhaps more formality was needed from the supplier's perspective: it was considered important to have a procedure that could be tracked and to put settlements in a written form.

Formal and informal aspects have to be considered from different viewpoints when it is a question of a vertically integrated relationship. Belonging to the same company had made some things easier in this case, but there were also some unfavourable aspects. Both parties had to adopt some company-wide decisions in situations in which they had operated with tailored models and systems, and in a very close and integrated way.

In order to maintain the competitive situation there was some pressure to increase the level of formalisation in this relationship. It had not always been easy for Papyrus label papers to keep both of its main customers satisfied, and other customers could well have become jealous of the vertically integrated relationship. It therefore made some necessary formal arrangements regarding the key-account management of the two customers: separate key-account managers dealt with each customer and they were not involved in each other's business. The implication is that relationship-management issues must be considered even more carefully when a vertically integrated relationship operates in a highly competitive market environment. However, this was not necessarily unfavourable, and may also have had some positive effects once the clear rules and arrangements regarding relationship management were settled.

4.5.4 Case analysis

The process of integration was evident in the strong actor bonds and activity links, and also to some extent in the resource ties, which were increasing in importance. Activity linking increased, for example, in terms of system connectivity between the parties in sharing stock-management information. On the other hand, there was no significant pressure to introduce unified systems. Given the importance of the resource ties, both parties' investment strategies had to match. This case clearly shows that actor bonds, activity links and resource ties are more easily created and maintained in certain areas when both companies belong to the same corporation. However, at the same time, a vertically integrated relationship restricts some actions and relationship-management issues. Both companies had their own resources, so there was no wider-scale resource integration. Being part of the same company made resource utilisation effective and actor bonds very tight when the direct operational model between production and sales was applied.

Papyrus was a clear partner for the customer, and would need to follow the customer's growth strategies by making corresponding investments in production capacity in fast-growing market areas. Although the customer was also important to Papyrus, Papyrus perhaps faced a different kind of challenge: it needed to expand its existing customer base by searching for new customers so that its current capacity utilisation would remain as stable as possible. The power positions were relatively balanced and both parties recognised their dependence on the other.

The structure of integration was the outcome of strong strategic and operational integration. Balancing formal and informal aspects was also relevant in this relationship, which had features of *both customer and supplier integration.* The process was developing, so that a change towards strategic supplier integration was evident. On the operational level there had been some revisions in the division of work. Papyrus label papers had taken care of the customer's stock management for over ten years, which strengthened the operational integration. However, the current change in operational model from direct to indirect in some markets could also imply *operational disintegration*. The aim with this indirect model seemed to be to achieve tighter corporate-wide internal integration, although in terms of this relationship it caused a conflict of interests. The indirect model challenged the ability to maintain the good level of customer service and cost-efficient co-operation at the same time. This meant giving up some flexibility and adaptability, which had traditionally characterised this relationship.

Strategic integration was quite strong, the focus being on locality in global business. Local mills always had an important role in business with this customer. The location of printing plants near the paper-production plants offered a kind of strategic fit and long-term advantage. Papyrus' potential label-paper investments in production, which could support customer growth and expansion in developing market areas, could also strengthen strategic integration in the future. This is related to the wider context of strategic decision-making and future cost-competitive and effective cooperation. It is not that the parties would compete against each other: they would rather share the processes and strategies that enhanced their long-term effectiveness and competitiveness.

The role of *formal and informal integration* is different in a vertically integrated than in an ordinary business relationship. There was a high level of formal integration in this case due to the vertical integration. On the other hand formalisation was traditionally not very extensive, although this was changing. The level of informal integration was high.

There are both positive and negative aspects when parties belong to the same corporation. Vertical integration is not always very easy to manage: agreeing on prices was difficult, for example. The need for greater formality was evident in the clear expectations of how both parties should behave in terms of taking into account other important customers and suppliers. The competitive situation increased the pressure to formalise the relationship, which was why the parties established some formal procedures regarding internal roles, responsibilities and other relationship-management issues. The account management at Papyrus label papers was clarified and made more transparent. Despite belonging to the same company, the customer was still able to change supplier if required: the relationship was not to be considered self-evident, or taken for granted.

At the same time, both parties admitted that belonging to the same group had helped a lot. It was easier in an open atmosphere to implement joint development projects in both the long and short term. Although each party still mainly had its own resources, they both had the opportunity to utilise each other's and to share. On the other hand, the customer had not traditionally identified so strongly with its parent company, and had a lot of freedom in its operations. Its growth-oriented and innovative policy clearly put pressure on Papyrus label papers: if it was to be strategically integrated in the future it would have to be able to change and to provide solutions to the customer's specific problems on both the operational and the strategic level. It was necessary to continuously strive against established practices and rigidity and to adopt more innovative and flexible behaviour.

Papyrus label papers will have to adopt some corporate-wide decisions aimed at increasing intra-firm integration. This may not enhance relationship integration - on the contrary, it may even lead to disintegration, especially in operational terms. This seems paradoxical, because generally speaking increased internal integration in a vertically integrated relationship should enhance integration between business units and in its (internal) business relationships.

4.6 Plywood converting

4.6.1 Overview and relationship development

The customer company was founded in the early 1970s to provide high-quality flooring systems to major local bus manufacturers. Today it is a special manufacturer of vehicle floor kits for bus, coach, military, marine, van, and truck and train markets. At the same time it sells the supplier's plywood products. It is a relatively small family-owned company with nineteen employees located in the UK, engaged in plywood cutting and CNC machining. Its products include plywood floors, floor assemblies, bonded laminates and partitions. It currently has approximately twenty main customers in the UK, among them the country's leading bus and coach manufacturers. Its business has been growing especially in the bus sector, and it currently serves a very significant proportion of the whole UK market.

The company had invested in the latest CNC routers and saws, and had introduced new operating systems. The floor kits are complete and ready to install. It has a highly quality-oriented philosophy and has both ISO 9001 quality and ISO 14001 environment certificates. Quality-mindedness is also required from its raw-material suppliers. It is actively looking for other markets pertaining to plywood supply and CNC machining. One of its special advantages is that it will machine small series.

This customer has a long tradition of doing business with Finnish plywood producers. Its business relationship with Papyrus began in the late 1970s when it was looking for a new supplier of quality products, having had some quality problems with its previous supplier. The products of the new supplier proved to perform very well and the company decided to change to Papyrus. Today Papyrus has, in practice, sole-supplier status in the customer's core business: the bus and railway industry. The business relationship is based mainly on export, meaning that plywood is produced and sometimes partly processed in Finland and then delivered to another for further processing. Two plywood mills and one processing plant have delivered plywood to this customer. One of the mills is the main delivering mill and the other delivers maxi sizes, which are formed by joining several standard-sized plywood sheets.

Papyrus aims at making long-term contracts with subcontractors of industrial end users, and occasionally directly with the end users, which is a very small proportion of the whole business. Transport equipment industry falls into three areas: heavy transport (trailers and railway trucks), light transport (buses and vans), and shipbuilding. Papyrus' road-transport customers are, generally speaking, vehicle manufacturers, commercial vehicle body builders, van-lining companies, and bus and caravan builders. The industry has been important for this customer, but future growth potential may lie in the railways. About fifteen years ago the process of deregulating the old railway system started in the UK. Today the industry operates in the global market, which offers more opportunities for subcontractors like this customer

This customer has been very important to Papyrus, being among the most valued in road transport in the UK. There are basically three reasons for this: first, it has the ability and capacity to add value to the supplier's product; second, it has specialist knowledge of the road-transport industry in Europe; and third, it has been a committed and very loyal customer. On the other hand, the volumes handled are not very big: the customer's plywood purchases are about six per cent of the whole plywood business in the UK. This customer is not one of Papyrus' biggest customers, but its importance lies not only in the current volumes bought, but also and more importantly in its growth and development potential. Furthermore, it is a unique operating model among Papyrus' other customer relationships.

There was a kind of turning point in this relationship around the year 2000, when Papyrus made some structural changes and closed two plywood mills. This restricted capacity, which in turn led to longer lead times. In this new situation the customer had to increase stock levels in order to continue offering fast and flexible services. Following the reorganisation of Papyrus' local sales in the UK there were some inaccuracies in the delivery information, which caused problems to the customer.

The customer thought that the most important aspects of the relationship were quality products, reliable deliveries, and pricing. In order to maintain quality and reliability it was important to listen to the customers' needs, and to design and develop good-quality solutions that exceeded customer requirements, although at a viable market price. It was also necessary for producers to be aware of the production volumes required and to keep looking for improvements at every stage of the process. However, quality and technical aspects alone did not determine success in business relationships: what was most important was to be enthusiastic, positive, and innovative. Competition in the bus industry was very tight and some suppliers offered substantially lower plywood prices. Therefore, it would be very important to operate as a provider of high-quality products and flexible service at the same time.

4.6.2 The process of integration

Actor bonds

This relationship involved a local, relatively small customer and a big and international wood-products producer. It was based on exports. The customer was also a subcontractor for Papyrus. Although much of the daily communication was between the Papyrus sales company and the customer, there was also involvement on the business-unit and product-development levels. Figure 13 shows the organisational-level bonding.

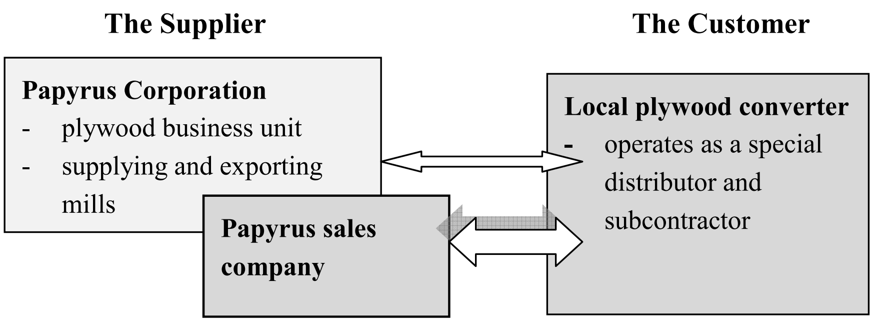

Figure 13 Plywood converting: organisational-level bonding

The cornerstone of this relationship for a long time was the close bond between the two key individuals: the Papyrus sales representative and the customer's managing director. The relationship had started almost thirty years previously in a situation in which the case customer's one major customer had some technical and quality problems. The Papyrus sales representative and the case customer's managing director visited the end customer together with a view to solving the problems. This event sowed the seeds of the business relationship, which grew and became stronger over the years.

The two individuals complemented each other and operated as a team serving the end customers: the sales representative performed the selling and marketing role and the case customer's managing director was more technically oriented. In time they became good friends, although the friendship was always driven by business. Nowadays they live hundreds of miles apart, and this naturally affects how often they meet. Still it was felt that the managing director and the sales representative were the two key individuals in this relationship.

The managing director handled and managed all the supplier-related daily operations as well as more long-term issues. He was the customer, as the Papyrus sales representative described it. He had deep knowledge of the company and of the whole business, and he was very well respected. He took care of internal matters as well as of supplier and customer relationships. According to the sales representative he saw his company as an extension of Papyrus in that he always talked about us and we. The managing director also dealt with the sales manager and operative staff in the Papyrus UK sales office.

The Papyrus sales representative had almost thirty years' experience of taking care of this relationship, and of being in regular contact with this customer, and the relationship functioned very well for a long time. He emphasised that he was always available if the customer needed his support and help. However, the amount of face-to-face communication and the number of joint visits to end customers had decreased in recent years, which was not positive. The customer thought that the main reason for decreased face-to-face communication was the sales reorganisation at Papyrus in the UK a few years previously: the office moved to another location and some experienced staff were lost. The customer thought that the move had a negative effect on the image of Papyrus in the eyes of the end customers, and also to some extent on its flexibility and decision-making capability.

Although the customer's managing director and the Papyrus sales representative were clearly the two key individuals, there were other significant persons involved in the relationship. The owner of the customer organisation still had a significant role and visited the company regularly even though he was already of retirement age. The significant persons in Papyrus were the sales manager and sales administrator in the UK, and the business manager located in Finland. The sales manager, who was relatively new in this position although he had a lot of experience in the industry, was the superior of the sales representative. His role was to make sure that all the wheels were turning, and his responsibilities included helping to find solutions to emerging problems. His contacts with the customer were limited to two or three face-to-face meetings a year, which he considered sufficient.

The business manager, one of the superiors of the Papyrus sales manager, met the customer approximately once or twice a year at the customer's premises, at trade fairs in the UK, or at the premises of Papyrus in Finland. He thought that more frequent meetings would have been useful, but for time-management reasons it had not been possible. Normally neither the sales manager nor the business manager had direct e-mail or telephone contact with the customer. Nevertheless, Papyrus emphasised the importance of regular customer visits to Finland: it was essential for this customer to have an overview of the opportunities and constraints related plywood production at Papyrus, and to be familiar with the technical issues.

The staff at the Finnish plywood mills and in the operational areas played an important role in this relationship, although they had relatively little direct interaction with the customer. The direct daily interaction took place mainly through local sales in the UK, although it was felt that Papyrus in Finland was the real decision maker in the relationship. The role of sales was mainly to take care of the administrative and operational tasks, and they did not have the authority to make far-reaching and independent decisions related to this business relationship.

The sales-office move caused some loss of experienced and knowledgeable staff. It was therefore necessary to recruit new staff, but training them took time. It was recognised that employee skills still needed to be developed. Competent people would ensure the accurate, fast and smooth flow of information in the daily operations. The customer thought that the structural changes in Papyrus had made decision-making somewhat more complicated, and the cooperation more inflexible in some cases. He also thought that the Papyrus sales people were unhappy and insecure about the changes.

The customer thought that there were some differences in interaction between the British and Finnish business cultures: Finnish people may sometimes have appeared very factual and focused, even too serious, whereas the British probably tended to put more emphasis on feelings and creating a good atmosphere. However, these differences did not have very much effect on this business relationship because the Papyrus sales representative was able to balance these different cultural aspects. Papyrus did not identify any particular cultural problems, but recognised that long traditions and certain hierarchies were often respected more in the UK than in the Finnish business culture. It was probably even more important in the UK than in Finland for the right people at the right level with sufficient decision-making authority to discuss and meet with each other.

Well-functioning communication between Papyrus and the customer was essential in this relationship. Effective communication at the customer-supplier interface required seamless internal communication between the different Papyrus functions, including production, sales and logistics. Openness and immediately giving bad news to the customer were considered very important, so that the customer could make alternative plans as soon as possible. On the other hand, when things were running well and planned very well in advance, there was no need for intensive interaction in daily operations. E-mails could not totally replace telephone communication and face-to-face meetings. In particular, it was better to deliver bad news face-to-face, or at least by telephone. E-mail was a good and effective way to communicate in daily operations. However, the customer sometimes found it difficult to contact the Papyrus personnel: waiting over a week for a response to an e-mail was not acceptable from the customer's perspective.

In sum, maintaining and developing this business relationship would require good and personal interaction, and strong actor bonding between individuals in the future. It was noted that the personal characteristics of the individuals involved in doing business with this customer should match. The relationship may have reached some kind of turning point when the Papyrus sales representative was about to retire in the autumn of 2006. Papyrus had planned how it would then manage the relationship well beforehand. Nevertheless, big changes were still possible, although it was thought that the change had happened a long time previously.

Activity links

Papyrus thought that a key aspect of this relationship was the whole-hearted support and commitment to the customer's business: it was important to maintain its reputation as a reliable supplier with high-quality products. Key elements thus included good service, quality, consistency, reliability and integrity. End-customer feedback had to be taken into account throughout the supply chain. Supplier support could extend, for example, to marketing and pricing, product warranty, and arranging customer visits to supplying plywood mills. Price support meant that the supplier did not require the highest possible price, but showed flexibility and was ready to negotiate.

Delivery reliability and information related to deliveries were key aspects from the customer perspective. Sole-supplier status required one-hundred-per-cent commitment by Papyrus to the relationship. The relatively long lead times from the plywood mills to the local end customers in the UK constituted a clear challenge. It was not only a question of physical distance: there was restricted capacity in the Finnish plywood mills, which meant that the orders of this customer were not always given first priority for one reason or another, and material arrived as much as a month later than originally requested. Information related to deliveries was in some cases inaccurate. Sometimes the customer even left without the material, which caused practical problems such as extra costs and an excess amount of stock. Rather than engaging in active and constructive problem solving and taking responsibility in these difficult situations, the different parties seemed to blame each other. If only a small piece of information was incorrect it could have quite a big effect on the customer's performance. Taking more responsibility and solving problems effectively should be the focus in this relationship.

Although the parties did not share any systems or databases, they were already using the Internet in their joint marketing. One useful future development area would be to link the customer with the Papyrus system so that he could see his stock levels and follow the path of his products in the supply chain. However, access to the system should be limited. Papyrus understood the potential of electronic commerce and the Internet, but it emphasised that order flows would still go through the customer and did not favour direct system linkages and joint operations with end customers.

Resource ties

There were no shared physical resources on a wider scale in this relationship, although joint product-information and marketing activities were carried out via the Internet. The customer linked his website to the wood-products website of Papyrus, which provided product information and technical details related to different plywood products. Papyrus also offered some financial support in the form of credit arrangements, and the parties shared a product brand in fire-protected plywood. There were no joint development teams, but there were some joint projects. One of these involved end-user education in adopting better techniques in order to get floor material to last for a longer time. On the other hand, further joint development was not easy due to the lack of available resources: the Papyrus team working on new ideas for the plywood business was relatively small.

The customer thought that joint technical resources targeted on end customers would be helpful. In fact, Papyrus did not have any local technical service in the UK. If there were technical problems the plywood sheets were sent back to Finland for further investigation. The local sales staff thought that that they could utilise more R&D support and technical service, which would have meant trying to anticipate problems and to solve them at a very early stage, before they became major issues. Although the customer was considered an important partner, Papyrus did not envisage any further sharing of resources in the future.

Personal relationships and the extensive shared experience of the Papyrus sales representative and the customer's managing director could be considered a valuable resource in this relationship. As a small company, the customer did not have a separate sales function, and the sales representative performed a sales-support role. For example, a fifteen-year guarantee for end customers would have been impossible to honour without support and backup from Papyrus. The relationship was a valuable resource in that the parties complemented and helped each other. The customer was ready to help Papyrus with machining and cutting, and Papyrus also processed the customer's orders. This customer was not only a special distributor and plywood converter: the roles had become blurred in that it had started to operate as a subcontractor for Papyrus.

Papyrus emphasised the customer's knowledge and ability to sense future market trends. Joint visits to end customers were still considered important, although there was currently less activity of that kind. From the perspective of Papyrus, this customer had an important role in acquiring new business. He was knowledgeable about the European railway business in general, not only about business in the UK, and was able to monitor market trends better than Papyrus could do alone. Papyrus emphasised this customer's role in acquiring and delivering customer, competitor and even authority-related information. For example, the European Union tightened the legislation on impregnants used by the supplier. They were consequently forbidden and finding another compound material meeting the same quality criteria was challenging. Given the changing market environment and the tightened legislation, the customer's market- and end-customer-related knowledge, and his ability to obtain important information, could be considered an important joint resource in this relationship.

4.6.3 The structure of integration

Operational and strategic integration

This relationship was both operationally and strategically integrated. However, there had been some operational problems in recent years. High *operational integration* between the partners was based on the decision in Papyrus gradually to give stocking responsibility to the customer and to stop the machining of small series. However, there was now some evidence of operational disintegration. There were some fundamental problems related to the need for improving lead times, decreasing stock levels and enhancing accurate information sharing and communication, which had to be solved first. Lead times in the Finnish mills were approximately from six to eight weeks, and if material was sent for treatment in the UK it took another three weeks. This meant that orders had to be placed three months ahead, which was not always possible.

Sharing information accurately and immediately in day-to-day activities ensured that the customer was able to make alternative plans. Restricted capacity in Papyrus sometimes made internal negotiations and prioritisation difficult. Better capacity planning and improved forecasting related to end-customer needs and behaviour were considered important elements. It is not very easy to anticipate future demand and to produce safety stocks in advance in a tight-capacity situation, but it would be extremely important in this case in order to maintain reliability. The division of work between the parties was relatively flexible. The customer helped by making scarf-jointed boards itself when there was a lack of capacity and if larger sizes were required. On the other hand, this could be quite expensive if overtime was required at short notice, for example.

Higher operational integration in this relationship would mean manufacturing products for which reasonably short delivery and lead times could be guaranteed. Economies of scale matter to Papyrus in terms of guaranteeing high customer-service performance. It is not enough to distribute the physical product, and technical knowledge and support are essential elements of the service offering. A key element is functionality and efficiency in the whole supply chain, which can only be achieved if there is a proper product mix. Higher operational performance would not mean that Papyrus would automatically meet all the possible demands of all kinds of customers. It would rather be a question of having certain priority rules and economies of scale in production, which in turn would enhance service performance. In addition, the pricing policy did not seem to be very clear in the eyes of the customer. There were too many different prices and discount systems, and the lack of pricing authority on the local level made dealings unnecessarily complicated. In the early days the sales representative could make the deal himself, but now price decisions are made centrally in Finland.

Strategic integration in this relationship meant strategic fit, compatibility and flexibility. This was achieved by means of a unique operational model in which both parties had a specific but flexible division of work, which in turn created strategic advantages. Papyrus had a similar operating model in France, but it remained mainly on the operational level. In this relationship it was brought onto a more strategic level in terms of joint goals, information sharing and interaction. Duplicating that concept would be ideal for Papyrus in other European countries. Strategic advantage comes from combining economies of scale with flexibility. The customer had responsibility for machining small series and stocking the material. Machining small series would have been inefficient, inflexible and slow for Papyrus, but with the help of this customer it had been possible to achieve certain economies of scale in plywood production.

There were also some unfavourable aspects of this operating model, especially from the customer perspective. Because of the long lead times safety stocks of all necessary materials were required. This, in turn, increased the customer's overhead costs and tied up a lot of capital: it was not always possible to reap equal mutual benefits. Another problem was that end customers regularly demanded price reductions, which in turn created even greater pressure to maintain high quality and delivery reliability in order to give value for money. A difficult situation and a joint challenge in this relationship was the bankruptcy of one major end customer.

Having a quality product with a strong brand and a good reputation had helped a lot thus far. However, a strong brand or product image has no value in itself if the products are not always available, working and in line with the needs of the end customers. Working towards a joint view of the market and its future development in order to increase sales of plywood should be a major aim. It would be essential to listen to the customer's practical suggestions in the face of external threats and challenges.

Customer mill visits allowed technical and R&D issues to be discussed more deeply. There was need for discussion in a situation in which competing composite materials were increasingly coming onto the market, and the question was how long plywood would be used as a raw material for bus floors. Composite materials were expensive, but they also had one clear advantage, lightness of weight. End customers are constantly seeking new innovations: lighter materials and new ways of decreasing the weight of buses, not least in order to reduce energy consumption and emissions. Composite materials could also offer new opportunities for Papyrus because plywood could be used as raw material in its production.

The parties did not share any profitability figures, but they did discuss their own future development and investment plans, and had always been relatively open with each other. From the customer's perspective relationship issues and openness could still be enhanced and developed. Probably due to the restructuring of Papyrus the parties no longer shared as much information on future development plans as they did in the early days. The customer in particular thought that there was a clear need for joint discussion on how to develop the business and help each other on a long-term basis. The situation appeared to be quite equivocal: openness was greater in the early days, but on the other hand Papyrus emphasised increased openness in this relationship. The customer's managing director had even attended internal business meetings at Papyrus, which shows a high degree of openness and trust. This was not common practice with other important customers.

Formal and informal integration

The two parties viewed the importance of formality and informality somewhat differently. The customer emphasised the role of informality. He considered trust a kind of "old-fashioned route", trusted people interacting with and responding to each other, which was always good for a relationship. He stressed commitment: whatever you have agreed will happen. He also thought that formal agreements did not play a big role in the relationship. Formality itself was not the key, it was rather a question of looking positively to the future and being helpful to each other. In such an atmosphere a certain amount of trust between individuals was needed. The local Papyrus salespeople also thought that formality and written agreements were not the key aspects: the relationship was based on integrity, mutual trust and understanding.

On the other hand, the Papyrus business management thought that explicit agreements did play an important role. Formal contracts did not reflect mistrust, but should be viewed more from the practical perspective: everybody knew exactly what had been agreed. There was no need for very strict or legally detailed documents: a written order and order confirmation were often enough. This made it easier to check confirmed delivery dates, quantities and qualities, if necessary. These somewhat conflicting opinions could simply have reflected the larger size of the organisation and the need for some kind of formality irrespective of how well functioning or partner-like the relationship was. This did not apply in the case of the relatively small customer's organisation.

Price and quantity contracts covered three years. Papyrus emphasised their intention to have long-term contracts in the future in the belief that they would guarantee future growth not only in existing markets but also in the new van markets, for example. The customer, in turn, thought that Papyrus above all needed to encourage and motivate its staff to take the initiative and work towards making the business profitable. Formality did not guarantee that the necessary next steps and actions would be taken.

However, informality was clearly more important than formality, and the parties were *informally integrated*. They both considered mutual trust and commitment essential elements in the relationship. Papyrus thought that trust and commitment were also resource issues: a trusting relationship requires long-term cooperation and partnership arrangements, which in turn enhances business easiness and flexibility. Trust means confidence in the future and that both parties will work together in mutual understanding. It also means keeping promises on every level. When mistrust prevails the other party's commitment is continuously questioned and issues provoking argumentation and dispute often arise. Commitment, in turn, gives a certain framework to long-term operations. In this sense it is also important that the parties are able to speak about each other's profitability and earnings logic relatively openly.

Neither the business model nor the mutual support was specifically or separately decided upon and agreed formally in this relationship: they rather developed in the spirit of mutual partnership. The parties had traditionally discussed and shared information and opinions respective companies' own goals, budgets and future plans and targets, although they may have had less formal joint targets. However, they both apparently had the same goals based on quality products, niche markets, profitability, and a good reputation.

4.6.4 Case analysis

The process of integration emerged in the form of close resource ties, and also as relatively strong actor bonds between the parties. However, actor bonding weakened slightly over the course of time because the customer was better able to take care of its end-customer relationships itself. Activity linking and actor bonding could still be enhanced in order to solve operational problems. Resource ties concerned tangible, physical resources, but also the non-physical type such as human resources and information. High resource dependence was typical in this case, which had been both advantageous and challenging: one example was the recent effort to optimise supply-chain activities and operations so that both parties would benefit. On the other hand, it seems that both parties had lost more profitable business due to their limited capacity and long lead times.

Papyrus saw itself as a trusted partner who would be able to guarantee support for this particular customer in the future. Flexibility characterises this relationship: both parties' roles have become compounded and the customer has also started to operate as a subcontractor for Papyrus. Consequently the supplier is also the customer. The mixed roles reflect the fact that the customer is simply better able to offer fast and flexible service.

Business aimed at end customers was driven more by the supplier at the very beginning of the relationship, whereas later it was driven more by the customer. In financially weaker times when there was a recession in bus market the joint visits to the end customers supported the customer's business: the supplier and the customer formed a kind of joint team. As the bus markets recovered and began to grow, from the customer's perspective there was less need for the joint visits. This reflected the customer's more independent role in the end-customer relationship.

The structure of integration was primarily the outcome of a good strategic fit between the parties, but it was also highly informal. The relationship traditionally involved *both customer and supplier integration,* and getting back to the level that prevailed was considered important from the both Papyrus' and the customer's perspective. There had already been some disintegration, however, and there was a clear need to focus on supplier integration, which would mean getting back to the high mutual integration that prevailed in the old good days. It is nevertheless problematic to define whether it was, strictly speaking, a question of more customer or supplier integration because the customer perceived itself as part of its supplier's business, and also operated as a subcontractor.

Operational integration was hindered by the fact that necessary economies of scale in production restricted the flexibility of Papyrus, and also by its relatively distant location. Enhanced operational integration would require more equality and more finely balanced power positions in this relationship. Papyrus should continue to acknowledge the key position of this particular customer, and should show this acknowledgement in practice. It is even more important nowadays for the customer to be able to offer a flexible and fast service to its end customers. Both parties should clearly engage in open and constructive discussion regarding the division of work between them in order to enhance operational integration. For example, the customer expressed his willingness to serve and help Papyrus in machining small plywood series.

The internal priority rules of Papyrus were sometimes unclear, thereby causing some internal conflicts regarding production capacity and the demands of other customers. Capacity handling in the plywood mills did not seem to be highly automated, and still depended very much on individual production planners. On the other hand, better capacity planning also requires better forecasting of end-customer demands and the necessary volumes. In sum, there was a greater need for operational integration in terms of service performance in this relationship.

The operating model was quite unique and tailored, reflecting the achieved *strategic integration* between the parties. The roles had become compounded: the customer also operated as a subcontractor for the supplier. Perhaps one of the key issues concerned the position of the small customer and the big supplier, which could imply imbalanced power positions in this relationship. This, in turn, could cause *strategic disintegration.* There is a need for a longer-term orientation, an enhanced understanding of end-user requirements, and a higher level of innovativeness. If this relationship is to have a great future it will require joint concepts and ideas for growth, and a decision to enter into long-term cooperation. It will be necessary for both parties to share the same vision of how to go forward together.

Enhanced strategic integration between the parties, on the other hand, is also related to decision-making procedures in Papyrus. Clear and straightforward decision-making would require greater internal integration among divisional and segment management, the plywood mills and the sales organisation in Papyrus. Sometimes the decision-making appeared to be quite complicated, at least from the customer's perspective. This, in turn, had a negative effect on Papyrus' performance in terms of fast reactions, and may have reduced the perceived openness in the eyes of the customer

This relationship was *more informally than formally integrated*. It was based on strong actor bonding and personal and close relationships between the two key individuals. Trust and commitment were on a very high level. The two key individuals formed a joint, informal quasi-team serving the end customers. However, in recent years this quasi-team lost cohesiveness, probably due to the changed market environment, but also on account of internal changes in Papyrus. A major question mark was the retirement of the Papyrus sales representative in that he had very deep knowledge of this business. The traditional norm in this relationship had been flexibility from both parties and a willingness to help each other. Although formal agreements and contracts did not play a very important role, it may well be that there will be more focus on *formal integration* in the future. This would mean drawing up long-term contracts regarding future projects, and also putting emphasis on detailed documentation in the daily information flow, such as in order confirmation.

5 CROSS-CASE COMPARISONS

This chapter aims at deepening the concept of customer-supplier integration, and concretising its content and domain on the basis of the individual case descriptions and analyses comprising Chapter 4. Comparison will allow customer-supplier integration as a phenomenon to be further refined and developed. The cross-case comparisons revealed similarities and differences, the aim being to take the processual nature of integration into account: they showed where the focus and managerial attention of relationship integration was previously, where it was at the time, and in what direction it was heading. The integration process also incorporates disintegration. The comparisons helped in conceptualising both the achieved state and structure, and the development process of customer-supplier integration.

This chapter is divided into four subchapters: The context of integration, The process of integration, The structure of integration, and A conceptualisation of customer-supplier integration. The context of integration means the nature of the business environment and of the relationship. Integration is not an isolated phenomenon, but is embedded in a wider network and business environment. The nature of the relationship creates preconditions, and the process develops in a constant interplay of actor bonds, activity links and resource ties. The structure is the outcome of the integration process. It includes six dimensions of operational, strategic, formal, informal, customer and supplier integration.

The resulting conceptualisation synthesises both the theoretical perspectives and the empirical results, providing evidence both for and against the current theoretical literature. It also has managerial value: it helps to identify the past, current and future state of integration and the processes that direct and guide it. In short, it facilitates better evaluation of the role and significance of customer-supplier integration in the forest industry.

5.1 The context of integration

Two main contextual elements had an important role: the nature of the business environment and of the relationship. Table 5 summarises the case comparisons with regard to *the nature of the business environment*. According to the empirical results, two main aspects emerged: the development of the customer's business and the supplier's business environment, which also refers to the role of third parties affecting the supplier's business with a particular customer.

The development of the customer's business reflects changed end-customer behaviour and needs. Customer business development could be seen as an important driving force with regard to the supplier's business environment and market conditions. All the customers' businesses were growing, and in most cases the companies had grown through acquisitions and mergers either locally or internationally. The magazine publisher intended to expand into new business areas, but it still mainly operated in its local market area. The newsprint publisher and printer remained a local actor, but made some local acquisitions. The paper merchant, the publisher and printer and the paper converter aimed at market expansion in developing countries, in which paper consumption was growing: paper converting was the fastest-growing business with production investments in the Far East. In the plywood-converting case, the relationship probably will remain local, focusing on high-quality products and flexible service. There were no expressed plans for market expansion into countries outside the home country.

In terms of *the supplier's business environment,* both the paper and wood-products markets were clearly challenging. A competitive environment is difficult and frequently shows a clear supply-demand imbalance. There was overcapacity in many paper grades, increased imports and declining prices over several years. Digital publishing and electronic media was expanding all the time, while newsprint circulation was on the decline. The channel structures in paper merchanting seemed to be in constant change. In addition, business with the end customers is relatively short-term when deals are constantly rediscussed and renegotiated in a transparent market. Label-paper producers had consolidated in order to maintain profitability. As for plywood converting, competitive materials were coming onto the market and the tightening of environment-related regulations set new demands on materials and their processing.

Despite the competitive and difficult market environment, all the studied customer companies had struggled with the challenges in various ways. The major customers of the paper producers had grown and expanded into new market areas, and those remaining mainly local had grown through acquisitions and joint ventures. In the plywood-converting case geographical growth was not the primary aim: it was rather to specialise in high-quality products and service in its local market area. At the same time, new business possibilities were actively sought. Therefore, the customers' growth or specialisation strategies could well also offer opportunities to Papyrus.

Table 5 The context of integration: the nature of the business environment

The nature of the business environment	Magazine publishing	Paper merchanting	Newsprint publishing and printing	Publishing and printing	Paper converting	Plywood converting
Development of the customer's business	growth through acquisitions and joint ventures, expanding into new businesses	growth through mergers and acquisitions, market expansion, diversification, short-termism	growth through acquisitions, internal rearrangements, maintaining profitability	growth through market expansion and acquisitions, expanding the product portfolio	growth through rapid market expansion	expanding into new business areas, continuing as a local high-quality supplier
Supplier's business environment (including the role of third parties)	expanding digital publishing, magazine-paper over-supply, price competition other customers and competitors affect business with this customer	a difficult market environment with paper over-supply in many grades, changing channel structures third parties do not play a determining role in business with this customer	newsprint over-supply and increased imports, declining newspaper circulations, expanding electronic media third parties (competitors) and general developments in the paper, publishing and printing industry slightly affect business with this customer	difficult competitive environment, over-supply in many paper grades, the need for structural changes and rationalisation in both paper and publishing industry third parties (competitors) and general developments in the paper, publishing and printing industry clearly affects business with this customer	label-paper producers have consolidated to increase profitability, difficult competitive environment competition between two global customers affects business with this customer	tight competition in bus markets, tighter legislation changing end-customer requirements and competitive offerings/materials coming onto the market affects business with this customer

Third parties affected business between Papyrus and the case customers most clearly in the magazine-publishing and the publishing and printing cases. In the plywood-converting case it was the changing end-customer requirements and new competitive materials and offerings that affected the business relationship, whereas in the paper-converting case the tight competition between two global customers affected business between Papyrus and the internal case customer. Third parties seemed to have less of an effect on business between Papyrus and the case customers in the paper-merchanting and newsprint-publishing and printing cases.

Three elements that were relevant to *the nature of the relationship* emerged in the empirical study: *complexity and stability, business type, and power positions.* The reason for analysing those elements was to shed light on the relationship-governance structures and mechanisms, either intentional or unintentional that guide and direct the integration process. Thus the nature of the relationship refers to its more general characteristics, whether or not they lead to integration. Table 6 compares the cases by the nature of the relationship. Complexity and stability are closely related and are therefore treated as unified.

The existing literature relates *complex relationships* specifically to high continuity and high involvement. It is in such relationships that efficiency improvements through mutual adaptations lead to cost and revenue benefits over time. (Gadde & Håkansson 2001, 142.) Relationship complexity could be seen as a relationship-internal matter: it presumably increases when various organisational levels and different countries and cultures are involved. On the other hand, complexity also refers to the number and diversity of external factors facing the organisation (Bourgeois 1980, 33) or business relationship. Relationship complexity and instability are inseparable, and complexity does not necessarily mean high involvement: on the contrary. The results show that when complexity increases relationship instability may often also increase, which in turn reduces business predictability. At worst the negative cycle continues, and increased instability makes the relationship even more complicated. The key question is thus how both parties are able to manage and deal with relationship complexity so as to turn it into a positive force.

Table 6 The context of integration: the nature of the relationship

The nature of the relationship	**Magazine publishing**	**Paper merchanting**	**Newsprint publishing and printing**	**Publishing and printing**	**Paper converting**	**Plywood converting**
Complexity and stability	relatively simple and stable	relatively complex, but relatively stable	relatively simple and very stable	relatively complex, some instability	relatively simple and stable, complexity increasing	relatively simple and stable, complexity increasing
Business type (local, international or global)	international based on export, also some local supply	international and multinational, combination of export and local supply	local and domestic supply concept	traditionally based on domestic supply, increasing internationalisation and export	international with a global approach, combination of domestic supply and export, vertically integrated relationship	international based on export, customer – supplier roles mixed and compound
Power positions in a relationship	both significant actors, the customer especially in its market area, customer has a more powerful role in this relationship	both parties are big and significant actors, customer more powerful, although there were signs of a better balance	big supplier, small customer, power positions still relatively balanced	both big and significant actors power currently relatively unbalanced, customer's increased position due to growth and market expansion	both big and significant actors, power positions relatively balanced despite the competitive environment, high mutual dependence	big supplier, small customer, currently relatively unbalanced, supplier more powerful, high customer dependence on its supplier

Relationship stability does not mean the absence of change, nor are stable relationships static or inflexible (Geersbro et al. 2007, 2—3). On the other hand, turbulence, volatility and dynamism refer to the degree of change (Bourgeois 1980, 33). Change in stable relationships is evolutionary and predictable rather than revolutionary or radical. It can be assumed that when instability increases, relationship turbulence and volatility also increase. Relationships require a certain amount of instability, dynamism, and flexibility, but too much instability may hinder efficiency and the development of the relationship.

The magazine-publishing and the newsprint-publishing and printing cases remained simple and stable in nature. The paper-merchanting case was relatively complex due to its international and multicultural business with various actor levels and product types. The publishing and printing case increased in both complexity and instability due to the increased level of internationalisation: the relationship was domestic in origin. This case also showed considerable volume variation from year to year. The paper-converting and plywood-converting cases had been relatively simple and stable, but both were becoming more complex, although for different reasons: the former was increasing in complexity on the strategic level, whereas the latter was struggling mainly with operational problems. The restructuring in Papyrus had affected this relationship negatively and the company was less capable of adapting to the customer's needs.

Business type was identified as local, international or global. Local business in this research means local and domestic supply in the supplier's home country, or that production and sales operate in the same country or region outside the home country. Internationalisation, in turn, means export operations and sales, and marketing subsidiary operations (Gabrielsson et al. 2000, 75). According to Gabrielsson and Gabrielsson (2004, 665), in an international company over fifty per cent of sales are generated outside the home country, and in the case of a global company over fifty per cent of the sales come from outside the home continent. Globalisation often implies that the national orientation gives way to a global orientation aimed at increased efficiency across countries in strategy development and implementation. (e.g., Douglas & Graig 1989, 55.) However, in reality only few companies have pure global strategies because some degree of adaptation to regional or national conditions is always required (Svensson 2002, 577). The term global is used cautiously in this research: globalisation refers less to a company's sales generated outside the home continent than to its global strategies, which goes beyond its operational decisions.

Most of the cases in question had internationalised, some of them quite strongly. However, none of them represented a purely global relationship implying global strategies. It was emphasised that despite internationalisation, national features were always essential to the business. Increased efficiency across countries was often sought in the international cases, but it remained on the operational level and rarely implied true strategic globalisation. Although some relationships remained mainly local, changes in the network environment and internationalisation affected them. The newsprint-publishing and printing case was a local relationship with a local supply concept, while the magazine-publishing case was based mainly on export through a local sales subsidiary: there was local production but the volumes bought from the local delivering mill were not very high.

The plywood-converting case was based on export together with local sales, but the roles of the customer and the supplier were compound and mixed. The customer also operated as a subcontractor for Papyrus by machining smaller series, which was not economically reasonable for the supplier. The publishing and printing case was traditionally a local, domestic business, but due to the customer's rapid internationalisation, mainly in Europe, the proportion of exports increased significantly. The paper-merchanting and paper-converting cases were the most international, both operating worldwide. The former was a combination of export and local supply, and the domicile was different for both parties, while the paper converter had the same domicile as its supplier: it was a combination of local supply and export (with a global approach) in a vertically integrated relationship.

Local relationships are often relatively simple and stable with relatively little growth potential for the existing products. In turn, internationalising and expanding relationships bring new kinds of growth challenges. Established practices and procedures are often lacking and problems are solved case-by-case when new situations and business opportunities arise. Relationship complexity is often related to growth and expansion. However, complexity does not automatically increase when business grows if the roles and responsibilities are clear.

The power positions were relatively balanced in the newsprint-publishing and printing and paper-converting cases. The customer seemed to be more powerful in the paper-merchanting case, although there were signs of a better balance. The customer had traditionally played a more powerful role in the magazine-publishing case too, and it seems to continue. The customer had more power in the publishing and printing case. Although both actors were big players the customer's more powerful role was mainly attributable to the general market conditions rather than a big-small actor imbalance. There was also imbalance in the plywood-converting case, the big and global supplier being more powerful than its small and local customer. Still Papyrus was also dependent on this customer.

The customer's rapid internationalisation may be challenging for its supplier, and could lead to a negative cycle in the relationship. When both parties are big and significant actors, as in the publishing and printing case, internationalisation may change the power position. This and the customer's increased power may lead to a process of disintegration: both parties have to operate in a competitive environment under constant cost and price pressures. Mutual understanding is often difficult to achieve, especially when energy and efforts are put into company-internal matters. A lack of mutual understanding, in turn, leads to business instability: conflicting views make long-term planning and cooperation difficult.

In the magazine-publishing case the customer's faster rate of change put pressure on the paper supplier to rethink its role: to change from a traditional product provider to a solution seller. However, thus far the roles appear to have remained quite traditional and institutionalised. In turn, the paper-converting case showed how a customer may have clear expectations regarding the rate of change and innovativeness of its suppliers: a supplier with a strategic aim to maintain its key position in the customer's business simply has no alternative than to follow the customer's strategies. This implies that the customer has increased negotiation power and influence in strategic issues as well, not only in operational day-to-day activities.

5.2 The process of integration

5.2.1 Actor bonding

The following dimensions that are relevant to integration emerged in the context of actor bonding: *the width and depth of the contact pattern, the amount and importance of face-to-face communication, the existence and importance of individual versus collective bonding, and the existence of a mutual orientation.* The formation of trust and commitment was excluded because it could be seen as an outcome of the overall interplay between strong actor bonds, activity links and resource ties. Table 7 shows the results of the comparisons.

The contact pattern means the number and type of individuals involved in a relationship, and it is sometimes considered a dimension of relationship complexity (Håkansson & Snehota 1995, 7). In this study it is viewed as a dimension of actor bonding rather than of relationship complexity, which is a much wider phenomenon. The contact pattern may be narrow or wide, superficial or deep. A narrow contact pattern means that the number of individuals in the relationship is limited. It is more often narrow in local relationships, and wide in international relationships. The contact patterns in the magazine-publishing, newsprint-publishing and printing and plywood-converting cases were narrow or relatively narrow. There were some signs of broadening in the magazine-publishing and plywood-converting cases, however, especially in the supplier organisation, although business had remained very much the same. The widest patterns were in the paper-merchanting and paper-converting cases, and it was particularly well established in the latter, with clear practices and nominated persons interacting with each other on both operational and strategic levels.

The width of the contact pattern does not necessarily enhance the process of integration: on the contrary, too wide a pattern may make the relationship too complicated and complex. A wide pattern may remain superficial, and it is rather the depth that leads to closer actor bonding, which enhances integration. Patterns vary in depth because individuals have different statuses, roles and levels of influence. For example, in the plywood-converting case the interaction was mainly between two key individuals operating as a team in their dealings with end customers. Despite its narrowness, however, the pattern was sometimes very deep. On the other hand, if the contact pattern is narrow and deep the relationship may become vulnerable, because it may be too dependent on the contribution of key individuals. In that kind of situation the capabilities and abilities of key individuals to deal with change are of paramount importance.

Face-to-face meetings were considered important in all of the cases, although only the paper-converting case showed a clear increase in that sense. There was some variation in the paper-merchanting case, especially on the multinational level due to management changes. The number of face-to-face meetings remained relatively stable in the newsprint-publishing and publishing and printing cases, whereas there was a clear decreasing trend in the plywood-converting case that was attributable to rearrangements in the supplier’s sales and increased physical distances. In sum, integration is hard to achieve when technology is the only tool. Closer integration always requires some level of personal and face-to-face interaction and communication, but its importance naturally varies depending on the phase of the process. However, the number of face-to-face meetings is not an indication of their importance: effective and good communication does not necessarily require more face-to-face interaction.

Table 7 The process of integration: actor bonding

Actor bonding	**Magazine publishing**	**Paper merchanting**	**Newsprint publishing and printing**	**Publishing and printing**	**Paper converting**	**Plywood converting**
Width and depth of contact pattern	relatively narrow, depth varied	wide multiactor, multilevel and multicultural, depth varied, but was increasing	narrow with few key individuals, traditionally deep contacts	relatively wide, depth increased, although some variation	wide and deep at all levels, focus on problem solving	traditionally very narrow and deep, currently wider from the supplier side, but decreasing in depth
Amount and importance of face-to-face meetings	currently of somewhat less importance, but still rather high	currently less on the multinational level, importance rather high on all levels	remained the same, important	remained the same, very important	increased, important when focused	decreased, especially joint visits to the end customer, personal contacts still important, face-to-face and telephone
Existence and importance of individual vs. collective bonding	mainly individual, importance of collective level may increase	both individual and collective, both important	individual, collective bonding remained local, importance of collective bonding may increase	emphasis on individual, some collective-level bonding required	individual, collective-level bonding ambiguous	traditionally individual, importance of collective-level bonding may increase
Existence of a mutual orientation	currently reflected more customer orientation	some mutual orientation and an aim for higher mutuality	mutual orientation very high	low mutual orientation, competitive relationship	mutual orientation relatively high	currently reflected stronger supplier orientation, mutuality traditionally high

Actor bonding develops in the interplay of *individual- and collective-level bonding* (Håkansson & Snehota 1995, 199). Individual bonding means deep and continuous communication and interaction between key individuals in a relationship. The organisational structures of both companies affect actor bonding (ibid., 43) and it is assumed here that they primarily affect collective-level bonding. Companies are actors with a certain identity in the eyes and interpretations of others (Håkansson & Snehota 1996, 195). Collective level bonding here means a joint identity and values. It develops on the company level and is shaped by the reputation, image and brand of both the customer and the supplier. Moreover, it is built on the contributions of key individuals.

Collective-level bonding is becoming increasingly important in both local and international relationships, and there is a greater emphasis on general company management and perceived identity and reputation. Managing relationships on an individual and targeted basis has no value unless the whole company's identity matches the customer's values and expectations. For example, the perceived environmental reputation of paper suppliers mattered greatly among magazine publishers in the UK. Collective-level bonding also intensifies in a particular relationship if important customers perceive the company's products as high-quality brands in the market.

On the other hand, collective-level bonding may be ambiguous in a vertically integrated relationship. The customer in the paper-converting case had not traditionally identified with its parent company, but had maintained its own, separate identity. The situation has started to change, and the customer was becoming a solid part of the company in terms of both internal systems and external changes, such as in the company name. Collective-level bonding was not emphasised when communicating with other market actors, however, because both parties considered it vital to maintain the "real" business relationship, operating on an equal footing with other customers and suppliers.

A mutual orientation means shared interests and reciprocated activities in a relationship, and is achieved through interaction, influence and adaptation (Håkansson & Snehota 1995, 122, 197–198). It is long-term in nature. On the other hand, customer orientation or customer-led business is about understanding and serving the expressed desires of customers, often on a short-term and reactive basis (Slater & Narver 1998, 1002, 1005). The same idea can be applied to supplier orientation, which often means short-term supplier-led or supplier-driven business. Campbell (2002, 390–391) classifies buyer-seller relationships as competitive, cooperative and commanding, and places them in a nine-cell matrix combining the seller's marketing strategies and the buyer's purchasing strategies. It can be assumed that mutual orientation is high when both parties have cooperative strategies and considerable interdependence.

The existence of a mutual orientation could be considered a fundamental precondition for closer integration between parties. If it is lacking the business relationship may still work, even in the long term, if both parties accept imbalanced roles, and identify with and understand each other's strategies. However, customer and supplier orientation must not be confused with customer and supplier integration: alone it does not lead to closer integration, which requires a longer-term and more strategic perspective than the word "orientation" generally implies in practice.

The newsprint-publishing and printing and paper-converting cases showed the highest levels of mutual orientation. Mutuality in business cultures, strategies and interests was identified, although mutuality is not exactly the same as similarity in a business relationship: it is rather a question of whether each party understands exactly and clearly what the other party is aiming at, and what each other's role in the business relationship is. There was an increase in mutual orientation in the paper-merchanting case. This kind of development requires close cooperation on the operational level in that both parties need to remove overlapping activities and decrease costs jointly, and on the strategic level in order to produce a clear strategic vision of each other's role in the relationship. On the other hand, closer mutuality may still be very challenging due to the multinational nature of relationships with different business cultures.

There was less mutual orientation but rather customer orientation, i.e. cooperative orientation from the supplier's side, in the magazine-publishing case. The supplier's task is primarily to be available when needed and to fulfil customers' needs, often on a short-term basis. Supplier initiatives do not necessarily result in any substantial change or improvement. This case study represented a typical buyer's market, in which the seller has cooperative strategies but the buyer remains independent (Campbell 2002, 391). Mutual orientation was high in the plywood-converting case, but it was clearly more supplier-oriented. According to Campbell (ibid.), this indicates a captive market, i.e. a cooperative strategy and dependence from the buyer's side but a command strategy from the seller's perspective. Despite its high dependence on Papyrus and some operational problems that emerged, this customer remained loyal and committed.

The publishing and printing case showed the least mutual orientation: it rather seemed to become a competitive relationship driven very much by market forces. In Campbell's (2002, 391) terms, it is an example of competitive strategies from both the buyer's and the seller's perspective, implying a "perfect market". Mutual orientation was higher in the early days when business was more local and easier to manage. On the other hand, the relationship still had some cooperative elements, but it also showed signs of mismatch, command strategies from both parties. Thus the relationship strategies were not very clear, and the strategic orientation seemed to vary considerably depending on the business environment.

5.2.2 Activity linking

The key activities in a relationship that were relevant to integration were identified by means of activity linking. *The existence of and need for system connectivity or shared systems* were also considered. Key activities cover both operational day-to-day connectivity and communication, and strategic activities and efforts. Although activity linking in the ARA model often refers to day-to-day activities such as the physical flow of goods, strategic activities and efforts are at least equally relevant in integrated relationships.

Table 8 shows the results of the activity-linking comparison. In most cases the need to go beyond the operational agenda to the strategic agenda was recognised. Emphasis on more strategic-level activities may mean that there is greater need for strategic than for operational integration, but it does not necessarily indicate anything about the relative importance of the two agendas: it suggests which area needs improvement and further integration, and where management attention should be focused.

Operational, well-managed day-to-day aspects were already self-evident in the publishing and printing and paper-converting cases. More attention should be paid to strategic aspects, although operational connectivity was still important: effective and efficient operational management ensures that more time can be allocated to strategic issues. The plywood-converting case showed that the key priorities should be where the biggest problems are: the ability to solve operational problems is important, but it does not make strategic issues less important. Whether the emphasis is put on operational or strategic activities depends very much on the competitive and business environment, and also on whether both parties have a clear mutual understanding of their joint business goals.

Cost-competitive cooperation, which refers more to strategic activities, was emphasised in the paper-converting case. Both parties in the paper-merchanting case aimed at decreasing supply-chain costs and improving operational efficiency, but they also had more strategic-level objectives: finding new joint business opportunities and ensuring future strategic effectiveness through joint promotional planning and marketing. The development of activity integration requires what Slater and Narver (1999) call industry and customer insight: it means taking the opportunity to foster strong buyer loyalty, which requires more than just satisfying the expressed needs of customers. Discovering customers' latent needs by developing superior solutions then becomes the key issue. (Slater & Narver 1999, 1165–1166.)

Shared systems were mainly used in the area of stock management, but together with system connectivity they were not widely applied. The VMI model and system linkages between Papyrus and the case customers were adopted in some instances, and it is probable that the importance of system connectivity will increase in the future. Examples of important activities in a relationship included the long-term forecasting of paper demand, electronic ordering and invoicing. System connectivity may also become more important with regard to end customers in the form of more Internet-based communication and electronic commerce.

It was emphasised that systems needed to be standardised for use in wider business networks and in both the supplier's and the customers' industries. Tailored relationship-specific solutions were mostly considered too costly. There was less system connectivity in the magazine-publishing and plywood-converting cases, although there seemed to be a greater need for more in the latter. The biggest customer-supplier relationships measured in terms of delivered quantities had already developed linking mechanisms and improved system connectivity, or at least had formed projects to do so.

Table 8 The process of integration: activity linking

Activity linking	**Magazine publishing**	**Paper merchanting**	**Newsprint publishing and printing**	**Publishing and printing**	**Paper converting**	**Plywood converting**
Key activities in the relationship	day-to-day efficiency and delivery reliability, meeting quality criteria, forecasting paper consumption	buying, stocking, selling and distributing paper, decreasing costs in the supply chain, joint promotional plans and marketing activities concerning end customers	delivery accuracy, reliability and speed, maintaining constant quality, keeping printed media viable in the future	relationship management and finding solutions, maintaining good quality cost-effectively	integrating the supplier into the customer's investment policy, cooperation in product development, cost-competitive cooperation	the supplier's ability to support the customer's business (e.g., financial support), maintaining a reputation as a reliable and high-quality supplier, accurate and fast information sharing
System connectivity/ shared systems - existence - future need	very little, may be needed but must take account of the wider network	some connectivity already in use, needed and expected to increase in the future	some connectivity already in use, some need to extend	some connectivity already in use, needed but through standardised solutions	connectivity already in use, shared information channel, no special need or pressure to extend	not in use, except for the Internet in joint marketing, will probably be needed in the future in the area of stock management and e-commerce

5.2.3 Resource tying

The empirical results indicate two dimensions of resource tying: *the extent to which both parties shared physical and non-physical resources and whether the emphasis was on the former or the latter.* The extent of sharing resources is further divided into the existence of and need for shared resources. Table 9 shows the comparisons related to resource tying. None of the case relationships shared physical resources on a wider scale. The parties in the paper-converting case shared some warehouse and product-development facilities, while in the newsprint-publishing and printing and the publishing and printing cases some resources were shared in trial runs at the customer's premises or in other product-development projects in which the customer's printing machines, facilities and knowledge were utilised. Those projects were not always aimed solely at solving the specific customer's problems or improving the quality of the products it required, but were often focused on the supplier's own paper-quality development or improvement.

Generally speaking*, the need for sharing resources* in the future was not emphasised in the paper business, while those in the plywood business realised the potential and the opportunities. It was commonly feared in the paper business that sharing resources on a wider scale would endanger other business relationships if that relationship became too close and specific in the eyes of other customers and suppliers. Nevertheless, shared resources were still considered useful in specified and targeted areas. For example, the need for shared technical services for end customers was mentioned in the paper-merchanting and plywood-converting cases, while the paper-converting case emphasised the importance of joint technical human resources in a relationship, people who were familiar with both the customer's and the supplier's production processes. Sharing information was emphasised as a valuable non-physical resource in the magazine-publishing, paper-merchanting and plywood-converting cases and in the latter two there was a particular need for sharing strategic information.

The emphasis on physical or non-physical resources varied between the cases, although there was slightly more stress on the non-physical. In some cases there had been long traditions of close cooperation in product development, involving both physical and non-physical resources. Nowadays it seems that many paper grades are relatively homogenous and of sufficiently high quality. Quality improvement is no longer the key issue, and it is more important to maintain the level achieved and to keep costs reasonable.

Table 9 The process of integration: resource tying

Resource tying	**Magazine publishing**	**Paper merchanting**	**Newsprint publishing and printing**	**Publishing and printing**	**Paper converting**	**Plywood converting**
Sharing physical and non-physical resources -existence -future need	no shared physical resources, information and education an important non-physical resource, no need or possibility to extend	no shared physical resources, strategic information an important non-physical resource, possibly need to consider sharing technical people	both shared physical and non-physical resources, the customer's physical facilities and knowledge in trial runs, no need to increase	both shared (indirect) physical and non-physical resources, traditionally cooperation in paper-quality improvement (at the publishers' printers facilities), no need to increase, except in the environmental area in the form of shared information	both physical and non-physical resources, sharing warehouses, product development with third parties, no wider need, joint technical human resources would be useful	no shared physical resources, joint product marketing and financial support, the customer's market knowledge as a non-physical resource, need for increased mutual support, such as technical human resources
Emphasis on key resources (physical/ non-physical)	both physical and non-physical	both, more emphasis on the non-physical	both, emphasis on the physical	mainly physical, traditionally also non-physical such as cooperation in quality improvement	both, emphasis on the physical	both, emphasis on the non-physical, the relationship itself as a resource with long joint experience and accumulated learning

The relationship itself was not commonly considered a resource, except in the plywood-converting case: when it was viewed as an important resource, it had the potential to become more integrated. Future growth potential was emphasised in that case. Long joint experience and mutual learning were considered key elements of an integrated relationship, but had not yet been exploited in the best possible way for developing existing business and at the same time finding new solutions. There was a clear need to operate more as a joint and unified team with regard to end customers. Having a joint team meant optimising the division of work, and joining forces in order to achieve both economies of scale as required by the supplier and the best service level characterised by flexibility and specialisation. High quality, which applied both to the supplier's products and the customer's expert and flexible service, was considered important.

5.3 The structure of integration

5.3.1 Customer and supplier integration

The current literature often puts emphasis on integration tools such as process modelling or management techniques in the context of customer (and supplier) integration. Both dimensions of integration in this research refer to the whole concept of strategic management, the ultimate aim of which is to create more market value by combining and leveraging resources and capabilities. Customer integration takes place on the supplier's initiative, the aim being to integrate the customer into its activities, processes and strategies. The opposite is the case with supplier integration. Thus *the direction of the integration* is towards either the customer or the supplier integration in vertical relationships. It does not necessarily reflect the change upstream or downstream in the marketing channel, but rather shows how both parties perceive the integration and who is the more influential partner in the relationship.

The cases studied showed evidence of *customer integration, supplier integration, both, or neither* (see Table 10). There was the highest degree of both in the plywood-converting case, although there has now been some supplier disintegration. The customer's clear intention was to enhance supplier integration, or at least to bring it back to its former level. The paper-converting case also featured both forms, although the tendency was to increase strategic supplier integration. Integration in the paper-merchanting and newsprint-publishing and printing cases was more supplier integration, and in the former it was corporate-wide. It seems probable that the future direction will be towards both to supplier and customer integration.

Table 10 The structure of integration: customer and supplier integration

	Magazine publishing	**Paper merchanting**	**Newsprint publishing and printing**	**Publishing and printing**	**Paper converting**	**Plywood converting**
Customer integration, supplier integration, both or neither	no noticeable integration, well-functioning, cooperative and long-term relationship	corporate-wide supplier integration	supplier integration	no noticeable integration, despite long traditions of cooperation, the relationship is currently rather competitive	both customer and supplier integration	both customer and supplier integration
Direction of integration	attempts at customer integration, but not self-evident	towards both customer and supplier integration	probably towards strategic supplier integration	no clear direction	towards strategic supplier integration	towards operational and strategic supplier integration

As far as newsprint publishing and printing are concerned, it may well be that supplier integration needs to be brought onto the strategic level. This would mean integrating the Papyrus business unit more deeply into this relationship, while retaining the integrated relationship with the supplying mill.

Neither form of integration was evident in the magazine-publishing and publishing and printing cases. The former was a cooperative, long-term and relatively institutionalised relationship: the supplier had attempted to achieve customer integration, but it had not thus far succeeded. The publishing and printing case was a competitive relationship under constant pressure in a tight market environment. It had traditionally enjoyed good cooperation, but conflicting elements had crept in due to increased customer power. In this case it was impossible to identify the clear direction of the integration.

The concepts of customer and supplier integration are sometimes intertwined, even misunderstood. For example, a situation in which the customer has the initiative and identifies itself as part of its supplier's business without any supplier involvement does not fit into either category. It merely reflects the customer's unilateral attempts to involve the supplier. It may, however, be quite risky and is hardly successful in the long term. Unilateral attempts to involve either the supplier or the customer are not the same as integration. Another case is when the clear roles of the customer and the supplier are blurred in a vertical relationship, which makes it quite challenging to determine the integration form. If the customer becomes a subcontractor of the supplier, as in the plywood-converting case, and both parties are responsive, there is both customer and supplier integration.

5.3.2 Operational and strategic integration

Table 11 shows the cross-case comparisons between operational and strategic integration. The primary aim of *operational integration* is to achieve efficiency and effectiveness in the current activities and operational processes. The empirical evidence suggests that it may be related to an *optimised division of work between the parties:* it is the outcome of a coordinated, developed and streamlined division of labour. The term optimised thus mainly implies the efficiency dimension, i.e. reducing costs by specialising in certain activities and removing those that overlap. Operational integration is examined here in terms of *the level of optimisation in division of work: the current state, the need for change and the optimising potential*. A clear need for change does not mean that change can be implemented: potential thus refers to what change is realistic and possible in a particular relationship.

Table 11 The structure of integration: operational and strategic integration

	Magazine publishing	**Paper merchanting**	**Newsprint publ. & printing**	**Publishing and printing**	**Paper converting**	**Plywood converting**
Operational integration: *State of optimisation in division of work*	not always optimised, part of stock management now under supplier's responsibility	already relatively optimised in the context of joint process improvement	optimised, stock management under supplier's responsibility	not yet optimised	optimised, stock management partially under supplier's responsibility	relatively optimised, stock management under customer's responsibility
Need for change in division of work	in the supplier's interest to move into stock management	may still need to revise division of work and specialise more	no especial need for change	customer plans to outsource stock management	supplier's indirect operational model may require revision	constant need to compound roles and act according to the situation
Potential for increasing level of optimisation in division of work	some potential still exists	relatively high potential	optimisation already high, little potential	some potential still exists	some potential still exists	high potential, duplicating operating model on a wider scale
Strategic integration: *Existenc of /need for joint business strategies and goals*	not jointly determined, probably needed due to common future interests	some shared goals, but no shared strategies on a higher level	not jointly determined, some need due to shared interests	not jointly determined, need to resolve conflicting interests first	not jointly determined, production investments needed	not jointly determined, constant discussion needed to find shared interests
Existence of /need for joint relationship planning and decision-making	mainly separate, need for mutuality in decision-making	partially shared, still needs to be improved	partially shared, needed, but partly beyond authority	mainly separate, need to enhance mutual understanding first	partially shared, some need, but restricted by the competition	partially shared, clearly needs to be enhanced

The state of optimisation in division of work varied among the cases. It was already optimised in the newsprint-publishing and printing and paper-converting cases in that stock management had been transferred to the supplier ten years previously. It was relatively optimised in the paper-merchanting and plywood-converting cases, but more was still needed. In the latter case stock management had been gradually transferred from Papyrus to the customer, but there was still room for further development despite the fact that both parties already operated in a situation-specific and flexible way and assumed compound and mixed roles. There were also potential growth opportunities in new business areas and in the increasing specialisation. Duplicating this operating model with other plywood customers could be beneficial, especially to the supplier.

The state of optimisation in division of work was nowhere near optimised in the magazine-publishing and publishing and printing cases, the main problems lying in both short- and long-term business predictability. There was only some potential for increasing the level of optimisation in these cases. The publishing and printing case remained unclear: this relationship seemed mainly to follow the general industry trends especially in terms of system development. Operational integration often requires adaptations and adjustments in a particular relationship. Relationship-specific investments and adaptations were not favoured in this case on account of additional and increased costs.

In the paper business it was in Papyrus' interests to gain more control over and responsibility for the customer's stock management. The customer in the publishing and printing case was already planning to outsource its stock management. Internal changes such as introducing an indirect sales model could mean disintegration in the paper-converting case unless both parties are able to revise the division of work in order to maintain operational efficiency. There was still potential for optimising the division of work and increasing specialisation within the relationship in the paper-merchanting case: in fact, this work had already begun in the form of developing joint programmes and projects to reduce overlapping costs and activities.

In sum, there was at least some potential in most cases for further operational integration, although the need for change may have been higher than the potential for it or the possibility of implementing it. Changed roles can work efficiently and effectively only when both parties clearly understand the need for the change and the benefits it may offer.

According to the empirical results, *strategic integration* is related to the *existence of and need for shared business strategies and goals, and joint relationship planning and decision-making*. It thus combines the strategic and relational views. Strategic integration in vertical relationships extends the strategy concept across organisational boundaries, and it requires a mixed strategy in which both parties' interests and goals converge. It did not seem to be on a very high level among the cases because the parties did not seem to have joint strategies and goals more generally, despite the fact that they often shared joint future interests. They discussed their own strategies and goals rather than setting jointly determined ones. In the paper-merchanting case the shared goals were set primarily to increase supply-chain efficiency and reduce marketing costs. A constantly increasing need for both parties to discuss future plans and strategies was common to all of the cases. More or less general and vague concerns about the future of the relationship were expressed in many cases, such as about the ability to maintain the viability of printed media in the future. Expressing clearly and concretely and in measurable terms exactly what joint interests mean still seems to be quite a challenging task.

In most cases the relationship was still planned and the decisions made separately within the companies when each one had its own plans regarding relationship management with its suppliers and customers. The relationship itself was rarely viewed as a strategic device that could enhance both parties' strategic positioning in the market. Some cases did have *joint relationship planning and decision-making*, but it seemed to depend very much on the key-account manager, the supplier's or customer's primary contact person and his/her personal capabilities and characteristics in terms of mastering the customer or supplier relationship. Joint relationship planning and decision-making had been more prevalent in the early days in the plywood-converting case, and joint activities were reduced to making plans and visiting end customers. In the paper-merchanting case joint project teams were established in order to set up joint marketing plans, for example. There seemed to be no tendency towards joint relationship planning and decision-making in the publishing and printing case: mutual understanding had to develop first, and only then would it be realistic to set jointly agreed relationship agendas.

5.3.3 Formal and informal integration

Formal integration refers to a legally binding structural arrangement between parties. It is achieved through changed ownership or by contractual arrangement, and in the latter case the parties still retain their autonomy. It implies a formalised and explicit business-relationship structure. Formalisation of the relationship mainly through evolutionary institutionalisation is thus not considered to be formal integration in this research: it is rather assumed that the degree of formal integration reflects the role or importance of formal contracts and agreements.

Informal integration means perceived interdependence and compatibility between parties, which is achieved through the forging of social bonds. It is very much an outcome of the institutionalisation process in which common expectations and norms have evolved in the course of time. However, it raises the important question of whether too much institutionalisation hinders the integration process. Informal integration thus comprises two elements, the role of social bonds and the development of shared expectations and norms. The comparisons are shown in Table 12.

Formal contracts and agreements were not considered very important in the prevailing situation among the studied cases. Long-term and fixed contracts were not considered very favourable because enhanced formality was often paralleled with increased inflexibility and rigidity. On the other hand, it was anticipated that contracts would become increasingly formal in complex business relationships and market environments, which in turn implies that the parties assumed that increased formality would increase business predictability. The price and quantity contracts in the studied cases varied from six months to three years. In some cases the quantities were planned for a longer period, but prices were revised more often. The supplier emphasised long-term volume planning. If the parties were committed to each other, price or other agreement was normally not very difficult to achieve, but if mutual commitment was weak and unilateral action strong, it could have negative effects on relationship integration. An increase in the number of conflicting views was one of the major determining factors of relationship disintegration.

The majority of cases emphasised the informal over the formal, and particularly stressed the *importance of social bonds* implying deep social relationships with increased mutual trust and commitment. However, it is not easy to build trust and commitment, and it always takes time. Today's business world is impatient and the trust-building process often does not fit in with short-term targets.

Hard work was still required, especially in the paper-merchanting and publishing and printing cases. When the management or organisation changes trust and commitment have to be built up almost from scratch. Although business may continue as usual, personnel changes cause a lot of concern and doubts regarding the future of the relationship. It is then important to keep promises so that problems will be avoided.

Table 12 The structure of integration: formal and informal integration

	Magazine publishing	**Paper merchanting**	**Newsprint publishing & printing**	**Publishing and printing**	**Paper converting**	**Plywood converting**
Formal integration: *The role of formal contracts and agreements (length and importance)*	one-year contracts, not very important, although some formality needed, importance may increase in the future	three-year contracts, formal contracts are needed due to relationship size, multinational nature and business complexity	one-year contracts, formal guidelines do not play a major role, general guidelines set	six-month and one year contracts, big volumes require formal contracts, which implies that things are well prepared and planned, importance of formal contracts may still increase	quarterly (prices) and one-year contracts (volumes), formality in price negotiations	three-year contracts, some formality is needed so that everyone knows what has been agreed, formality may increase
Informal integration: *The role of social bonds*	Emphasis on maintaining a social atmosphere in which both parties feel trusted and confident	trust, integrity and social relationships at all levels need enhancement	good and personal relationships ensure reliability and consistency	traditionally high, now minor, more emphasis on deep relationships could enhance informal integration	emphasis on mutual trust and commitment, social activities important, open atmosphere and the ability to solve problems jointly also needed in the future	emphasis traditionally on integrity, mutual trust and commitment, social atmosphere needs to be enhanced
The existence of shared expectations and norms	some shared expectations and clear norms	shared expectations and norms not yet achieved everywhere, but there is progress	shared expectations and norms, but future unclear	traditionally shared expectations and norms have prevailed, but there is now evidence of separation	long and common history with a shared vision has lead to shared expectations and norms	shared expectations and norms have developed in the spirit of mutuality, evidence of slight separation

A social atmosphere in which mutual understanding, trust and commitment prevail is a prerequisite for closer informal integration. However, tight social bonds always evolve over time, and some may lead to *shared expectations and norms:* this is all part of the institutionalisation process. The highest level of shared expectations and norms was apparent in the newsprint-publishing and printing and the paper-converting cases. However, in the former the operations were local, between one supplying mill and the customer, and it was not possible to establish whether the Papyrus Corporation had shared expectations and norms with this customer. Clear expectations and norms had traditionally prevailed in the publishing and printing and the plywood-converting cases, with clear separation in the former and moderate in the latter. The relationship in the paper-merchanting case was less institutionalised, and under constant development. It appears that shared expectations and norms are not yet commonly adopted in multinational and multicultural environments.

Formal contracts do not guarantee that things will be done as agreed or that commitments will be honoured to the satisfaction of both parties. Formal contracts have no value unless trust, consistency and integrity prevail in a positive atmosphere. On the other hand, informality alone does not guarantee a long-term and mutual orientation. According to the cases studied, an appropriate combination of formality and informality is required. No general rules can be set, but the necessary level of formality and informality is, first and foremost, a relationship-specific issue.

Constant interaction is required so that both parties can understand each other and solve emerging problems effectively, irrespective of exchange volume, size, nature and development stage of a relationship. A speculative atmosphere may become very expensive in a profitable and long-term business relationship. Business growth and internationalisation increase business complexity, which often means that decisions have to be explicitly expressed, and things planned and managed in more formalised ways. Formalisation does not mean slow decision-making, increased bureaucracy and avoiding problems that emerge, however: it rather ensures that the capabilities of both parties can be utilised in a dynamic and effective way.

5.4 Customer-supplier integration in a nutshell

Elements of customer-supplier integration were deepened and specified in the previous section based on the empirical evidence. This section draws together the various elements behind the concept based on the framework presented in subchapter 2.6 and the results of the cross-case comparisons. Figure 14 illustrates the conceptualisation: the three main elements, the context, the process and the structure of integration are reviewed below.

The context is the starting point of integration, and it affects the process. It comprises both relationship-specific aspects and the business environment in which the relationship is embedded. Relationship-specific aspects include the following elements: the nature of the relationship, i.e. its complexity and stability, the business type and the power positions involved. The business environment includes both the development of the customer's business and the supplier's market environment, including the relevant third parties affecting the specific relationship.

The process of integration was seen as an effective and efficient combination of actor bonds, activity links and resource ties: all of these ARA model components are needed. Relationship institutionalisation is part of that process. Relationship governance is closely related to both the context and process of integration. Governance structures and mechanisms that prevail in a relationship either facilitate or hinder the process of becoming more integrated.

The structure refers to the dimensions of formal and informal, operational and strategic, and customer and supplier integration. The concepts of customer and supplier integration are problematic, because if they are treated as alternative and separate issues the emphasis is on either the supplier's or the customer's perspective, and it does not always reflect the balanced power and mutual relationship that signals "complete" or "full" integration. This is why an integrated relationship usually involves both customer and supplier integration, although the initiative to integrate may come from either the supplier or the customer.

Customer-supplier integration ultimately aims at realisation of the team effects of integrated relationships in terms of both effectiveness and efficiency, which a single company cannot achieve alone. If the relationship is focused more on operational integration the aim is to achieve efficiency-related economic effects, whereas an emphasis on strategic integration implies the primary objectives of long-term effectiveness and mutual value creation. On the strategic level, too, non-economic effects that have indirect economic consequences are also valued.

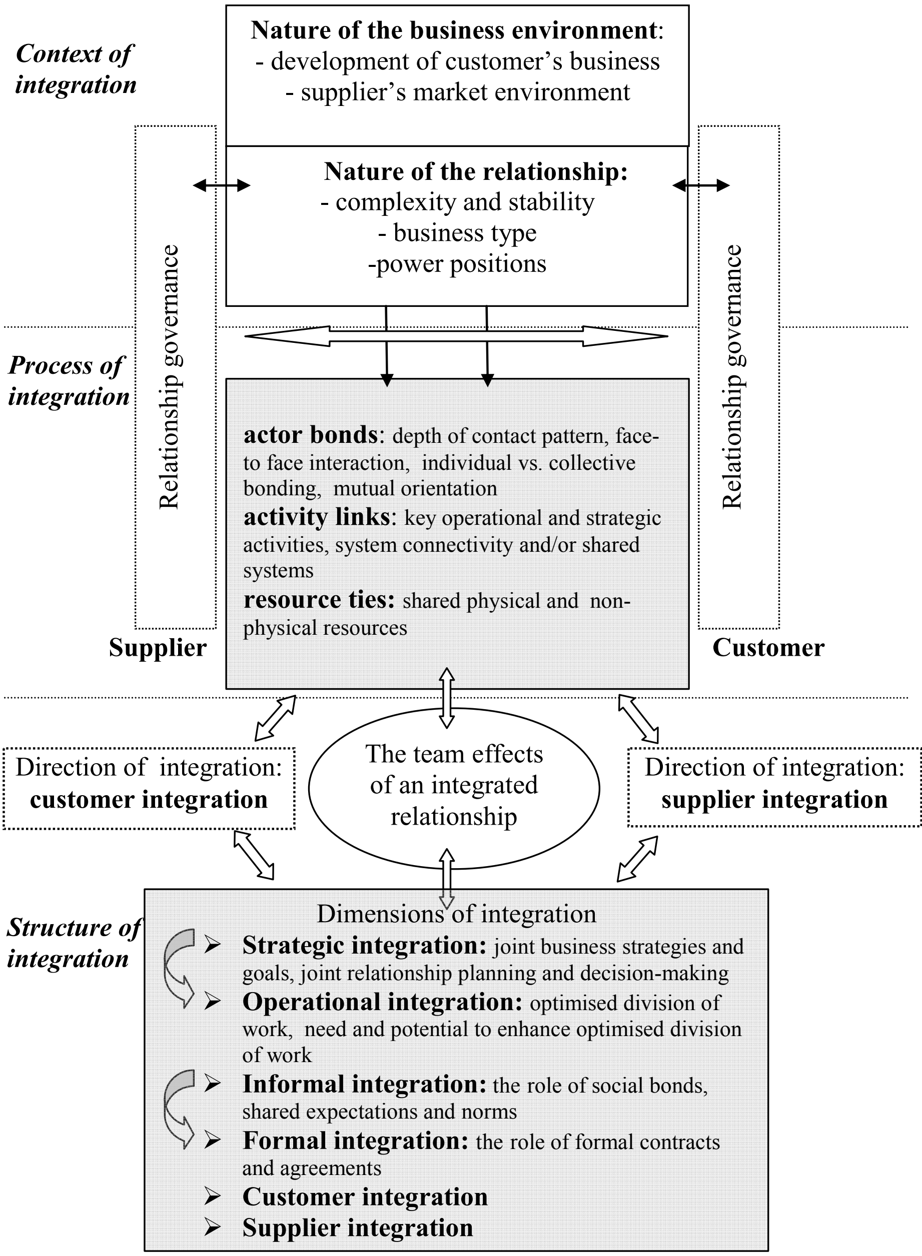

Figure 14 Customer-supplier integration in a nutshell

5.4.1 The context of integration

The context of integration incorporates two main elements: the nature of the business environment and of the relationship. These two aspects could be considered the fundamental driving forces behind the integration/ disintegration process. Two main aspects of the business environment that are relevant to integration emerged: the *development of the customer's business* and the *supplier's business environment*. The former reflects changing end-customer behaviour and needs, which in turn affect the actions of customers. The supplier's market environment reflects the general market conditions as well as the effects of third parties on its business. The development of the customer's business could be seen as the driving force behind the supplier's business environment. The customer's business very much determines the business environment of the supplier and the specific network in which it operates. Customer-supplier integration may be difficult to achieve in a very competitive market environment for two reasons: first, there are other players in the market affecting the particular relationship, and second, a competitive market environment may change the internal power positions in a relationship, and make it more competitive.

The nature of the relationship is a wide term, and is the result of the relationship-development process. In this research the overall nature of the relationship was studied through its past, present and future development. Three main elements that were relevant to integration emerged: relationship complexity and stability, business type, and power positions. The business type was identified as local, international or global. Relationship complexity is not seen here as only a relationship-internal matter, and equally refers to a number and variety of external factors (Bourgeois 1980, 33). It may affect the process of integration in one of two opposite ways: enhancing or hindering it. Complexity also refers to the diversity of external factors affecting a relationship, which may cause instability and hinder the process of integration. Relationship complexity and stability naturally vary depending on the business type. Understanding the interdependence between the two is one of the prerequisites for integration.

Power positions in a relationship are related to *relationship governance,* which is a higher-level concept covering various developmental phases from establishment to enforcement. It refers to both structure, i.e. governance forms, and process, i.e. governance mechanisms. It could be considered the basis and a foundation of customer-supplier integration. An integrated relationship requires plural governance (e.g., Cannon et al. 2000) combining both informal and formal mechanisms. The power positions in a relationship are related to both dependence and relationship symmetry/asymmetry (e.g., Spekman & Celly 1995). When the power positions are balanced mutual dependence is often high: the relationship reflects symmetrical exchanges based on bilateral governance and both parties are motivated to work for mutual benefits. Bilateral governance refers to mutual understanding and influence in a relationship, which in turn offers better possibilities for the relationship to become more integrated. Bilateral governance often requires common values, expectations and relational norms.

5.4.2 The process of integration

The process of integration develops as an evolutionary change process over time. Only by understanding the process as change over time can complex and non-linear processes be observed (Pettigrew 1997, 338). A process is therefore not just sequential and linear with successive stages of development. Integration is not always a predetermined, intentional and manageable process, and much of the change may happen or evolve unintentionally. The change may be so slow that the actors involved in the relationship hardly notice it. The process may move towards closer and deeper integration, or alternatively to disintegration. In addition, the supplier and the customer may perceive the direction of integration differently.

The ARA model is useful in terms of incorporating the process of integration into the overall change process in a relationship. Integration and disintegration happen in the constant and continuous interplay between actor bonds, activity links and resource ties. The ARA model conceptualises the different types of relationship, including the fully integrated and the non-integrated, and those between these two extremes. In addition, a specific customer-supplier relationship may involve both integration and disintegration depending on the dimension. It is therefore necessary to break down the model into components specifying which characteristics describe integration. Moreover, the focus and importance of each model component may vary depending on the phase of the integration process. The process of institutionalisation is also closely related to integration: some level is required, but too much may hinder the process if the relationship becomes too rigid.

On the other hand, the process-related components of the ARA model can be linked to its structure. Empirical evidence suggests that actor bonding mainly contributes to informal and formal integration. Activity linking, in turn, contributes to operational and strategic integration, whereas resource tying contributes mainly to strategic integration.

The ARA model assumes that the relationship enjoys team effects, which means that together the companies can carry out activities and utilise resources, which none of them could accomplish in isolation (Håkansson & Snehota 1995, 37). However, it seems questionable whether these team effects are exactly the same as integration benefits. Relationship benefits and integration benefits may be quite different in reality: what is beneficial to the relationship may not be beneficial to integration, and vice versa.

Integration effects may be economic or non-economic, and economic effects, in turn, may be related to efficiency or effectiveness. Integration has traditionally focused on the efficiency dimension, aiming at economies of scale and scope (Håkansson & Snehota 1995, 53─54) and at getting the most out of available resources (Anderson & Narus 1999, 203; Möller & Törrönen 2003, 111). Effectiveness means creating more market value by inventing new solutions (Möller & Törrönen 2003, 112). Both elements are important, but companies are often unable to pursue efficiency and effectiveness targets simultaneously, although it may be necessary: they frequently neglect effectiveness and focus more on efficiency. The fundamental problem is that both require different managerial capabilities (Mouzas 2006, 1124─1125, 1131), and the capabilities and resources of a single company are often limited.

According to the research results, due to *the team effects of integrated relationships* companies are able to attend to both efficiency and effectiveness: combining the different managerial capabilities in the two firms makes this easier to achieve. Thus the companies operate as a joint and unified team by utilising the most effective and situation-specific resource and capability combinations. Integration also has non-economic benefits, mainly related to enhanced and accumulated mutual learning and developed dynamic capabilities. Forsström (2004) argues that different relationships at different development phases utilise economies of efficiency, economies of innovation, and economies of exploiting and creating new interdependencies. When the degree of involvement increases the parties move from economies of efficiency towards economies of innovation. Companies at the third developmental stage continuously exploit managed interdependencies in high-involvement relationships (ibid., 77, 164─165). According to Forsström, the two latter types of economies refer to value creation and effectiveness, which are fundamental in an integrated relationship.

The current literature relates two processes to *actor bonding:* the construction of identity and the formation of trust and commitment (Håkansson & Snehota 1995, 192─197, 199). The results of this study support the relevance of identity construction, but suggest that the formation of trust and commitment is rather related to the overall outcome of the successful combination of bonds, links and ties. Trust and commitment result not only from actor bonding, but are also affected by activity linking and resource tying.

Thus, actor bonding was specified along the following dimensions that affect integration: the width and depth of the contact pattern, the amount and importance of face-to-face communication, individual- versus collective-level bonding, and the existence of a mutual orientation. Too wide a contact pattern often makes the relationship unnecessarily complicated, which in turn hinders the integration process: it is rather the depth of the pattern that directs integration. The amount of face-to-face communication proved to be only a rough indicator of the importance of interaction and communication: effective and good communication is at least as important, and the amount of interaction does not measure effectiveness. Effective communication requires relationship managers and promoters who intensively shape and advance the inter-organisational exchange process and help both customer and supplier firms to articulate their mutual goals realistically, strongly, consistently and comprehensibly (Walter & Gemünden 2000, 90─91). Relationship promoters are people who have the ability to influence, to contribute, and to make things happen.

Individual bonding develops in deep and close interaction between key individuals, while collective-level bonding results in a joint identity that is shaped by the reputation, image and brand of both companies, and is difficult to achieve without the contribution of key individuals. Actor bonding develops in interplay on the individual and collective levels. Collective-level bonding enhances relationship institutionalisation, which in turn is required for integration. Institutionalisation in a relationship refers to two central processes: routinisation and the development of shared norms (Dosi et al. 2000, 4, 12). However, too much institutionalisation may cause inflexibility and rigidity, which in turn may lead to disintegration. Identifying the proper amount of collective bonding that will lead to institutionalisation is a key element in integration.

Mutual orientation refers to the shared and reciprocal activities in a relationship, and can be achieved through interaction, influence and adaptation (Håkansson & Snehota 1995, 122, 197─198): it goes beyond customer and supplier orientation. For example, customer orientation means customer-led business, which refers to fulfilling the existing and expressed needs of customers (Slater & Narver 1998, 1002, 1005). The results of this research indicated that mutual orientation is not a relationship-internal matter, and that it could be hindered by tight competition and unbalanced power positions. If it is lacking it does not necessarily mean conflicting interests and a competitive relationship: it may also reflect power imbalance in a cooperative relationship. Mutual orientation takes both parties' profitability and future value-creation potential into account, and mutually oriented companies actively seek solutions not only to existing business problems, but also to latent and emerging problems. Integration in a relationship always requires mutual orientation regardless of whether the focus is on customer integration, supplier integration, or both.

The current literature relates *activity linking* mainly to operational activities such as the flow of products, services, information and money. It mostly takes place in day-to-day rationalisations. (Ford et al. 2003, 40, 102─103) In this research it refers to both operational and strategic activities between partners. An important finding was that system connectivity alone does not determine the process of integration: connectivity is not the same thing as integration, and does not necessarily ensure its success. Connectivity and linking mechanisms make the relationship more transparent and visible, but if the division of work between the partners is fundamentally wrong, enhanced connectivity may have only marginal value in terms of integration.

Resource tying refers to how two companies bring resources together, confront and combine them in order to maintain and enhance future competitiveness (Håkansson & Snehota 1995, 30─31, 135, 137, 147). It often requires relationship-specific investments and adaptations (Håkansson & Johanson 1992, 32). The relationship itself could be viewed as a strategic resource or asset, which adds market value. As a resource it requires knowledge harnessing, which means developing new creative business solutions and integrated practices (Marsh & Stock 2006, 424─425). It also implies a human-investment model of shared leadership that creates, enhances and fosters learning-oriented partnerships (Miles & Snow 1995, 12─13). The better the strategic value of non-physical and human resources is understood, the more likely is the relationship to become integrated.

Resource tying was specified as the existence of shared physical and non-physical resources, with the emphasis on one or the other. The results indicate that successful resource tying combines both. It does not always mean that shared resources are needed in jointly determined projects, however: the customer may, for example, provide its facilities and knowledge for its supplier's own development projects without any intention of utilising the results. With integration it is a question of the flexible and effective use of resources in a dyadic relationship, either for joint projects or for each company's own separate projects.

5.4.3 The structure of integration

The structure of integration is a result and an outcome of the integration process, and can be specified in more detail in terms of levels or dimensions. For the purposes of this research integration was divided into the following dimensions: *operational, strategic, formal, informal, customer and supplier integration*. As far as customer-supplier integration is concerned, what is relevant is the appropriate combination of all the dimensions, not the dominance of one of them. The implication is that both parties have influence in a relationship, and have congruent perceptions about it.

Customer integration has attracted more research interest than supplier integration, and both are often treated as separate phenomena from either the buyer's or the seller's perspective. The current literature often emphasises operational-management techniques or practices (e.g., Fliess & Kleinaltenkamp; Eggert & Helm 2000; Petersen et al. 2004), although both customer and supplier integration could also be seen as strategic concepts enhancing both parties' value-creation potential and beneficial to both. Although customer integration is a supplier-driven activity, it still requires a mutual perspective and jointly determined goals. It is not the same thing as customer orientation, nor is it simply excellence in meeting customer needs and expectations better than the competitors. It means that the customer contributes to and influences the supplier's business: it has an important role in leveraging and expanding its resources beyond company boundaries towards its supplier.

Operational integration, according to the current theory, is close to activity linking: it refers to efficient system linkages and administration systems (Larson 1992, 90─92). However, it is not the same thing: it means the state of optimisation in the division of work, the need for change and the enhancement potential. However, the need for change must be distinguished from the enhancement potential, which refers to what is realistic and possible. Operational integration may be valuable in both network and company-internal integration. For example, duplicating and extending the operating model between the supplier and the customer may offer new possibilities and opportunities to companies separately, to the relationship and to the wider network.

Creating solutions for end-customer needs may require more flexibility in daily operations. In this context therefore the supplier and the customer may start to operate as a team and their respective traditional roles may become blurred. Ross and Robertson (2007) call this kind of relationship a compound relationship, which means that the firms involved are simultaneously engaged in several roles. However, each compound relationship varies in terms of power and future potential. Compound roles may be temporally restricted by contract, but they may also have real strategic value. (Ross & Robertson 2007, 108, 110, 116, 119–120) Compound relationships may thus enhance both operational and strategic integration depending on their nature.

S*trategic integration* implies a strategic mindset in both partners and perception of the particular relationship as a strategic asset. It also implies combined resources, expanded joint capabilities and enhanced competitive positions. (Johnson 1999, 5.) It requires the combining of both relational and strategic views. Thus strategising is not only concerned with competition, it also involves simultaneous elements of co-operation, conflict, integration and separation (Ford et al. 2003, 6).

Based on the results, strategic integration emerged as the existence of and need for joint business strategies and goals, and joint relationship planning and decision-making. It thus combines both the strategic and the relational views. It implies strategic excellence in a relationship enabling both parties to enhance each other's strategic positions, and to ensure future value-creation potential and profitable growth. Strategic integration was found to be a precondition for successful operational integration, which is difficult to implement unless the parties already share a joint business vision, strategies and goals.

Formal integration refers in the literature to institutional or legal integration (Mattsson 1969, 46), or to written and long-term contracts between parties (Hertz 1992, 108–110). However, the distinction between formal and informal integration is not always evident. The term formal often refers to cooperation that is overt, planned and managed (Easton & Araujo 1992, 76), or to codifiable patterns of behaviour (Redding 2005, 135), while the term informal often refers to individual, random and unplanned cooperation (Easton & Araujo 1992, 76) or uncodified systems of meaning requiring interpretation (Redding 2005, 135).

Formal integration emphasises the role of formal contracts and agreements in a relationship, whereas the focus in *informal integration* is on the role of social bonds and the existence of shared expectations and norms, both of which are relevant outcomes of the institutionalisation process. Three relevant aspects of social bonding emerged from the results: mutual understanding, trust and commitment. Informal integration is a prerequisite of formal integration, and both are closely connected. Formal integration has no value unless both parties feel confident and trusted, are committed to each other, operate on a mutual basis and have a clear understanding of each other's expectations. On the other hand, informal integration, especially in fast-growing and multinational relationships, may not be sufficient, and some formalisation may be required. However, this does not always mean a strict formal contract, and any written documentation will do. Nevertheless, informal integration was more difficult to capture conceptually than formal integration. Informal integration is just not an achieved state of socialisation or togetherness, although important aspects, but it also enhances fit and compatibility between a customer and a supplier.

One problem is that company-internal structures and core capabilities do not always support integration. According to Leonard-Barton (1992, 112), company-internal core capabilities may lead to inertia in the face of environmental changes. They are institutionalised parts of the organisation's taken-for-granted reality, bound to its values and culture. (ibid., 112─113, 121) The results of this research support the view that a considerable amount of institutionalisation either within or between companies may make the relationship so rigid that integration is impossible. For example, if key individuals at the customer-supplier interface do not have enough authority to make independent decisions, the renewal potential remains relatively low. Problem-solving ability is limited in unexpected and sudden situations, and no matter how well the partners fit together strategically, a rigid relationship is unable to adjust and adapt to changed circumstances. Therefore, there is need not only for good strategic compatibility, but also for considerable strategic stretch to prevent core capabilities from turning into core rigidities.

6 SUMMARY AND IMPLICATIONS OF THE STUDY

6.1 Summary and empirical conclusions

This research focused on customer-supplier integration in vertical business relationships. The concept of integration is both versatile and ambiguous. It is versatile in that it offers various perspectives and alternatives, while at the same time it is ambiguous because it still lacks preciseness, rigour and clarity.
Therefore, there was a need for a holistic conceptualisation of integration in customer-supplier relationships in industrial markets.

The purpose of the research was to offer an analytical description of customer-supplier integration, thereby clarifying the concept of integration and identifying the key elements constituting an integrated relationship. The following research questions were addressed: 1. Which theoretical approaches and concepts are relevant for describing customer-supplier integration? 2. How can customer-supplier integration be conceptually described in terms of both structure and process? 3. What contextual elements affect customer-supplier integration?

The study was conducted in the forest industry, in which the integration concept is also of high managerial relevance. The focus here was on the paper and plywood industries. The increasingly competitive market environment and the changing end-customer needs and demands are creating clear pressures for suppliers and customers to operate as a joint and integrated team. The industry is not homogeneous, but it incorporates different business areas among which the only common factor is that they use wood as raw material.

This research builds on various theoretical approaches: vertical-marketing channels and the political-economy framework, the interaction and network approaches, relational contracting, resource-dependence theory, and supply-chain management. Cross-paradigmatic efforts were required in order to enhance understanding of customer-supplier integration, which is a complex and still quite poorly understood phenonmenon. The political-economic framework and the IMP's interaction and network approaches cover several disciplines, and were considered the most valuable in this sense.

The qualitative approach was considered the most appropriate in order to develop an analytical description of customer-supplier integration. The research was mainly descriptive, but it also contributed to theory development.

The multiple-case study seemed to be appropriate in terms of the comparison and analysis of different businesses. Face-to-face interviews with both customers and suppliers were used as the main data source, complemented with public and company-internal and confidential written material. The deep understanding of customer-supplier integration obtained facilitated description of the phenomenon in a real-life context, illustrating where and when integration occurs.

The supplier in question was a big and global forest-products company. The cases examined six different customer-supplier relationships: magazine publishing, paper merchanting, newsprint publishing and printing, publishing and printing, paper converting and plywood converting. These versatile and different cases in the paper and wood-products industry made it possible to cover the integration phenomenon from various angles. The comparisons and analyses were used in giving content and meaning to the developed theoretical framework in terms of the context, the process and the structure of integration.

The general conclusion from the empirical results is that the conceptualisation of customer-supplier integration has special value in customer-supplier relationships combining economies of scale aiming at efficiency, and economies of innovativeness aiming at dynamism and flexibility. This combination of efficiency and flexibility characterises integrated relationships because individual companies are rarely able to meet what are often contradictory demands in the market.[4] In the forest industry it means that the supplier and the customer set their joint goals with regard to their end customers, and specialise accordingly. For example, the paper producer and paper merchant may co-operate to achieve both efficiency in production and logistics, and also the flexibility and dynamism in market offerings required by end customers and users.

The main empirical conclusions that emerged from the data are presented in more detail below. *First, the concept of customer-supplier integration extends and deepens our understanding of the development of industrial customer-supplier relationships.* The basic premise was that an integrated relationship is distinguishable from committed, cooperative, collaborative and partnership relationships. Although an integrative relationship contains elements of all of these types, it is different in that both supplier and customer have a critical and strategic role in each other's success and earnings logic. For example, there are several types of partnerships, not all of which are integrated relationships. An integrated relationship could be considered the most advanced phase of relationship development, and a specific type of partnership.

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[4] See also the seventh empirical conclusion on the role of integration in the development of dynamic capabilities across organisational boundaries.

Secondly, understanding of customer-supplier integration requires an understanding of relationship governance, which forms a framework for customer-supplier integration. The study showed that an integrated relationship requires plural forms and mechanisms of governance as well as a bilateral approach. Plural governance includes both formal and informal forms and mechanisms, whereas under bilateral governance both parties are able to influence the relationship: it is acknowledged that unilateral attempts may happen, but in the long term both parties aim at closer mutuality and mutual benefits. A key point is that no single organisation can control, manage or govern a relationship. Relationships do not fit into hierarchical structures, and they cannot be based merely on trust, either. Thus this research does not support the view that increased integration implies more formal governance at the same time (e.g., Andersson 1979). Formal governance often plays an important role in integration, but it is not the only decisive element.

Thirdly, the contextual elements of integration either facilitate or hinder the process. It is necessary to understand the factors related to the nature of the relationship as well as factors external to it. Its nature, in turn, is affected by both the supplier's and the customer's organisations. Organisational rigidity may hinder integration because highly congruent, traditional and strongly-held institutionalised core capabilities, in other words taken-for-granted reality, cannot be easily aligned with new demands emerging from the market environment (Leonard-Barton 1992, 112─114) or the partner. On the other hand, how individuals perceive themselves and their intentionality matters: it is a question of how key actors view their business context and the chances of achieving goals within it. Some events are considered critical and require prompt action, while others require only minor attention. (Halinen et al. 1999, 791.) The decisions both partners make based on their perceptions of the relationship and the business environment determine whether or not the relationship has the potential to become integrated.

Fourthly, the basis for successful formal integration thus lies in the appropriate level of informal integration, which is achieved through social bonds, especially mutual understanding, trust and commitment. Increased trust and commitment may be qualitative outcomes of the integration process, which may also have economic value in the long term. These two aspects promote both efficiency and effectiveness: trust fosters acquiescence, stability and cooperation, enhances conflict-solving ability, and decreases decision-making uncertainty (Morgan & Hunt 1994, 25─26). Although it has many benefits it also has some limitations: it often takes a long time to build; it always requires companies to relinquish some of their independence and to become more dependent on one another; and regardless of how deeply the partners trust each other, they will always have areas of differences and different goals (Kumar 1996, 97–98, 106).

It is not easy to determine the necessary level of informal integration, which depends on the social bonds and the process of institutionalisation. However, too high a level of institutionalisation may create rigidities in terms of well-established practices, expectations and norms, which are difficult to change and restrict relationship flexibility. The relationship may then even lose its renewal potential. This would probably not be a problem if the market circumstances remained the same, but in many cases there was increasing pressure for greater innovativeness in the customers' businesses. When conditions change, sticking with the existing core capabilities may be fatal in a situation in which new kinds of dynamism and innovativeness are required. The capability for both organisational and relational renewal is an essential element.

Fifthly, achieving long-term-integration benefits in a relationship often requires going beyond the operational agenda to the strategic agenda. Both parties engaged in strategic integration aim at enhanced strategic positions, which benefits both supplier and customer. Customer-supplier integration requires strategising the relationship, which not only concerns competition, but also involves simultaneous elements of co-operation, conflict, integration and separation regarding the company's relationships (Ford et al. 2003, 63). A strategising relationship is not easy in practice because not even all long-term relationships are worth strategising. In addition, the key individuals and companies often view the strategy from their own perspectives, and those involved in the relationship may lack the authority to determine joint strategies.

However, the business world is increasingly characterised by customer-supplier relationships involving multiple roles, and these compound relationships may have real strategic importance. Partner firms may be simultaneously engaged in several roles. The relationships are subject to greater change, however, and opportunities may vary more than in traditional relationships. Roles may be time-limited by contract or circumstances. (Ross & Robertson 2007, 108, 110, 116, 119–120) It is evident that new compound roles create the pressure to determine joint strategies and goals in a relationship, although both partners may still maintain their own.

Sixthly, integrative value creation seems to be the primary aim of strategic integration. Integrative value creation means that a relationship brings and adds more value than companies alone can achieve. Value is not produced simply as a result of economising and saving on relationship costs, it also reflects the increase in relationship benefits (Håkansson & Snehota 1995, 396–397). The development of value-creation potential may require the supplier to master the customer's business, and that some of the customers' key business processes, or its complete business, are externalised (Möller & Törrönen 2003, 115─116). This kind of development may be based on decisions or plans, but it could also be an outcome of a more organic and unconscious process (ibid., 111).

Integrative value creation requires a buyer-seller perspective and a mutual orientation. The former means that firms jointly create value through relationships and partnerships, and not that the supplier creates value only for its customers and how customers perceive that value offering compared with the offerings of its competitors (Ulaga 2001, 315─317). Sharing and distributing created value so as to benefit both parties secures the long-term survival of the relationship. The parties do not need to value different functions in exactly the same way, but they need to understand the value-creating functions within the relationship in the same way. (Walter et al. 2001, 375.) Therefore each party has to understand his/her role in the joint earnings logic.

Seventhly, the empirical results of this study suggest that integration has a definite role in developing dynamic capabilities in customer-supplier relationships. Integrated relationships have more potential in terms of sharing practices, duplicating processes, and recombining and reconfiguring resources. Such a relationship becomes a dynamic device, which helps companies to increase their flexibility and service capabilities with regard to their end customers.

While static capabilities are routine and emphasise productivity, efficiency and information accuracy, dynamic capabilities refer to the ability to handle a complex process related to the evolution of a new system (Fujimoto 2000, 245─246). The term dynamic refers to the capacity to renew competences and achieve congruence with the changing business environment, while capability implies adapting, integrating and reconfiguring internal and external organisational skills, resources and competences to match the requirements of a changing environment (Teece et al. 1997, 510, 515, 516).

This study supports the view that capability transfer across organisational boundaries nevertheless requires a clear strategic decision (e.g., Florida & Kenney 2000, 295, 302), which both companies share. Functionality or commonalities of dynamic capabilities can be duplicated across firms, and their value lies in the resource configurations they create, not in the capabilities themselves. Dynamic capabilities could thus be seen as drivers of creation and evolution, and of the recombination of other resources into new sources of competitive advantage. (Eisenhardt & Martin 2000, 1007, 1106─1107.)

6.2 Theoretical conclusions

This study developed a conceptualisation of customer-supplier integration in business relationships in the forest industry. The aim was to answer the following research questions: 1. Which theoretical approaches and concepts are relevant for describing customer-supplier integration? 2. How can customer-supplier integration be conceptually described in terms of both structure and process? 3. What contextual elements affect customer-supplier integration? Addressing these questions required the identification and analysis of the constituent elements of the concept.

The starting point in this study was that a single approach cannot effectively cover the complex and holistic nature of customer-supplier integration, and that different, sometimes conflicting approaches are needed. Their partial and somewhat limited viewpoints were combined in order to create a holistic description of integration. The theoretical approaches covered were the political-economy framework within the literature on marketing channels, the interaction and network approaches, relational contracting, resource-dependence theory and the supply-chain management.

The political-economy framework was useful in terms of enhancing understanding of the concept of integration from both the structural and processual, economic and behavioural, internal and external perspectives. The contribution of the *interaction and network approaches* to this research lay in their focus on the processual perspective, evolutionary relationship development and the social and informal aspects of a relationship, implying the importance of trust and commitment. For the purposes of this study, neither the formal nor the informal aspects of integration were considered sufficient in themselves. It was therefore based to some extent on the notion of *relational contracting*, which offered a suitable pluralistic view combining both formality and informality.

Resource-dependence theory and especially the concepts of power and control, and dependence and interdependence, are useful in terms of determining how integrated relationships are governed. The idea of plural governance was adopted: trust and other social bonds are seen as complementary to contracts, not as governance mechanisms with their own merits. Dependence-interdependence structures determine what kinds of power positions prevail in the relationship, and it is the total power balance that guides the integration process. When interdependence or mutual dependence between the partners is high, the relationship is more likely to become integrated. At some point of time, in some activities or operations, one partner may have a more powerful and more influential role than another, but this does not necessarily imply disintegration. The literature on *supply-chain* *management* offers a more operationally oriented perspective on integration. It quite often focuses on the management of supply-chain efficiency. Although it does not totally neglect the strategic value-creation perspective, this is not the primary focus. Strategic integration was found to be a precondition for successful operational integration however, especially in international, complex and changing market environments.

The main theoretical contribution of the study lies in the conceptualisation of customer-supplier integration it has developed. It is a comprehensive and holistic conceptualisation in that it identifies elements constituting the context, the process and the structure of integration, and combines them. This research was conducted on the premise that the structure and process of integration are important basic perspectives, and that both are affected by the identified contextual elements arising from both the supplier's and the customer's business environment and the nature of their relationship.

It was shown that the structure is the outcome of the process, which develops in constant interplay between the relationship components: actor bonds, activity links and resource ties. The structural dimensions of informal, formal, operational, strategic, customer and supplier integration were identified and combined. The existing literature on integration mainly considers it from one of these perspectives, and no previous attempt has been made to combine the various structural and processual elements in one big picture. The concepts of customer and supplier integration are quite problematic because they mainly reflect the perspective and initiative of either the supplier or the customer, and also partly overlap with the informal, formal, operational and strategic dimensions. Basically, customer-supplier integration requires both, but the emphasis may vary.

The literature on vertical marketing channels has made a major contribution to our understanding of the nature of dyadic relationships in vertical marketing channels, but often from the perspective of formal integration with less emphasis on informal integration. This study showed that informal integration is necessary for formal integration. They are not separate phenomena, but are closely connected.

The importance of formal integration often increases when a relationship grows and expands. In a multicultural environment formalisation ensures that everything runs as agreed. This view is supported in the current literature: according to Blomqvist et al. (2005, 501─502), the contracting process may enhance trust in that it serves as a tool for learning to understand each other's cultures, goals and working methods. Contracts state future expectations explicitly, express the aim for a long-term relationship, and thus increase trust. On the other hand, they are incomplete and merely provide a framework that can hardly be effective without some amount of ex ante trust. (ibid.)

Birkinshaw et al. (2000) argue that human integration, which refers to a shared identity and people satisfaction and attitudes, facilitates task integration, i.e. sharing resources and transferring capabilities. Very low human integration limits the effectiveness of task integration (ibid., 398─400, 419).

One of the theoretical contributions of this study is that it clarifies the integration concept and the terminology in the context of vertical business relationships. This was a challenging task, however, because the terminology is often very confusing. The term is sometimes related to aspects that, in fact, have very little to do with integration as understood in this study. On the other hand, there are quite a lot integration-related terms, including cooperation, coordination, collaboration, commitment, and partnering, that do belong to the domain. This study synthesised the integration and its related concepts, and extended the conceptual domain.

The following definition of customer-supplier integration arises from the theory and the empirical results. Customer-supplier integration is both a structure and a process. The aim is to at achieve unity and coherence between the two organisations, their strategies, functions, processes and individual activities effectively and efficiently on a long-term basis. Both the supplier and the customer are organised so as to be highly compatible, and they have a strategic role in each other's success and viability. Thus integration is not a separate short- or medium-term project between the supplier and the customer, and requires a more profound and long-term mutual orientation. An integrated relationship has a shared vision, and the ability and resources to decide on and implement business objectives jointly in an optimised way.

6.3 Managerial implications

Although integration is often viewed only from the cost-efficiency perspective in industrial business relationships, it is only one aspect of customer-supplier integration. Managers need to understand better the effectiveness dimension, which focuses on long-term value-creation potential, as well as non-economic effects such as increased mutual trust and commitment, which may have indirect value in the long term. How these non-economic effects are related to the economic effects is still open to question, and they are still considered more or less separate: "tough" and "soft" aspects. Integration effects cannot be realised if the parties just do what they are expected to do and stick to their traditional roles, norms and expectations: a certain amount of innovation and flexibility is required as well. The ability to adapt, adjust and change is crucial, but it is often very difficult for a single company to be both efficient and innovative at the same time. Integrated relationships may be better able to combine both efficiency and innovativeness.

The economic effects are more easily achievable when both parties feel confident, share the same identity at least to some extent, and have certain joint goals. There is a need for a clearer vision and understanding of the roles in the earnings logic of both parties. This kind of mutual understanding would help in situations in which the relationship and company interests conflict: it is not surprising that a company's own strategies and goals often take precedence over relationship benefits. Although partnership relationships have long been emphasised in forest-industry customer-supplier relationships, it seems that opportunism still flourishes, and the word partnership remains more or less a buzzword.

Customer-supplier integration is not a separate project to be implemented at a certain point of time. Although there was evident progression in some of the cases studied, especially in the management of supply-chain efficiency, there was often a lack of understanding about the nature of the relationship and its development. This in turn, hinders the integration: the nature of the relationship clearly affects the process and the direction. The more complex, unstable, multinational and multicultural the relationship is, the more challenging is the process of integration. In itself it facilitates business predictability, but only when both parties are committed to working for mutual benefits, not based on opportunism or competition. The power of individual relationships is not always understood in the business context, or it is misinterpreted as competition between various suppliers and customers.

In order to fully exploit the benefits of an integrated relationship it is necessary to go beyond the operational to the strategic agenda. Managers need to have the ability to combine both the operational and the strategic perspectives so that both parties fully understand their roles and responsibilities. Existing organisational structures may not support such practice. For example, key individuals or account managers may lack the authority or competence to make strategic relationship-specific decisions. Although people skills, mutual inspiration, motivation, trust and mutual commitment are necessary elements in the move from an operational to a strategic agenda, the most important thing is for people to have enough power to make independent decisions at the customer-supplier interface.

It is not easy to bring long-term value creation and capability development into the discussion unless people are motivated and educated in their new roles as relationship promoters. According to Walter and Gemünden (2000, 90, 91), relationship promoters are managers who are responsible for all relational performance contributions, and have access to all necessary power sources. They intensively shape and advance the inter-organisational exchange process, and help both customer and supplier firms to articulate their mutual goals realistically, strongly, consistently and comprehensibly. Identifying and empowering relationship promoters should be the first step when parties start making plans to become more integrated.

Customer-supplier integration is not always an ideal state to aim at, however, not even in a long-term and committed relationship. If both parties are satisfied primarily with improving their own operations or strategies it might well be a viable option. Difficulties may arise if one party is aiming only at operational improvements, such as cost efficiency in current operations, and the other mainly at future strategic development, such as increased revenue benefits in new business areas. In this kind of situation it is necessary for them to discuss their individual goals in order to avoid minsunderstandings. If the joint strategies and goals cannot be identified and mutually understood, closer integration is probably not worth considering. Further, if the parties continuously struggle with contradictory views, the decision to disintegrate may be the most reasonable solution.

In addition, managers need to understand that formal structures or contracts do not guarantee that the benefits of integration will automatically be realised, although formality itself may help in the integration process. A speculative atmosphere seriously hinders the process, or even brings it to a halt. One problem is that changes in key or senior management may bring about informal disintegration, even if business continues as usual on the surface. In such cases, trust and confidence often have to be built between the newly appointed key individuals, and this process is often very time-consuming and costly.

This study has shown that the rate of change in many customer industries is already more rapid than in the supplier's industry. One challenging task is thus to match the different business dynamics, which may mean that the supplier has to rethink its traditional role. In some cases too, customers need to revise their attitudes and more carefully analyse their role and position in their supplier's business. On the one hand it was stated that the supplier's and the customer's businesses were too different to be integrated, but on the other hand, the cleverest cases had already utilised their differences and similarities and had started to operate as a joint and unified team with regard to their end customers. Through integration they had been able to exploit their joint capabilities in a dynamic, simple and flexible way. The process of integration has certain value in developing dynamic capabilities, which in turn enhances future value-creation potential.

It is clear from this study that competition in the forest industry has increased, and there have been many macro-environmental and external changes affecting the business development of customer-supplier relationships. No organisation alone can possess all the capabilities it requires, hence the need to develop effective capability utilisation in customer-supplier relationships. On the one hand, organisations should be flexible enough to support the inter-firm integration process, but on the other they need to operate as single coherent entities and deliver a consistent service (Wilson & Daniel 2007, 18). This is the dilemma those embedded in business relationships and networks always face. An integrated relationship that is carefully planned and mutually implemented may nevertheless become the kind of dynamic and strategic device that surmounts organisational boundaries and established structures. This kind of integrated entity clearly has more potential in terms of increasing long-term capability development and meeting changing external demands than any single company operating alone.

6.4 Evaluation of the study and future research possibilities

The wide scope and holistic nature of this research constrained this study to some extent. It covered various concepts and approaches, which naturally limited how deeply each dimension of integration could be investigated. In addition, it was not possible to investigate the effects and benefits more closely. Inherent in the integration concept is the assumption that targeted and carefully determined integrated relationships produce both efficiency and effectiveness benefits. One future research avenue would thus be to investigate more specifically what kind of efficiency and effectiveness benefits integration produces in different circumstances: this would require a more processual or longitudinal approach, and not only the retrospective and real-time methods used in this study.

The question of generalisability is sometimes considered problematic in case studies. Lukka and Kasanen (1999) found three basic types of generalisation: statistical, contextual and constructive. An important characteristic of the case study is that it can provide contextual generalisation: substantial results also hold true for other cases, and structural similarity to cases outside of such studies can be shown. It convinces the reader of the validity of case description and analysis, i.e. makes a credible impression. In case studies generalisability may refer to theoretical or analytical generalisation, which means transferability of research findings through, or against, existing theories. It is based on replication logic, not on sampling logic as in statistical generalisations. There are several types of generalised conclusions that can be drawn in forms such as conceptual frameworks and descriptive, explanatory and prescriptive models. (ibid., 72, 75, 77, 83) Constructive generalisation creates new reality by connecting the problem and its solution with accumulated theoretical knowledge. It also demonstrates the functioning and real-world implementation of the construction. (ibid., 244–247.)

Generalisation in this study is analytical and contextual in nature. It is analytical in that the cross-case comparisons and analyses were considered in the light of previous theories and approaches: extending understanding of the phenomenon of customer-supplier integration. It is also contextual, with caution, in that the developed conceptualisation could be considered relevant and applicable across various customer-supplier relationships in the forest industry, and to some extent in other industrial customer-supplier relationships as well. The study covered a carefully selected combination of various business and product areas, and different business types. However, one of the limitations is that the empirical results are mainly based customer-supplier relationships in the paper industry. The selected plywood industry is similar to the paper industry in that both are capital-intensive and aim at economies of scales in production and in other operations, which is a strategic necessity, and even a critical element. The forest industry is not homogeneous in that sense: it also involves smaller-scale businesses and new emergent business areas, which were impossible to include in this study given the research limitations.

One of the strengths of the study is that it took into account the cultural and national differences between two countries through the investigation of local, international and global relationships. The rate of industry or business change varied depending often on the degree of internationalisation. Typical customer-supplier relationships have been long-term and well established in this industry, and often began many decades ago as relatively local relationships. In the course of time they have grown and internationalised, which is why the study focused on the evolutionary development of the change process of integration. However, the researcher recognises that this process could as well be radical, even revolutionary. The developed conceptualisation thus has more general value in a wider context, in both a theoretical and a managerial sense, in industrial and international customer-supplier relationships. The conceptualisation is thus applicable to other industries than the forest industry on condition that the rate of industry/business change is taken into account.

This study concentrated on vertically aligned customer-supplier relationships. Power positions and relationship governance may differ considerably between vertically and horizontally aligned relationships. Co-operation may, in some cases, be easier in situations in which both parties are more equal, i.e. horizontally aligned. Therefore, the developed conceptualisation is not necessarily directly applicable in the case of horizontal alignment, e.g. joint ventures between companies involved in the same business.

Another future research task could be to test and validate the developed conceptualisation quantitatively. The elements identified in this research are by no means the only possible ones: new ones can be added and existing ones further specified. Informal integration in particular still requires further specification. The IMP School's ARA model was used in determining and specifying the integration process. The model covers the whole relationship, but one of its weaknesses is that the components overlap to some extent. It is still relatively vague, and it is not always very clear how the components are related to each other: indeed, the components are often treated separately in the literature. The ARA model conceptualises interaction in a relationship, but it does not cover attitudes to integration. However, it proved helpful in capturing the process, which requires specific efforts in every component. How the specific model components, actor bonds, activity links and resource ties are linked to the structural dimensions of integration remains, to some extent, tentative.

Finally, it would be fruitful to investigate the connection and relationship between dynamic capabilities and integration. Dynamic capabilities refer to innovativeness and to strategic value co-creation, which is an important outcome of strategic integration. Although this study showed that integration is relevant and important in the development of dynamic inter-firm capabilities, more research in that area is still needed. The question of combining economies of integration and economies of innovation remains under-researched. The dynamic-capabilities perspective seems promising in that sense, and may offer new research avenues and insights in the study of integration in business relationships.

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APPENDICES

Appendix 1 List of interviews

(Very short telephone discussions and meetings related to the case and the interviewee selection are not reported here)

Position	Case	Date	Method	Duration
1. Vice President, sales and marketing, supplier	Magazine publishing	*15.6.2005* 14.11.2006 9.2.2006	*Interview* Phone discussions	*2 h 15 min* 30 min 20 min
2. Segment Director, supplier	Magazine publishing	*24.8.2005* 17.10.2005	*Interview* Phone discussion	*1 h 30 min* 30 min
3. Group Operations Manager, customer	Magazine publishing	*25.8.2005* 20.10.2005	*Interview* Phone discussion	*1 h 30 min* 30 min
4. Sales Director/Vice President, supplier	Paper merchanting	*27.9.2005* 24.2.2006 4.6.2006	*Interview* Phone discussions	*2 h* 20 min 35 min
5. Senior Vice President, sales and marketing, supplier	Paper merchanting	*19.10.2005* 16.3.2006 15.6.2006	*Interview* Phone discussions	*1 h 5 min* 15 min 15 min
6. Marketing and Purchasing Director, customer	Paper merchanting	*27.9.2005* 16.12.2005 14.6.2006	*Interview* Phone discussions	*1 h 30 min* 30 min 15 min
7. Purchasing Director, customer	Paper merchanting	*28.9.2005* 30.11.2005 12.6.2006	*Interview* Phone discussions	*1 h 30 min* 30 min 25 min
8. Sales Manager, supplier	Newsprint publishing & printing	*3.10.2005* 13.3.2006 23.8.2006	*Interview* Phone discussions	*1 h 30 min* 45 min 15 min
9. Technical Customer Service Manager, supplier	Newsprint publishing & printing	*27.6.2006*	*Phone interview*	*1 h 15 min*
10. Technical Director, customer	Newsprint publishing	*12.10.2005* 5.1.2006 24.8.2006	*Interview* Phone discussions	*1 h 45 min* 30 min 15 min
11. Sales Director, supplier	Publishing & printing	*31.10.2005* 20.3.2006 23.8.2006	*Interview* Phone discussions	*1 h 30 min* 45 min 20 min
12. Purchasing Director, Print Media, customer	Publishing & printing	*7.10.2005* 24.1.2006 18.8.2006	*Interview* Phone discussions	*1 h 30 min* 30 min 15 min
13. Sales Director, supplier	Paper converting	*15.9.2005* 22.11.2005 16.6.2005	*Interview* Phone discussions	*2 h 15 min* 45 min 1 h 5 min

14. Director, Procurement, customer	Paper converting	*3.10.2005* 15.2.2006 22.6.2006	*Interview* Phone discussions	*2 h* 20 min 30 min
15. Business Manager, supplier	Plywood converting	*31.10.2005* 23.3.2006 4.9.2006 17.5.2006	*Interview* Phone discussions Meeting	*2 h* 30 min 15 min 1 h
16. Sales Manager, supplier	Plywood converting	*26.9.2005* 3.3.2006	*Interview* Phone discussion	*1 h* 20 min
17. Sales representative, supplier	Plywood converting	*17.5.2006* 16.8.2006	*Interview* Phone discussion	*1 h 15 min* 15 min
18. Director, customer	Plywood converting	*26.9.2005* *17.5.2006* 20.12.2005 4.1.2006 9.5.2006	*Interview* *Interview* E-mails received	*1 h 30 min* *1 h*

Appendix 2 Interview themes

I BACKGROUND INFORMATION

1 Information related to the interviewee

- Name, name of the company, position in the company
- Experience in the company and in the current position
- Name and position of the nearest foreman (men)
- Number and positions of direct and indirect subordinates

2 Information related to the organisation

- Organisation chart
- Major internal organisational changes during the last three years in the company

3 Information related to the business, products and services

- Business the company is involved in
- Products and services the company offers
- Customers the company has
- Major changes related the company’s business during the last three years

II THE CUSTOMER-SUPPLIER RELATIONSHIP AND ITS DEVELOPMENT

- Description of the relationship’s birth and early development
- The overall development of the relationship during the last (three) years
- The strength of the business relationship under investigation
- The importance of the customer/supplier relationship under investigation
- The importance of day-to-day activities versus future strategic planning
- Changes regarding information sharing, cooperation and commitment in this relationship
- Both parties’ interests and how they match in this relationship

- Power positions in this relationship

III THE INTEGRATION PROCESS

1 Actor bonds

- Key actors and their roles in this relationship
- Contact patterns and personal contacts between individuals
- Easiness of contacting
- Changes in the number of face-to-face meetings
- Mutual orientation in the relationship

2 Activity links

- Key activities and their role in this relationship
- Information flow and feedback giving in this relationship
- System connectivity between the parties
- Sharing IT systems, databases or other tools
- The need to have common systems or system linkages in the future

3 Resource ties

- Key tangible/intangible resources and their role in this relationship
- Sharing intangible and tangible resources in the relationship
- The usefulness of sharing resources now and in the future
- Control over resources
- The existence and nature of cross-firm teams or projects
- The importance of cross-firm teams or projects

IV OPERATIONAL AND STRATEGIC INTEGRATION

1 Operational integration

- The division of work in terms of transferred activities to the customer/supplier
- The reason for the changed division of work and its usefulness

2 Strategic integration

- Decision-making regarding the marketing/purchasing strategy
- The existence of shared interests between the parties
- The existence of joint goals between the parties

- The easiness of implementing decisions and targets (joint/separate) in this relationship
- The cultural problems that emerged in this relationship
- The prevalence of joint decisions concerning long-term cooperation between the parties
- Sharing risks and rewards in this relationship
- Sharing strategic information in the relationship
- The future long-term vision (in ten years) regarding this business relationship

V FORMAL AND INFORMAL INTEGRATION

1 Formal integration

- The role of formal contracts and agreements
- The existence of joint business or service process modelling in the relationship
- The need for joint process modelling in the relationship

2 Informal integration

- The role of trust and commitment in the relationship
- The role of other informal and social aspects in the relationship

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