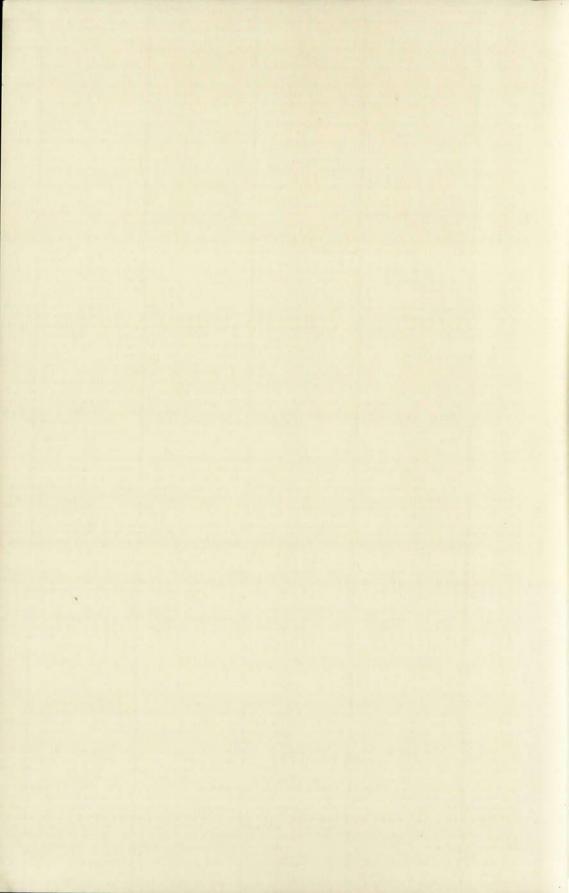
COMPETING ON KNOWLEDGE FROM CUSTOMERS

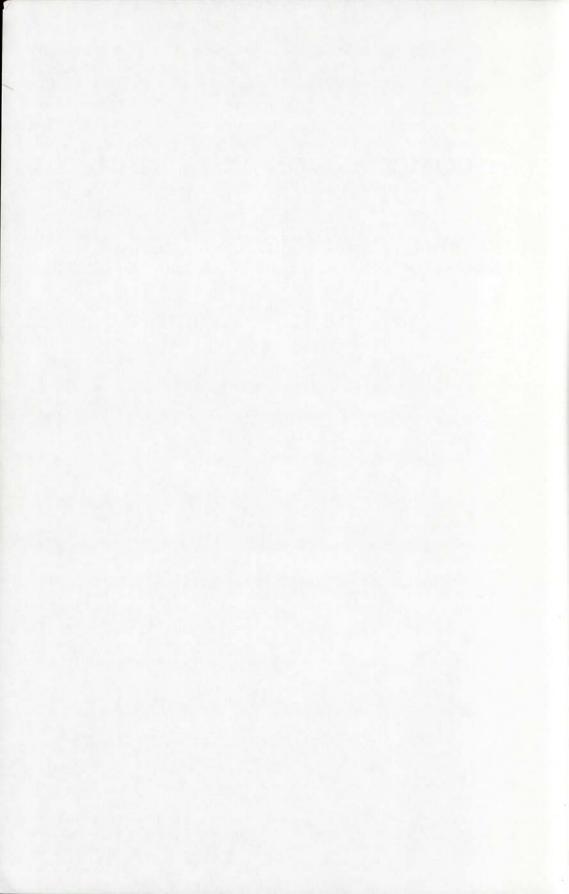
STRATEGIC PERSPECTIVE ON MANAGING KNOWLEDGE-INTENSIVE BUSINESS SERVICE FIRMS

Petteri Sivula



COMPETING ON KNOWLEDGE FROM CUSTOMERS

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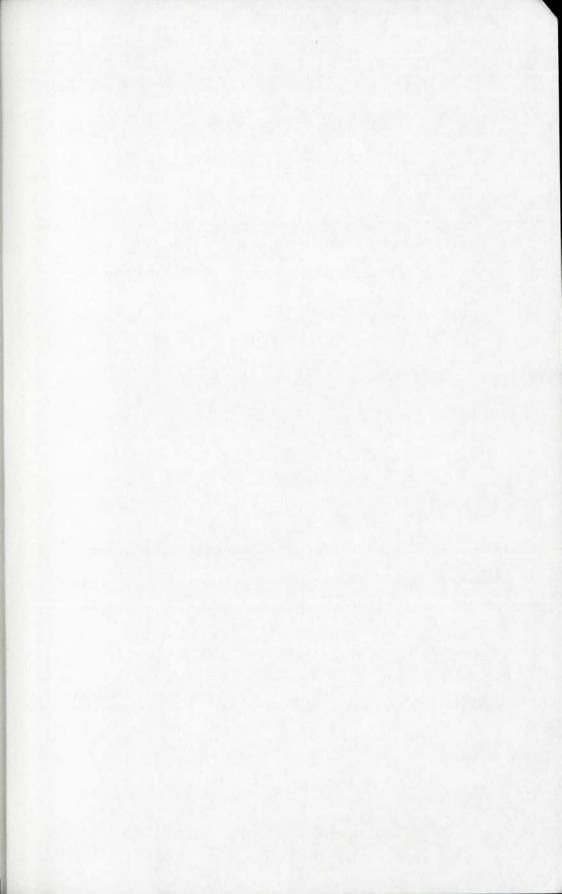
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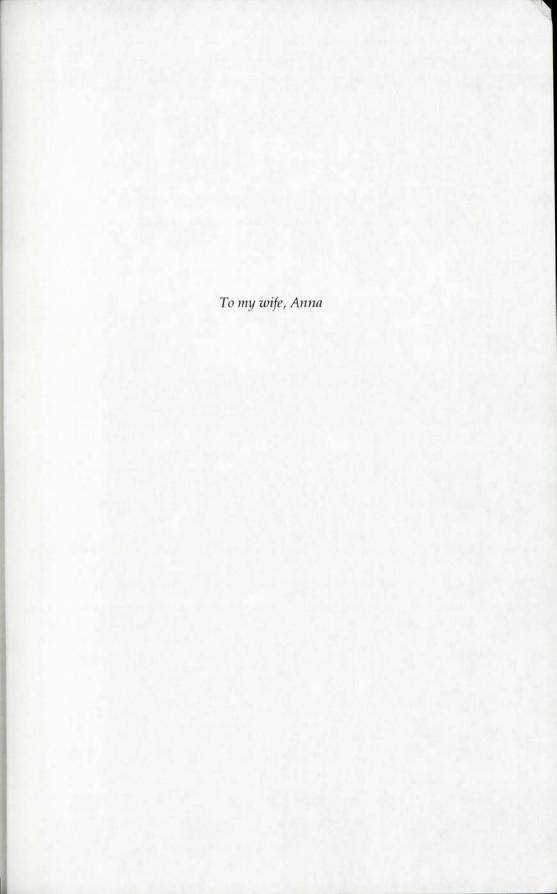
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Additional of Discourse by Victor 1917.

The groundwork of this book goes back to 1992, when I went to England to study technology and innovation management at Science Policy Research Unit in Sussex University. At SPRU, I was hit and excited by the idea that customers may actually be the most important source of new knowledge for the firms in innovation processes. The customers were shown not only to contribute to the innovation processes by being demanding, but they actually developed new knowledge to be commercialised in certain industries. These findings, truly, turn the idea of knowledge creation within the firms on its head. They suggest that the absorption of knowledge and knowledge creation in different kinds of interfaces may be an interesting area of research.

In 1993, Erasmus University Rotterdam in the Netherlands provided me an opportunity to start doing research on strategies in knowledge-intensive business services. That time, the paradigm shift in strategic management, from competitive positioning theory to the resource-based theory of the firm, inspired researchers to focus on a firm's internal sources of competitive advantage. I was fascinated by the idea that tacit knowledge may be a valuable resource for the firms that compete on building capabilities and competencies. The idea that tacit knowledge is hard to articulate with formal language, makes it, however, a challenging research subject. Being difficult to articulate implies that tacit knowledge is also difficult to transfer without interaction and participation. This suggests that the analysis of interactions is an important part of doing research on tacit knowledge.

Service management and relationship marketing literature provided me some additional ideas that integrated the picture about business service firms and knowledge. In 1995, I spent a summer in Finland at Swedish School of Economics and Business Administration studying the peculiar role of customers in services. Services are typically co-produced by the service provider and the customers. Thus, the interaction between the service provider and the customer, and the associated opportunity for knowledge absorption and development are inevitable in services.

Linking the ideas from innovation studies, strategic management, service management and relationship marketing literature, it became evident that the customers may potentially be a great source of knowledge for the business service firms. This book is the result of the attempt to analyse and to do research on this inspiring idea; learning and knowledge absorption from customers may be critical in acquiring and developing new knowledge in business services.

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My thoughts and the book benefited from intense discussions with very insightful management consultants that I respect, such as E. Kilpi and Dr. K. Storbacka. Particularly, I want to thank E. Kilpi of his help on finalising the manuscript. Any remaining errors or shortcomings are, of course, entirely mine.

I am also grateful to the number of people at the case study firms, KPMG and Tieto Group that were willing to give their valuable time for the research project and share their knowledge with me. I want to thank Finnish Academy and Finnish Cultural Foundation for the financial support of the research project.

Finally and especially, I want to thank my family that shared this research project with me very intensively.

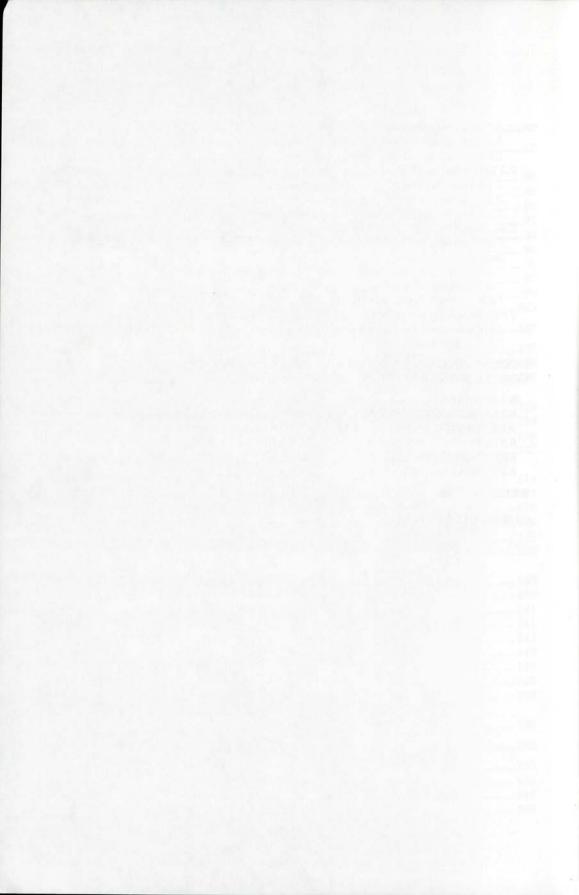
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INTRODUCTION: COMPETING ON KNOWLEDGE FROM CUSTOMERS

Knowledge is a key resource in competition, as the firm's ability to develop more inexpensive and better products, or the firm's ability to support the customers' processes with its services determine the business success. Strategic management literature on knowledge has, in general, focused on firm's internal knowledge creation processes that provide new products, make the operations more efficient and improves the understanding of the markets. In addition to the firm's internal knowledge creation, firms absorb, create and utilise knowledge in interaction with the business environment. The research on innovation processes has shown that in some industries 'the locus of innovation activity [may] not be found necessarily within the commercializing firm' (von Hippel, 1976: 238) and demonstrated impressively that the users or customers may have an essential role in creating new knowledge (innovations). The following results from innovation studies support the idea that firm's customers may be an important source of knowledge:

- In many cases it is the customer that identifies the improvement needs (need content of new knowledge), invents the solution, builds and applies the prototype (solution content of new knowledge), and informs the manufacturer "how to do it" (von Hippel, 1976).
- Successful knowledge development projects are often associated with outside collaboration, mostly with customers (Rothwell, 1986). In contrast to manufacturing industries where the contact with demanding and competent customers may offer important knowledge creation opportunities (Rothwell &

Gardiner, 1985), the customer's technical competence may not be that essential in knowledge creation processes in service industries (Voss, 1985).

Prior knowledge about the user industry is typically acquired in customer
contacts in terms of previous work or discussions in the user industry. Most of
prior knowledge about the user industry in service context is uncodified in
nature, instead of codified knowledge like textbooks, procedure manuals etc.
(Voss, 1985).

These results suggest that the locus of knowledge building may surprisingly often be customer contacts, in which the firms do not just apply "knowledge that a firm has developed" for solving customer's problems, but firms actually learn and build knowledge substantially in their customer contacts. Thus, important knowledge absorption and creation activities take place in the customer relationships and the customer contacts may be an important source of new knowledge. The result that the absorbed knowledge is often uncodified or tacit in nature implies that knowledge absorption from customer contacts may be strongly influenced by the contextual factors like the nature of client contacts in service delivery.

This research focuses on looking at the role of client contacts as a context of knowledge absorption and learning. The main research question in this study is what are the determinants of knowledge absorption from customers? This research question points to the need for analysing (1) what type of knowledge is absorbed from customers? and (2) how the customer context influences knowledge absorption? As a result, this research will be theory building in nature. The point of departure from innovation studies that have focused on identifying the sources of new knowledge, is in this study, (1) to look at how the customer relationships influence the absorption of knowledge from client contacts and (2) to analyse the role of uncodified or tacit knowledge in business service firm's (BSF) knowledge absorption. This study will focus on analysing what business service firms learn in their client contacts and will aim at:

· analysing knowledge as a resource

INTRODUCTION 3

 analysing client relationships or assignments as the context of knowledge absorption and

 analysing the strategic implications of knowledge absorption for the competitive advantage of a BSF.

Knowledge-intensive business service firms will be analysed in this research due to the peculiar nature of client contacts in services and due to the relatively high importance of knowledge as a resource in providing business services. Service management literature has emphasised the peculiar role of customers in service delivery (Bharadwaj, Varadarajan & Fahy, 1993; Lovelock, 1992; Sharma, 1991 & 1994). Services differ from goods by being intangible (Sasser, Olsen & Wyckoff, 1978) and services are often associated with information processing potential (Mills, Hall, Leidecker & Margulies, 1983) and knowledge (Drucker, 1969). Service delivery requires also typically close interaction between service provider and the customer (Fuchs, 1968) due to the simultaneous service production and service consumption (Mills & Moberg, 1993). The co-production in service delivery may offer opportunity for the exchange of information and knowledge in client relationships. As Mills, Hall, Leidecker & Margulies pointed out that 'service organizations survive by incorporating vital information from their environment, specifically from their customers and clients, followed by a transformation procedure in which the information is altered to fit the requirements of the client and the service capability of the firm (Emery & Trist, 1965). The need for information, the "raw material" of the service organization, forces an association between the firm and an unpredictable element in the external environment, the customer or client.' (1983, p119). There is a good reason to believe that learning in such client relationships may be intense and provides illustrative case material for theory building about strategic aspects of learning in client relationships. As Quinn, Anderson and Finkelstein emphasised: 'for most professionals, the learning curve depends heavily on interactions with the customers. Accordingly, the best companies systematically put new professionals in contact with the customers... The best organizations constantly push their professionals beyond the comfort of their book knowledge, simulation models and controlled laboratories. They relentlessly drive associates to deal with the more complex intellectual realms of live customers...' (1996: 73-74).

Strategic management provides the general frame of reference to the study. Strategic management as an inquiry into the roots of competitive advantage of the firm provides understanding of interplay between the external and internal factors of competition. The common view is that strategic management is about establishing fit between firm's resources and its business environment (Reve, 1990). This implies that firms either adapt to the external changes (outside-in) or influences the business environment (inside-out) by developing firm's resources. The competitive positioning approach takes a standpoint that firm's competitive advantage is determined by the competitive situation of an industry. Firms that are well positioned are able to influence forces of competition and have competitive advantage over others (outside-in). The resource-based theory of the firm, on the other hand, suggests that products and positioning in product markets may be regarded as the reflection of idiosyncratic and unique resources of the firm that are eventually the source of competitive advantage of a firm (Conner, 1991). The resourcebased theory of the firm provides rationale for analysing knowledge as a valuable resource and a source of competitive advantage of a firm. The external and internal sources of competitive advantage may, however, be interdependent so that the external factors may be utilised in developing firm's internal resources, like knowledge. This may offer superior strategic approach in dynamic competition.

How firms compete on knowledge, and how to analyse knowledge management? Penrose's (1959) work on the resource-based theory of the firm has pioneered the recent research in strategic management on knowledge (Bartlett & Ghoshal, 1993; Boisot, 1995; Davis & Botkin, 1994; Dierickx & Cool, 1989; Grant, 1991 & 1996; Hall, 1992; Hamel, 1991; Hedlund; 1994; Nonaka, 1994; Winch & Schneider, 1993) and learning (Argyris, 1992; Lane, 1994; Senge, 1990; Walsh & Ungson, 1991). The research on knowledge in strategic management has focused on the development and creation of new knowledge within the firm and the conversion of knowledge in knowledge creation processes (Grant, 1996; Nonaka, 1994). Boisot, Griffiths & Moles (1997) proposed using Boisot's (1983, 1995) model of Culture Space that socially relevant knowledge gets structured within the firm and between the

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firm and the target group. The driving force behind the structuring processes is the need for the conversion of knowledge from uncodified or tacit knowledge to codified knowledge in order to increase the diffusion of knowledge without loosing the value of knowledge. In this study Boisot's ideas about knowledge structuring between the firm and the target group will be applied in business service context and extended by explicitly identifying the locus of knowledge processes and adding the BSF/client boundary into the framework of knowledge conversion and transfer.

Tacit knowledge in terms of experience and skills (Penrose, 1959), the understanding of client's context (Hayek, 1945) and the development of tacit knowledge in client contacts (Mills, Hall, Leidecker & Margulius, 1983) have been identified as potential source of competitive advantage (Sivula, vd Bosch & Elfring, 1997). However, the ideas that tacit knowledge may be an immediate source of competitive advantage has been criticised due to the limited leverage opportunity of tacit knowledge and the importance of codification processes for utilising tacit knowledge (Sanchez, 1997). This study will show that the processes of knowledge absorption, development and deployment are depending on the characteristics of the context, in which the knowledge processes take place. The nature of interaction with the target group (the group of people, to which knowledge is transferred or with which knowledge is utilised) will influence the degree of codification needed in such processes. This study will analyse the impact of client context on the locus of knowledge processes and propose that the opportunity for the utilisation of tacit knowledge depends on the nature of client relationships. This implies that codification as such is not necessarily so important as Sanchez (1997) argued, but the context of knowledge utilisation determines the need for codification. This study will show that the nature of customer contacts influences the opportunity for knowledge absorption due to the focus and locus of knowledge conversion and transfer in different types of client relationships.

Figure 1 will give an overview of the structure of the book. Chapter one introduces the topic of the PhD thesis and identifies a research problem by pointing to the opportunity of knowledge absorption and the implications of knowledge absorption from customers in business services. Looking at the client contacts as a source of knowledge may provide an interesting approach to managing BSFs from

the point of view of strategic management, because knowledge absorption, development and deployment are overlapping in service delivery. The simultaneous nature of service production and consumption suggests interaction between the client and the business service firm, and client contacts may offer strategic opportunities for learning and developing the knowledge base of a business service firm. The challenge of this study is to look at how knowledge conversion and transfer is influenced by different types of client relationships in the context of business services.

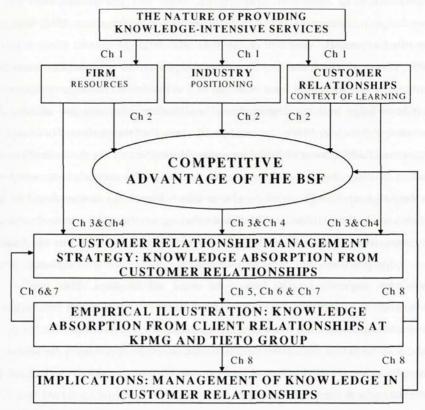


Figure 1 Structure of the book

Chapter two will present the overview of the approaches in strategic management literature and introduce a framework for looking at the competitive advantage of a BSF. There are a number of ways to perceive the nature of competition and, thus, the sources of competitive advantage of a firm. Two INTRODUCTION 7

approaches: (1) the competitive positioning approach and (2) the resource-based theory of the firm, will be introduced for developing a general framework of competitive advantage of a BSF. This study will draw from the resource-based theory of the firm in developing the understanding of strategic aspects of managing BSFs. This approach aims at an explicit identification of internal factors that affect the distinctiveness of resources and success in the product market (Wernerfelt, 1984). The resource-based theory of the firm views the development of the firm's resources as a way to influence the business environment and gain a competitive advantage for a firm. At the heart of the resource-based theory of the firm, firms are conceptualised as unique bundles of idiosyncratic resources. The distinctiveness and uniqueness of resources and their idiosyncratic combination are identified to be the source of competitive advantage in the resource-based theory of the firm (Peteraf, 1993).

The line of reasoning in the resource-base theory of the firm combined with service management theories will suggest that client contacts may offer opportunity for the development of a business service firm's knowledge base. This study will focus on knowledge as a critical resource in providing knowledge-intensive business services and identify knowledge absorption in client relationships as a strategic opportunity that needs to be analysed and exploited. By focusing on the client relationships as a potential source of knowledge and context of learning, it will be proposed in chapter two that knowledge absorption in client relationships develops the knowledge-base of the business service firm, providing opportunity for (1) utilising the absorbed knowledge in the long-term client relationships (knowledge leverage with the same client) and (2) utilising the absorbed knowledge in new client relationships (general knowledge leverage). Finally, knowledge flows in client interface will be identified and the central concepts to be used in analysing knowledge absorption in client relationships will be defined.

Chapter three will analyse the knowledge processes in client interface. Based on the degree of codification of knowledge, chapter three will define four types of knowledge processes in client interface: codification, extension, absorption and sharing. These are based on two basic processes in which knowledge is either transformed from tacit to codified or vice versa; or knowledge is transferred as such. Boisot's (1995) ideas about knowledge diffusion between the firm and the target

group in business service context will be extended by identifying explicitly the locus of knowledge processes and adding the BSF/client boundary into the framework of knowledge conversion and transfer. This will be helpful for specifying knowledge conversion and transfer at the level of client relationship and later in chapter eight in developing the implications of different types of client relationships for knowledge management. Hamel's (1991) concepts, receptivity and transparency, will be used for analysing the determinants of knowledge transfer between firms. Two central determinants of knowledge transfer in client relationships will be focused: absorptive capacity of a business service firm and the transparency of the client.

Chapter four will focus on the analysis of client relationships from the point of view of knowledge absorption. A framework for analysing the linkages between knowledge absorption and different types of client relationships will be developed. By juxtaposing critical dimensions of client relationships in terms of knowledge absorption opportunity four different types of client relationships have been identified: (1) the client partnership, (2) the loyal client relationship, (3) the comakership and (4) the market exchange relationship. The implications of different types of client relationships for knowledge absorption and learning will be analysed and the propositions concerning learning in client relationships will be presented. The developed framework will facilitate the case study research by providing the basis for the theoretical selection of cases and the analysis of case study results.

Chapter five will take a look at the previous research on knowledge absorption from customer contacts and present research design for conducting case studies on knowledge absorption in client relationships. The methodological reasons for choosing case study research approach will be discussed and the theoretical sampling of cases (Eisenhardt, 1989) will be emphasised. The selection of cases will be based on the theoretical framework and the propositions developed in chapter four. The research design will be presented by describing the rationale behind case selection and the research process at case study firms.

In order to illustrate the knowledge transfer and learning in client relationships, a number of case studies have been conducted in the Netherlands and in Finland. Two case study firms, KPMG, the world's biggest auditing firm, and Tieto Group, the biggest IT consulting firm in Finland have participated the research

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project and provided access to analysing some of their client relationships from the point of view of knowledge absorption. Chapter six will present the case study at KPMG. The case description will give an overview of KPMG and describe the current changes at KPMG. At KPMG the absorption of knowledge was investigated in three client relationship cases: a loyal client relationship (auditing), a comakership (management consulting) and a client partnership (auditing). The theoretical propositions developed in chapter four will be illustrated by these client relationship cases. At the end of chapters six and seven the cases will be compared and conclusions on knowledge absorption in different types of client relationships will be drawn.

Chapter seven contains a case study at Tieto Group, where knowledge absorption at market exchange relationships was investigated. Compact service case turned out to be interesting from the learning perspective, because it provides insights to the peculiar case of client relationships that are managed in product-oriented way. Compact service case will (1) illustrate learning implications of short-term and distant client contacts and (2) show how new or different ways of reconfiguring the customer contacts may be a source of learning.

This research on the absorption of knowledge will contribute to the existing theory of strategic management by

- providing new insights into the absorption of knowledge and the firm/customer interactions by integrating more specific theories like service management with general theories of strategic management,
- developing integrated frameworks for analysing strategic aspects of knowledge absorption from customers,
- extending Boisot's (1983, 1995) Culture Space by adding BSF/client boundary into the framework and by identifying the locus of knowledge processes in different types of client relationships and
- providing new insights and empirical evidence in the research on knowledge management by analysing the role of tacit knowledge in managing client relationships.

With the help of these contributions, some general patterns of knowledge management in client relationships may be suggested in chapter eight. Three main patterns of knowledge management in customer relationships emerge from the results of this study: (1) process alignment in client partnerships by knowledge exchange and development, (2) proactive adaptation to the client's requirements and problems by knowledge conversion (a) between the transactions or (b) during the assignment and (3) service delivery in arm's length customer relationships by packaging of knowledge. It should be noted that the case studies focused on business service context and without further theoretical and empirical research (replications) the wider generalisation of case study results may not be appropriate. However, it is important, on the basis of present findings of this study, to recognise that the client relationships are an important source of knowledge for the business service firms.

THE ROOTS OF THE COMPETITIVE ADVANTAGE OF A BUSINESS SERVICE FIRM

2.1 INTRODUCTION

In perfectly competitive markets firms do not make profits due to the equilibrating competitive processes, explains the neo-classical economics. This statement describes the way markets function in the context of perfect competition, where homogenous firms are assumed to compete by minimising the cost of production. Economics looks at economic activity and competition from the point of view of markets. However, in the world of strategic management unique and dissimilar firms act strategically and earn above average profits due to their competitive advantage over the rivals. As Teece pointed out about the dynamic nature of strategic management: 'Strategic management issues are centrally concerned with dynamics. Economic theory, on the other hand, deals almost exclusively with equilibrium analyses, which are very often static.' (1984). These two viewpoints highlight different sides of the same phenomenon, competition. When customers are added into the analysis, the picture becomes even more complicated. As Larsson & Bowen pointed out: 'Indeed, the phenomenon of customer's participating in the production of services (more so than goods) is not easily addressed through established perspectives. For example, in economics the focus is on the market condition of organizational supply of output and the customer demand for it. However, in services, customers are not simply a source of demand, they also are a source of production inputs in the form of information...' (1989: 214). This implies that in addition to being part of market processes the customers at service context are also active participants in production processes.

Strategic management research, as an inquiry into the roots of the competitive advantage of a firm, analyses the relationships between the firm and its business environment, and firm's ability to influence the competitive market processes. The academic discussion in strategy and business policy has dwelled around the success factors that contribute to the competitive advantage of the firm. The basic question mirrors the distinction between the business environment and firm's internal context in strategy: is it the firm's internal factors or the nature of business environment that determines the business success? This chapter will provide some answers to this question by looking at the nature of competition and its implications for the theories of strategic management. This chapter aims at (1) developing a framework for looking at the competitive advantage of a knowledge-intensive business service firm and (2) analysing what are the strategic implications of close interaction with the customers for the competitive advantage of a BSF. The critical role of customer relationships as a source of knowledge will be emphasised and the implications for competitive advantage will be highlighted. This framework will structure the research efforts and specify the issues that will be focused in this book.

Figure 2 will describe the line of reasoning in explaining different approaches in strategic management. As figure 2 suggests, two major factors that influence the opportunity for competitive advantage of a firm, may be identified: (1) the nature of competition and (2) the source of competitive advantage of a firm. The nature of competition will be associated with a firm's ability to influence its business environment. Basically, in dynamic competition a firm is able to influence its business environment and in static competition the business environment determines a firm's activities. The nature of competition determines how a firm should focus its strategic behaviour. The underlying theories of the firm in strategic management will be utilised in analysing the nature of competition. It will be shown that in the context of more dynamic competition, i.e., changing, unpredictable and uncertain business environment, paradoxically, focus on firm's internal development of resources is required in order to adapt to the changes or in order to influence the developments in business environment.

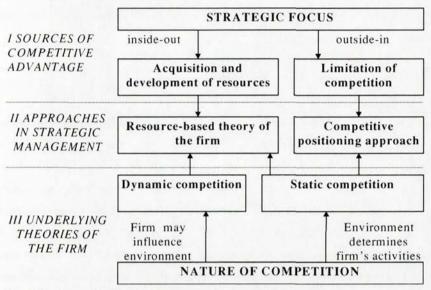


Figure 2 Line of reasoning in describing different approaches in strategic management

Section 2.2 will take a look at the perception of competition in underlying theories of the firm. The theories of the firm in economics offer insight into the nature of competition. Economics describes the phenomenon of competition from the point of view of markets and it is useful for describing the nature of competition. Strategic management, on the other hand, is focused on explaining how firms should compete in order to gain competitive advantage over others. Section 2.3 will present different approaches in strategic management. In the following discussion the focus will be on the resource-based theory of the firm. It will be proposed that in the context of more dynamic competition a firm should be able to develop its resources and learn in changing circumstances in order to gain and sustain its competitive advantage.

Section 2.4 will focus on knowledge and learning in business services. The analysis of different approaches in strategic management provides basis for building the framework of competitive advantage in business service context. The resource-based theory of the firm and service management approach will suggest a unique view to business service context, namely, focus on the development of resources like knowledge in a close interaction with the client. The framework for looking at the

strategic aspects of managing business service firms will be presented for increasing the focus of following research.

2.2 THE NATURE OF COMPETITION

2.2.1 Background

This section will take a look how competition is viewed in different theories of the firm. The basic criterion for comparing different theories of the firm is the way the interaction between the business environment and the firm is explained or perceived¹. Those theories that grant little or no room for the individual firm's manoeuvre will be viewed as static theories due to the exogenous and dominant nature of firm's business environment. Dynamic theories, on the other hand, describe firm's business environment in endogenous terms and offer limited and sometimes extensive (radical innovations) opportunity for influencing the business environment causing (sometimes fundamental) changes in the way the markets operate or establishing new linkages between different economic actors.

Even if some theorists in strategic management have suggested that strategic management as an academic discipline lacks a theory of the firm (e.g., Foss, 1996; Reve, 1990), there are underlying theories of the firm in strategic management that provide some ideas of the role of business environment in firm's competitive activities. Two clusters of theories of the firm may be identified: (1) theories of the firm that view firm's activities to be determined by its business environment (industrial organisation economics (IO) theories of the firm) and (2) theories of the firm that view firm as an active economic agent that may influence its business environment (Austrian economics and evolutionary economics theories of the firm). These clusters of theories will be compared by looking at the explanations of different theories to (1) the role of the firm, (2) type of competition and (3) determinants of competitive advantage. Typically, IO theories of the firm view the business environment to be (1) the determinant of firm's behaviour and (2)

Barney (1986b) makes a distinction between IO, Chamberlain and Schumpeterian competition. IO economics and Schumpeterian approach will be presented as opposite views of competition and thus proposed to illustrate the basic differences for the sake of simplicity. Chamberlain economics is close to the resource-based theory of the firm that will be presented in section 2.4. Barney noted: 'Chamberlain economics begins with the focus on the unique assets and capabilities of individual firms, and then traces the impact of these idiosyncratic organizational traits on the strategies firms pursue and returns to those strategies.' (1986: 793).

exogenous. These characteristics will be associated with static competition in which a firm adapts in a rather passive way to the changes in its business environment. Austrian and evolutionary economics theories of the firm will represent a different approach to competition. These approaches perceive the business environment to be dynamic in terms of offering opportunity for an individual firm (1) to influence its business environment and (2) to utilise market processes. The analysis of the nature of competition will be based on the underlying theories of the firm.

2.2.2 Underlying theories of the firm

Neo-classical economics: firm as a production function

The theory of the firm in neo-classical economics represents an approach, in which markets determine the activities of the firm. The neo-classical economics describes a firm as an economic entity that combines the inputs of production in order to produce outputs for perfectly competitive markets. Firms are assumed to be relatively small entities so that they can not affect the market prices of production factors or products or services and thus are viewed as price takers. In that sense, a firm's purpose is to combine resources to produce an end product (Conner, 1991) in response to the changes in market prices.

Furthermore, neo-classical theory of the firm assumes that the inputs of production are completely mobile and divisible, and thus able to flow to the highest-valuing use that is determined by the pricing mechanism (perfect competition in factor markets) and marginal productivity of the production factor (Conner, 1991). This approach to a theory of the firm requires that the marginal contribution of each input is easily calculated and that perfect information is available to all firms at least in terms of price information that captures the outcome of bargaining situation in factor and product market. As Nelson notices: '…economists continue to see the central economic problem as that of meeting preferences as well as possible, given resources, and prevailing technologies and institutions.' (1991: 64). This provides rather static picture of competition, in which perfect information and diffusion of knowledge reduces the firms to identical entities that are driven by market conditions.

As Teece (1984) has noted, the masqueraded theory of production in neoclassical economics should not be called a theory of the firm, since the treatment of a firm in such way does not say anything about the internal structure of the firm or the boundaries of the firm. Theories of the firm that are based on the assumption of perfect competition are clearly inadequate for understanding managerial activities in the dynamic business environment and hardly satisfactory as an underlying model of the firm in strategic management, since the decision making is assumed to be a non-problematic activity that is performed by hyper-rational decision makers (Teece, Pisano & Shuen, 1990). Nelson confirms this by pointing out:'...the 'economic problem' is basically about getting private incentives right, not about identifying the best things to doing, which is assumed to be no problem.' (1991: 64).

Bain-type IO economics: firm as an obstructer of competition

Bain-type IO economics offer a more practical and relevant underlying theory of the firm for strategic management. The explicit notion that firms are able to behave strategically in terms of increasing monopoly power or collusion with other firms gives a more strategic role to the firm in Bain-type IO. The exercise of monopoly power or collusion with other firms in order to affect market price offers an opportunity for earning economic rents (profits that exceed the opportunity cost of capital) and implicit purpose of the firm. A firm's purpose is to maximise its profits by limiting competition in an industry.

In Bain-type IO tradition, "structure-conduct-performance" hypothesis guides the identification of determinants of firm's performance. In the same way as in perfect competition approaches, external factors like industry structure drives the conduct and the performance of the firms. The difference is as Conner described it: 'Although the perfect competition view predicts that, in equilibrium, no persistent performance differentials will exist, Bain-type IO holds the opposite (1991: 125).' Bain-type IO model of the firm offers a more consistent motivation for the behaviour of the firm as an entity that maximises profits. A firm tries to maximise its profits by utilising different means for gaining the competitive advantage of the firm: differentiation and cost efficiency, and collusion with other firms. Even if Bain-type IO provides a more plausible and a more dynamic picture of the firm, it is still based on a static concept of competition in which the firm does not influence its business environment or industry settings, but industry factors determines the firm's

activities. Basically, Bain-type IO firm tries to benefit from market imperfections in order to influence the market price, not the market process.

Even if Bain-type IO offers an appealing approach to the theory of the firm from the strategic management point of view, it has little to say about the internal factors of the firm that contribute to the firm's ability to limit competition in an industry. In that sense, Bain-type IO offers an explanation for determinants of competitive advantage at industry level, but it fails to address the issues of managerial relevance: context and processes at firm level. Next, a review into Austrian and evolutionary economics will provide some insights into these issues.

Austrian and evolutionary economics: firm as a repository of knowledge

As proposed in last section, neo-classical and IO theories of the firm highlight the profits as the result of monopoly power (factor or product markets) and the ownership or the control of scarce resources (Ricardian rents). Opposite to these theories Austrian economics views profits as (1) a consequence of exploiting opportunities (deployment of knowledge) and (2) incentive for discovery and innovation (development of knowledge). As IO theories look at the competition from an equilibrium point of view, Austrian and evolutionary economics focus on entrepreneurship and innovations that typically disrupt markets and drive markets to disequilibrium. The disequilibrium of markets is thus both (1) the reason for profits and (2) the incentive for entrepreneurs to acquire, develop and deploy knowledge for exploiting opportunities.

Perception of markets and competition in Austrian and evolutionary economics imply that firms intend to do things that create disequilibrium or exploit the existing disequilibrium. This requires entrepreneurial (unique and circumstantial) actions in order to benefit from temporary market disequilibrium. As Jacobson pointed: 'Entrepreneurship occurs whenever a market participant does something even a little different from what is currently being done, so that some market imperfections can be profitably exploited.' (1992: 789). How to do things in a different way?

Schumpeterian approach views the entrepreneurial discovery to be an act that reforms or revolutionises the pattern of production or the range of products in the markets so that an industry will be reorganised. Schumpeterian approach has

influenced evolutionary economics and it emphasises the impacts of technological change on economic development and a firm's role in this process. Technological change is considered to be endogenous in nature so that a firm's activities (particularly R&D activities) influence its business environment by inducing changes in the rules of competition due to the innovations. Nelson describes this: 'In real capitalist economies, in contrast with the neo-classical models, technical advance proceeds through an evolutionary process, with new products and processes competing with each other and with prevailing technology in real time, rather than solely in ex ante calculation.' (1991: 69). The Schumpeterian entrepreneur thus causes disequilbrium by introducing and utilising innovations in the markets.

The second approach emphasises the existence of unorganised information (knowledge of particular circumstances of time and palace) as a source for business success (Hayek, 1945) and the firm's possibilities of exploiting short-term opportunities (Kirzner, 1979) that such knowledge offers. This suggests an entrepreneur that seeks opportunities for utilising gaps and niches. This process of filling gaps may create tendency towards equilibrium (Cheah, 1990), but due to the circumstantial and temporary nature of such competitive advantage the markets remain in disequilibrium.

Even if these approaches focus on different issues as a source of business dynamics, both approaches share the view that differences in knowledge possessions and acquisition capability are the foundations of business success. Circumstantial or new knowledge in terms of innovations may be seen as prerequisite for creating and exploiting opportunities. The competitive advantage of a firm depends thus on the possession of superior information (Jacobson, 1992). This implies that the role of the firm in Austrian tradition is to gather, evaluate and utilise information. A firm behaves as an arbitrageur that identifies the mismatch between what the factor market can offer and what customers will be willing to pay. As IO theories emphasise the limitation of competition, Austrian school stresses the opportunities for profits and entrepreneurial discovery in exploiting these opportunities that arise because of uncertainty and information asymmetries between economic agents.

Even if Austrian economics focuses more on the explanation of nature of competition and the description of a dynamic market process and the determinants

of profitability in this process, the implicit model of the firm may be identified. (1) Firms are heterogeneous and (2) maximising profits in a dynamic sense. This means that the heterogeneity of firms is the source of potential profits and thus firms intend to do things differently in order to gain profits. (3) Firms have an arbitrage function between factor markets and product markets. (4) Entrepreneurial activity drives the search for potential profits from arbitrage (entrepreneurial discovery). In order to earn entrepreneurial profits, a firm needs to exploit asymmetries of information and uncertainty. (5) The role of a firm is to collect, evaluate and utilise information. (6) A firm's success is affected by unobservable factors. This suggests that knowledge and learning affect the equilibrium conditions of markets and thus the opportunity for profits.

2.2.3 The comparison of underlying theories and the implications for competition

Table 1 summarises the above discussion about the underlying theories of the firm and looks at how (1) the role of the firm, (2) type of competition and (3) determinants of competitive advantage are viewed in different theories of the firm. The central difference between these approaches is that opposite to Austrian economics, neoclassical theory of the firm and Bain-type IO theory of the firm suggests a more passive role to the firm and views business environment as a determinant of firm's activities. Since a firm's competitive activities are determined by the conditions of business environment, competition is more adaptive and static in IO theories of the firm than in Austrian and evolutionary theories of the firm.

IO theories of the firm share the assumption about the firm's business environment: the market is characterised by equilibrium. This is due to the idea that the firm is unable to influence its business environment and able to interact with its customers only in transactive way. Having these properties, IO theories offer little incentive for the firms to seek economic rents and competitive advantage. As Jacobson stated: 'Perhaps the primary limitation of the neo-classical theory of competition and profit is that it fails to provide a motive for the search for new products and methods (i.e., innovation).' (1992: 785).

The focus on external determinants of firm's performance in IO theories of the firm implies that the markets are exogenous in terms of technological or other changes (e.g., social preferences) and reduce the behaviour of the firm to adapting to

these changes. Firms are regarded as vehicles of production that enhance customer welfare in perfectly competitive environment by combining resources and enhancing efficiency in production (neo-classical theories) or exploiting customer welfare by exercising monopoly power (Bain-type IO). Within IO economics tradition, firms are viewed as externally driven economic entities that either react automatically to changes in business environment (neo-classical economics) or behave strategically and influence the business environment by trying to limit competition (Bain-type IO). The common factor in these theories is the role of business environment as the main determinant of performance and the minor role of resources in terms of being homogeneous (neo-classical economics) or easily acquirable (Bain-type IO).

Table 1 The comparison of the underlying theories of the firm

Theory	Role of a firm	Type of competition	Competitive advantage
Neo- classical economics	to combine resources in order to produce an end product	 static (business environment will determine firm's activities) constrained by perfect competition and scale factors (increasing average cost) 	perfect information and competition yields a market equilibrium of zero economic rents
Bain-type IO economics	to restrain output through exercise of monopoly power or by colluding with other firms	static (business environment will determine firm's activities) determined by industry structure	differentiation in order to increase entry barriers and monopoly power
Austrian economics	to function as an arbitrage between factor markets and product markets to utilise disequilibrium	dynamic (firm may influence its business environment) determined by firm's ability to collect, evaluate and utilise information	affected by unobservable factors firm's ability to utilise and create disequlibrium in markets

Table 2 shows the central differences in presented theories. The basic difference is the perception of the nature of market process. In Austrian tradition market process is essentially dynamic process that may tend to move markets

towards equilibrium, but basically market processes disrupt equilibrium and thus offers an opportunity for entrepreneurial profits. This dynamic process implies the existence of heterogeneous firms that influence the market outcome and thus make markets endogenous and competition dynamic. As Jacobson stated: 'Adherents of neo-classical economics assume away the fundamental dynamic characteristics of competition and concentrate primarily on specifying the effects of competition after process of competition has reached its limits.' (1992: 789).

Even if neo-classical economics identifies the firms as profit maximisers, the assumption of perfect information and competition reduces a role of the firm to cost efficient vehicle of production that adapts to external changes in a passive manner. The development of new knowledge (innovations) and deployment of circumstantial knowledge as important economic activities driving the market processes in Austrian tradition are neglected in neo-classical economics. Managerial and technical knowledge needed in the production process is described by the production function and the knowledge is assumed not only to be freely available to any firm, but also identical for all the firms in neo-classical economics. Perfect information and availability of knowledge (e.g., technology), and perfect competition yields a market equilibrium that drives economic rents to zero. This means that firms are not able to behave strategically and the competitive advantage of the firm that new knowledge and innovations may provide is assumed away. The competition is thus static in terms of firms influencing the business environment.

The role of knowledge and learning in competition differs in IO and Austrian theories of the firm. IO firms, on the other hand, are assumed to have perfect knowledge about conditions of markets and new technologies (exogenous technological change) are assumed to diffuse rapidly in an industry. Factor and product markets are in equilibrium and all the decisions are static in a way that as long as the market prices or preferences and technologies do not change exogenously, resources are allocated according to the marginal rules. Since knowledge is perfect and adapted from exogenous changes learning is assumed to be simplistic (recognising changes), non-problematic (instant adaptation) and passive (exogenous change) in IO theories of the firm. The assumptions behind homogenous production functions (neo-classical economics), easily acquirable

resources (Bain-type IO) and competitive markets imply that the information and knowledge acquisition is assumed to be non-problematic and that the diffusion of knowledge is fast and not limited in any way. Since the knowledge is assumed to be symmetrically available to all firms in an industry and the learning is viewed to be a simplistic, non-problematic and passive process, IO theories of the firm do not pay any attention to the central activity of a firm in Austrian economics as a collector, evaluator and user of information.

Austrian tradition views successful firms as entrepreneurial entities that gather, evaluate and utilise information about market and technical opportunities. Austrian firms learn from experience and from the development of knowledge (e.g., R&D). In addition to the central role of knowledge, information and learning, firms are seen to function as an arbitrageur between factor markets and product markets in Austrian economics. Austrian firms are entrepreneurial entities that seek opportunities between factor and product markets, and utilise unobservable factors like circumstantial knowledge in these processes.

Even if neo-classical economics offer a rather static picture of competition, it does allow some room for learning. This type of learning is typically efficiency driven and it basically aims at cost efficiency in production by the means of codification and diffusion (Boisot, 1995). Boisot calls this type of learning neoclassical learning. Neo-classical learning facilitates firms to adjust to changing markets and environment, but such learning also eliminate economic rents due to the equilibrating process of neo-classical learning. A more dynamic competition offers also an opportunity for learning. Boisot (1995) calls this type of learning Schumpeterian learning. Schumpeterian learning drives the firms to learning processes, in which knowledge is being absorbed from business environment in a creative and selective way. The external experiences are being combined with the existing pieces of knowledge and new knowledge is being created in the interaction with the business environment. As Boisot points out: 'In contrast to the retentive strategies suggested by N-learning (a war of positions), S-learning advocates the speed of the social learning cycle (a war of movement).' (1995: 495). This type of learning changes the rules of games and brings the Schumpeterian creative destruction into the business environment (Schumpeter, 1934).

Table 2 Comparison of underlying theories of the firm in strategic management

	Static theories	Dynamic theories
Nature of markets	equilibriumexogenousthe outcome of market process focused	 disequilibrium endogenous market processes focused
Source of competitive advantage	 perfect vs. limited competition monopoly profits 	 different ability to identify and utilise opportunities ability to influence business environment Ricardian profits
Success factors	observable	unobservable, like knowledge
Knowledge	perfectly diffused	differences in knowledge possession provide opportunity for profits
Learning	 simplistic, non-problematic and passive N-learning part of the equilibrating process 	 changes in knowledge base drives the competition and disrupts equilibrium offering opportunities for entrepreneurial profits S-learning

Next, the dominant approaches in strategic management will be analysed and associated with the underlying theories of the firm. Since the aim is to explain how to build competitive advantage in the context of business to business services, those approaches that provide some ideas for further elaboration of competitive advantage of a BSF will be focused. The resource-based theory of the firm will be focused and utilised in creating models that specify the critical factors in the competitive advantage of a BSF.

2.3 APPROACHES IN STRATEGIC MANAGEMENT

2.3.1 Basic approaches in strategic management

Competitive positioning vs. resource-based approaches

The approaches in strategic management reflect the basic distinction of the source of economic rents². During 1980's the strategy literature was dominated by the view

One source of economic rents is non-perfect competition in markets, both output and input markets that allows a firm to behave in a monopolistic manner and to influence the market price for making abnormal profits. The other source of abnormal profits are firm's scarce and superior resources that may be capitalised if the competitive equilibrium price of a product offers an opportunity for a superior firm to produce at lower cost

that the competitive advantage is determined by the nature of its business environment. The main stream of strategy literature focused on the industry level factors and the competitive positioning as the determinants of sustainable competitive advantage. The competitive positioning approach is usually associated with Porter (1980 and 1985) who linked the theory of industrial organisation (IO) economics to the business policy (see van den Bosch & de Man, 1997; Foss, 1996). Porter turned the IO economics on its head and rephrased the fundamental questions in economics. As IO and neo-classical economics look at how the nature of markets influence a firm's profits and the customer's welfare, Porter took a look at the role of market forces from the point of view of strategically behaving firms. He applied lessons from IO economics in order to identify the determinants of economic rents and analysed how firms are able to influence the market forces in order to gain and sustain the competitive advantage of a firm? The competitive advantage were seen in this approach as a result of a firm's ability to behave over time in an oligopolistic manner and to rise entry barriers to potential new entrants (firms or new products).

Researchers in strategic management have increasingly started to pay attention to the role of a firm's internal factors like resources, capabilities, competencies and dynamic capabilities in competition, and the implications for the competitive advantage of a firm (Aaker, 1989; Aharoni; 1993; Amit & Shoemaker, 1993; Baden-Fuller & Stopford, 1994; Barney, 1986a; Bartmess & Cerny, 1993; Collis, 1991 & 1994; Dierickx & Cool, 1989; Grant, 1991; Hall, 1992; Mahoney & Pandian, 1992; Prahalad & Hamel, 1990; Peteraf, 1993; Schoemaker, 1990; Tallman, 1991; Teece, Pisano & Shuen, 1990, 1992 & 1994; Wernerfelt, 1984; Williams, 1992). The changes in the perception of the roots of competitive advantage have also some empirical support. An increasing number of empirical studies have shown that the firm-specific factors are important in explaining the profitability of the firm (Hansen & Wernerfelt, 1989; Jacobson, 1988; Rumelt, 1991; Vasconcellos & Hambrick, 1989). E.g., Rumelt (1991) reported bigger differences in profitability between business

and to profit from the difference between market price and the lower production cost (Varian, 1984). The firm may also be able to charge premium from the distinctiveness of the product or service it provides. Being distinctive and unique, firms thrive for competitive advantage by differentiating their products and service offerings and by creating new ways of competing.

units in the same industry than across different industries. In the Rumelt's study, only less than 10 % of profitability was explained by the choice of industry and almost half of the profitability was explained by the firm-specific choice of strategy. In general, the resource-based theory has witnessed a growing number of systematic empirical studies (Collis, 1991; Henderson & Cockburn, 1994; McGrath, Mac Millan & Venkatraman, 1995; Miller & Shamsie, 1996; Montgomery & Wernerfelt, 1988; Robins & Wiersema, 1995).

Resource-based theory of the firm shares many of the features of IO economics: firm as a combiner of resources (neo-classical economics) and as a profit maximiser that aims at earning economic rents (Bain type IO). However, the critical differences exist between the views of the firm. Resource-based theory of the firm is at odds with the neo-classical ideas of firms being identical combiners of resources (Peteraf, 1993). Also the assumptions of perfect information and input divisibility, and non-problematic development and diffusion of knowledge are rejected (Conner, 1991). In the heart of resource-based theory of the firm firms are unique bundles of idiosyncratic resources. The distinctiveness and uniqueness of resources and their idiosyncratic combination are also the sources of economic rents (Ricardian rents) in the resource-based theory of the firm.

As Bain-type IO emphasises the industry structure (limited competition) as the determinant of competitive advantage, the resource-based theory of the firm focuses on the internal factors that determine the competitive advantage: the acquisition, development and deployment of resources. As Hamel stated (about IO based strategies): 'The traditional ... paradigm ... focuses on only the last few hundred yards of what may be a skill-building marathon' (1991: 83). This suggests that at least in the environment that is characterised by a dynamic competition the strategic management theories should address the issues related to learning and knowledge management.

Summary of competitive positioning and resource-based approach in strategic management

Table 3 summarises the discussion about basic approaches in strategic management. The main differences between the competitive positioning approach and the resource-based theory of the firm are the level of analysis and the means of

sustaining the competitive advantage of the firm. The competitive positioning approach focuses mainly on industry level analysis and regards the industry forces as the main determinants of profitability in an industry. The resource-based theory of the firm, on the other hand, emphasises the distinctiveness of a firm in terms of its resources and dynamic capabilities as the main source of competitive advantage.

The competitive positioning approach has been successful in refining the analysis of the strategy interface with industry factors and product market, but it has neglected the other side of the story, the role of a firm as a bundle of resources and capabilities implementing the chosen strategy distinctively. In that sense competitive positioning approach has treated a firm as a "black box" that has no problems as long as the industry and the strategy were chosen right (Aharoni, 1993). The resource-based theory of the firm focus on looking at inside the firm and thus expanding the analysis of competitive positioning approach in a complementary manner.

In addition to the differences in the source of competitive advantage, the role of a firm in maintaining the competitive advantage differs between the competitive positioning approach and the resource-based theory of the firm³. In the competitive positioning model the competitive advantage is sustained by raising barriers to entry (substitutes and potential entrants), by trying to diminish the bargaining power of suppliers and buyers and by eroding the competition in an industry (Porter, 1985: 5). Some of the resources may have similar effects on the competition in an industry, like e.g. patents. However, the resource-based theory of the firm suggests that the development of resources and the firm-specific nature of these processes (difficult, if not impossible, to imitate due to causal ambiguity) are the sources of competitive advantage (Dierickx & Cool, 1989). This is closely related to the logic of strategic factor markets (Barney, 1986a) that suggests that a firm needs to have luck or a firm needs to be better informed for acquiring rent-generating resources from perfectly competitive factor markets. To overcome the logic of strategic factor markets a firm

³ The resource-based theory of the firm may also offer a more generally acceptable solution for the inherent contradiction between the main results of economics about the detrimental effects of monopoly power guiding public policy that seeks competition in an economy and the sustainability of competitive advantage of a strategically behaving firm, relying on entry barriers as limits to competition in the main stream strategic management literature (Aharoni, 1993).

must accumulate some resources that are not easy to imitate and develop firm-specific resources that has greater value for a current firm than for any other firm. Collis (1994) suggests that the focus on firm-specific context may be helpful in explaining how a firm should develop its resource-base.

Table 3 Comparison of dominant approaches in strategic management

	Resource-based theory of the firm	Competitive positioning approach
Intellectual roots	IO economics Austrian economics Evolutionary economics	IO economics
The objective of firm's activities	competitive advantageabnormal profits	competitive advantageabnormal profits
Focus and level of analysis	firm as a bundle of idiosyncratic resources inside-out	industry as source of competitive advantage outside-in
Source of competitive advantage	distinctive resources (Ricardian rents) competencies and dynamic capabilities	choice of profitable industry limited competition in industry (monopoly rents)
Sustainable competitive advantage of the firm	development of resources	impeding competition in an industry

2.3.2 The resource-based theory of the firm

The resource-based theory of the firm, will be used for identifying the determinants of competitive advantage at firm level and for looking at the issues related to knowledge and learning. The resource-based theory of the firm suggests that products and positioning in product markets may be regarded as the reflection of idiosyncratic and unique resources of the firm. In the resource-based theory of the firm, internal factors as resources, competencies and capabilities will be given a central role in competitive advantage of the firm and the business environment is treated endogenously. This approach aims at an explicit identification of internal factors that affect the distinctiveness of resources and success in the product market. The analysis of the firm's internal factors of success should be thus accompanied by the analysis of the resource's contribution to firm's ability to compete in its business environment.

Value of resources

The resource-based theory of the firm focuses on firm level factors and resources that influence firm's performance in product markets. It is a complementary approach to competitive positioning approach in a way that the value of resources is dependent on market demand (approval and need). As Collis & Montgomery pointed out: 'Resources cannot be evaluated in isolation, because their value is determined in the interplay with market forces.' (1995: 120). In order to be unique and valuable, resources need to contribute to firm's ability to develop, produce, sell or provide products and services in a satisfactory manner to the customers.

Being aligned with market demand is the first criterion of valuable resource (Collis & Montgomery, 1995). The resource should also be *scarce* in order to create value for its owner. Thus, the second criterion focuses on the heterogeneous and *unique* nature of valuable resources (Peteraf, 1993). Being unique implies that the resource should *not* be *substitutable* easily (Dierickx & Cool, 1989). In order to remain valuable and not to become obsolete, the resources need to be *difficult to copy or imitate* by competitors (Dierickx & Cool, 1989). This suggests the third criterion for the valuable resource: the firm needs to be able to appropriate its resources by making them *inimitable*. The intersection of the criterion of valuable resources, appropriability, market demand and scarcity, provide the area of value creation and the opportunity for competitive advantage (Collis & Montgomery, 1995). Knowledge as a resource will be looked at as an example of potentially valuable resource in chapter three.

Distinctive resources as a source of competitive advantage must be durable to lead to sustainable competitive advantage⁴. When the resources are difficult to imitate or copy and they are not substitutable, they also become *immobile*. When resources are specialised to firm-specific needs their opportunity cost is lower than their value to current employer. The firm-specific resources thus become more

⁴ The "bath tub" metaphor, presented by Dierickx et al. (1989), offers an useful way of describing the phenomenon. Resources can be associated with the content of the tub as a stock. The resources are thus the cumulative result of flows into and out of the pool. The positive flow of distinctive resources sustains the stock. Dynamic capabilities serve as a tap balancing and accelerating the maintenance and development of the resources. These are needed to transform the acquired resources into firm-specific assets that fulfil the conditions of imperfect imitability and imperfect substitutability.

valuable to the firm that is currently utilising them than for other firms. For instance, co-specialised assets that are used in conjunction with other resources that a firm employs may provide such advantage for the firm that possesses and utilises these assets. The imitation of resources may often be difficult because the building up the resource base may be a slow process and it may take a long time (path dependency). In addition to this, the firm that has developed the resource does not always know exactly how they were developed (causal ambiguity) (Dierickx et al., 1989).

Acquisition of resources

A valuable resource needs to be acquired or developed. The basic logic of resourcebased theory of the firm suggests that the ex post value of a resource should exceed the ex ante cost of a resource (including the cost of internal development) for a firm to benefit from the value of the resource (Peteraf, 1993). The empirical evidence (Maister, 1993) suggests that the competitive advantage pursued by external industry considerations may be insufficient, since the information needed for the analysis is in public domain and thus available for all the firms in the industry. If all the firms in the industry do the arithmetic right, they should get the same results. The environmental analysis may not be expected to be the source of the competitive advantage, if the expectations related to the potential value of the resource are firmspecific instead of industry-specific and the methodologies for the collection of information and the models for analysing external environment are in the public domain (Barney, 1986a). Organisational analysis offers an advantage in terms of inherent information asymmetries when acquiring resources. Utilising knowledge about similar resources, of which a firm is endowed, may create unique links between existing firm-specific assets and the new acquired assets.

The conditions of resource markets affect the opportunity for acquiring the resources like knowledge. If the competition in factor markets are perfect, it is impossible to acquire resources that offer opportunity for competitive advantage (Barney, 1986a). The factor markets are not perfect in every case. Especially tacit knowledge has characteristics that make the factor markets less than perfect. First of all, it may not be sold as a commodity due to the difficulties associated with its transfer. As Teece noted: 'When knowledge has high tacit component, ... It is, therefore, extremely difficult to transfer it without intimate personal contact,

demonstration and involvement... The transfer of knowledge may be impossible in the absence of the transfer of people' (1981: 9). Second, even if tacit knowledge may be acquired from factor markets in terms of hiring people or buying consulting services, the internal ways of developing tacit knowledge may be better in terms of appropriability than external sources of tacit knowledge. E.g., the experience and skills of employees (tacit knowledge) may be tied to the firm in a way that the knowledge becomes immobile. When the experience that employees have gained in a firm is related to other firm-specific resources, like for instance long-term client relationships, the value of knowledge and experience becomes dependent on the current situation. This means that interdependence between resources may provide synergy and make them more valuable to current firm than to other firms. Resources may, thus, multiply the value of each other.

This supports the idea that in dynamic competition, the internal development of firm-specific resources may turn out to be a viable way to the competitive advantage of a firm. The resource-based theory of the firm suggests that without such activities a firm is not able to possess rent-generating resources.

Development of resources

The issue of resource development has been acknowledged by dynamic capabilities approach (Teece, Pisano & Shuen, 1990) and competence-based competition approach (Hamel, 1991; Prahalad & Hamel, 1990; Hamel & Heene 1994). Teece et al. (1992) have identified four representative viewpoints within dynamic capabilities approach: (1) strategic investment approach, (2) intra- and inter-firm organisation development approach, (3) transformation of assets and skills into competencies approach and (4) capability maintenance approach. The competence-based competition approach may be associated with the inter-firm organisation development (Hamel, 1991) and competencies development approach (Prahalad & Hamel, 1990). They are, however, close to each other since strategic alliances between firms may be viewed simultaneously as a way to deal with the business environment (Reve, 1990) and to transform skills and assets into competencies by cooperating (Hamel, 1991). Dynamic capabilities approach may be associated with the last approach that emphasises the development and maintenance of capabilities by adapting and interacting with the changing business environment. Due to the

similarities in approaches the distinctions will be ignored in the following discussion.

The historical roots of dynamic capabilities approach may be traced back to evolutionary economics (Nelson & Winter, 1982). Dynamic capabilities approach emphasises the unavoidable nature of change both in external and internal conditions and the firm's opportunity (1) to influence the market processes that are driven by innovative competition and (2) to utilise the market processes in resource and capability development. This is close to Schumpeterian approach, in which creative winds of destruction change the markets and industries in terms of all kinds of innovation (product, process, organisational etc.) making the existing resources obsolete. As Teece et al. stated: 'Rivalry to develop new competencies or to improve existing ones is critical in a Schumpeterian world' (1992: 18). This offers an important role for dynamic capabilities. Dynamic capabilities maintain and develop relevant resources and competencies and are, thus, needed in the changing forms of competition. The need for a firm-specific strategy for developing resources is essential in this approach as individual firms induce the change in an industry mostly endogenously.

Dynamic capabilities of the firm affect both the rate and the direction of the evolution of firm-specific resources. From the point of view of resource-based theory of the firm, the sustainability of competitive advantage depends on the maintenance and development of resources. Dynamic capabilities sustain the competitive advantage of a firm in dynamic competition, if the rate of development of resources is higher than that of competitors and if the evolving resources are better than those of competitors. Using other words, the maintenance of competitive advantage in the face of competition depends on the firm's dynamic capabilities (Teece et al., 1992: 26-27).

This suggests that the competitive advantage provided by dynamic capabilities is essentially the race of resource development, in which the firm's are 'running in a moving surface'. In this case 'the moving surface' is the business environment that is characterised by the competitor's actions and customer's changing preferences. Dynamic capabilities serve as a dynamic buffer against environmental changes that might otherwise make existing resources obsolete. They

operate in the interface between a firm's resources and its business environment and induce or balance the external changes internally. Being able to develop resources is not enough. Resources need to be developed faster than the competitors do. The coordination of resource development and the facilitation of learning may be crucial in a sense that resources do not only may make some firms better than markets, but some firms may also better at co-ordinating these activities than other firms (Teece et al., 1992). This idea is close to Conner's (1991) suggestion that firms should not only be compared to markets but also to other firms.

Learning as a dynamic capability may be crucial for developing competencies (Teece et al., 1992). Competencies may be viewed as knowledge-based resources that may be associated with (1) knowledge that help to put a firm in close proximity to its customers (market-access competencies), (2) knowledge that allow a company to do things better than competitors (integrity-related competencies) and (3) knowledge that enable firms to provide services with unique functionality (functionality-related competencies) (Hamel & Heene, 1994). Later in chapter three and four a more detailed look into the nature of knowledge and learning will be taken. Market-access competencies will be associated with client-specific knowledge and integrity- and functionality-related competencies will be associated with non-specific knowledge.

The problem of infinite regress

Collis (1994) raised a question about the possible infinite regress in the analysis of dynamic capabilities. As Collis points out: 'Organizational capabilities... lead to a problem of infinite regress in the prediction of, and explanation for, sustainable competitive advantage.' (1994: 144). The question is where should we stop analysing the organisational factors that contribute to the competitive advantage of the firm, if we can always trace a more complex set of activities that 'accelerate' the development and the improvement of resources, capabilities and competencies. The implications of such attempts for strategic management theories may not be that appealing. Following Collis, 'The pursuit of the ultimate source of competitive advantage leads to an infinite regress until competition occurs over the *n*th order derivative of the rate of change of position, where no sustainable competitive advantage accrues to anyone because all competitors can almost instantaneously and without costs match any valuable product market position.' (1994: 144). The problem

of infinite regress will lead us back to neo-classical economics that predicts that competition will eventually erode the economic rents.

How to overcome the problem of infinite regress? Collis (1994) proposed three alternative ways of confronting the infinite regress. (1) The denial of importance of capabilities, (2) the analysis of succeeding levels of capabilities until the marginal benefit of exploiting the next level is less than the marginal cost of understanding that capability and (3) the analysis of context-specific capabilities. The last way of overcoming the problem of infinite regress will be focused and the analysis of what are the peculiar issues in knowledge-intensive business services that contribute to the competitive advantage of a business service firm will be done. Section 2.4 will focus on knowledge as a resource and take a look at the context-specific learning opportunity as a dynamic capability in business service context.

2.4 THE COMPETITIVE ADVANTAGE OF A BUSINESS SERVICE FIRM

This section will introduce a framework for analysing the competitive advantage of a knowledge-intensive BSF. Knowledge and learning have been shown to have important role in explaining the dynamic and context-specific sources of competitive advantage. Strategic management literature points to two basic sources of competitive advantage and above average profits: (1) The heterogeneity of firms in terms of resources and dynamic capabilities or (2) market power by positioning or collusive actions with other firms for influencing the market prices. This implies that firms should be able to choose and enter a profitable industry and try to limit competition somehow *ex post* in that industry or create valuable resources that may be utilised in competition. The resource-based strategy and the positioning strategy are complementary approaches in a way that they focus on different, but important factors of competitive advantage. The resource-based theory of the firm expands the analysis of markets and industry to firm level attributes (Mahoney et al., 1992; Collis, 1991) without forgetting the value considerations of resources in market (Collis & Montgomery, 1995).

There are some peculiar features in providing business services that needs to be taken into account when identifying the context-specific sources of competitive advantage. E.g., when looking at service firms that provide knowledge-intensive services, the unique sources of knowledge and learning may be identified. The analysis of strategic aspects of managing BSFs will be built upon the peculiarities of business service context. The importance of utilising and managing customer contacts in service delivery will be scrutinised. As Teece et al. noted: 'A fundamental characteristic of economic activity is that it provides the opportunity for learning' (1992). The opportunity for learning in close client contacts will be identified as important source of competitive advantage of a BSF. A BSF will be argued to develop its knowledge base by utilising learning incidents in customer contacts that are strengthened by the fact that the close interaction with the client characterises service delivery.

2.4.1 Peculiarities of services

The service management theories suggest that service context is peculiar in terms of customer's active role in service delivery due to the following conditions of providing services. (1) Services are *intangible* and (2) the production and consumption of services are *inseparable*. The intangibility of service reflects the idea that (3) service is a *process*. Service is about processing people, possessions and information (Lovelock, 1992). Particularly, processing information, i.e. producing knowledge may have important implications for the role of customer in knowledge-intensive business service firms. The inseparability of firm's and customer's activities in service delivery makes the contact with the customers (4) *interactive*, implying that the customers are often the co-producers of the service. The highly interactive nature of service delivery gives an opportunity for learning from customer contacts. These peculiarities may provide the basis for an integrative and context-specific (Collis 1994) view to learning. Close customer relationships do not thus only facilitate the service delivery, but also offer an opportunity for learning and knowledge absorption in client relationships.

Due to the peculiar nature of service delivery, the duration of customer relationships may have implications for the competitive advantage of the business service firm. Relationship marketing provides some insights for looking at the implications of long-term client relationships for the competitive advantage of a firm. The relationships marketing approach⁵ builds on the basic characteristic of service delivery⁶. It focuses on maintaining the existing customer base and enhancing long-term customer relationships. The central idea is that doing business with existing customers is more profitable than attracting new customers. This implies that long-term relationships with the customer are generally more profitable for a firm than short-term transactions⁷ (Grönroos, 1994 a; Reischeld, 1993).

There may be a number of reasons for the high profitability of long-term client relationships. First, learning in a customer relationship may decrease the cost of producing goods or services in comparison to the providing a service to the unknown customer. As Grönroos points out: 'Long-term relationships where both parties over time learn how to best interact with each other leads to decreasing costs for the customer as well as for the supplier or service provider ... To conclude, there is clear evidence that from a profitability point of view intelligent relationship building and management make sense' (1994 b: 11). This suggests that the long-term client relationships may provide strong opportunity for learning and utilisation of client-specific knowledge in those client relationships. Second, search cost for finding new customers may be substantially higher than maintaining a relationship. Third, internal efficiency improvements may have less effect on profitability than the increase in customer retention (Reischeld, 1993). These arguments suggest that the long-term client relationships contribute positively to the learning opportunity and the overall profitability of the business service firm in terms of repeat engagements.

In marketing literature, two competing approaches may be identified: (1) transaction marketing and (2) relationship marketing (Grönroos, 1994 b). Even if the relationship marketing approach "is still in its infancy as a mainstream marketing concept" (Grönroos, 1994 b: 9), it has increasingly received attention and applied also to other than service context (e.g., Reischeld, 1993; Craig, 1990; Copulsky & Wolf, 1990; Dwyer & Schull & Oh, 1987). The basic difference between these two approaches in marketing is the role that is given to the customer. In transaction marketing, customers are passive actors that are influenced from arm's length. The relationship marketing focuses on how to utilise the close interaction with the client, The transaction marketing approach, associated with 4 P model (product, price, promotion and place), may be appropriate for managing customer contacts in manufacturing industries, but service customer interface may require different approach.

The following concepts for managing the customer relationships like part-time marketers (Gummesson, 1987), customer relationship life cycle (Grönroos, 1982) and the interactive marketing function (Grönroos, 1982), have been develop in the relationships marketing approach based in the idea that service delivery requires often close interaction with the client (Grönroos, 1991).

Recently, Storbacka (1993) has pointed that it is not enough to maintain the customer base, but the firm needs to analyse the profitability of different customer relationships and maintain the profitable customer relationships.

The longer-term client relationship implies some bonds between a service provider and the customer8. Starbuck has identified bonding to be typical for knowledge-intensive service firms: 'Over the long-term, service KIFs [knowledgeintensive firms] try to convert client's satisfaction with specific projects into longterm relations. Even in contexts that are initially impersonal, repeated interactions between specific people create bonds.' (1992: 732). Starbuck refers to social bonds that are developed between the BSF and the client. However, developing knowledge bonds may also be important ways of bonding. Liljander & Strandvik pointed the fact that knowledge bonds are primarily dependent on the customer's perception: 'it is the customer's perception of the existence, and importance, of such bonds that count (1995: 18).' However, they recognise that a firm should be active in building these bonds: 'Knowledge and social bonds depend on the service provider being active and creating these bonds to the customer (1995: 18).' The knowledge bonds are established (1) when the client values the BSF's knowledge about the client's context and the BSF's ability to customise its services or (2) when the client perceives the BSF as competent in general. This suggests that knowledge absorption may have highly beneficial implications for the BSF's activities and knowledge about the client and its environment may enhance and maintain the client relationship.

2.4.2 The customer relationships as a source of knowledge

The framework of resource-based strategy for a business service firm is shown in figure 3. This framework is based on strategic management, service management and relationship marketing literature. Strategic management literature suggests an attention to the learning processes and their implications for the competitive advantage of a firm. The resource-based theory of the firm emphasises the value creation nature of economic activity and focus on learning as an essential factor in dynamic competition. Being often context-specific, opportunity for learning and resource development needs to be identified and analysed in the light of peculiarities

Liljander & Strandvik (1995) has provided a classification of bonds. They divided the bonds into contextual and perceptual bonds. The contextual bonds may often be managed by the service firm and they have negative associations by being characterised by necessity and obligations. These are (1) legal, (2) economic, (3) technological, (4) geographical and (5) time bonds. Negative bonds may function as switching barriers to the customers. The perceptual bonds, however, are argued to be more easily influenced by the customer and they have positive associations. These are (6) knowledge, (7) social, (8) cultural, (9) ideological and (10) psychological bonds.

of each context. Service management and relationship marketing literature point to the peculiar role of client contacts and relationships in business service context.

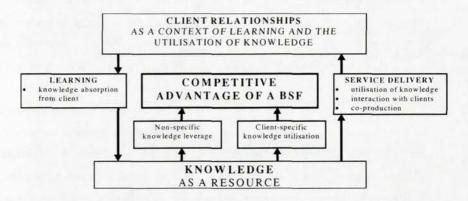


Figure 3 Determinant of the competitive advantage of a business service firm

Nonaka emphasised that a firm's ability to create knowledge and to learn from interaction with its environment is critical in dynamic competition: 'Any organisation that dynamically deals with a changing environment ought not only to process information efficiently but also create information and knowledge...., it can be argued that the organization's interaction with its environment, together with the means by which it creates and distributes information and knowledge, are more important when it comes to building an active and dynamic understanding of the organization.' (1994: 14). This suggests that the analysis of a firm's interfaces with its environment from the point of view of learning may offer fruitful approach to understanding knowledge building in BSFs.

Reve (1990) utilised the resource-based theory of a firm in analysing the alignment of a firm's business environment and internal activities. The central idea is that a firm may influence both its business environment and its resource base, for instance, by establishing co-operative customer relationships or downstream alliances⁹ as Reve calls them. The idea that relationships in factor markets or product

Four potential strategic alliances may be identified. The vertical alliances may be associated with the cooperative arrangements with upstream sources (suppliers and other sources of production factors: raw materials, employees, parts, components, business services) or the co-operation with downstream customers. Horizontal alliances may be used for an exploitation of economies of scale as long as the antitrust legislation is not violated. This kind of alliances may benefit from the market imperfections if the alliance is able to collude in terms of prices. This however is seldom a viable solution, since public policy in general opposes cartels of all sort by the means of anti-cartel legislation. Horizontal alliances within an industry that may limit competition

markets may be utilised as the partners of learning (Hamel, 1991) is close to the ideas of dynamic competition that gives an active role for the firm in relation to its business environment. Particularly, downstream co-operative contacts with customers may offer direct access to customer context in terms of understanding customer's preferences and needs better. This suggests that customer relationships may be used for influencing the competition in an industry and for developing the firm's knowledge base.

The basic idea in figure 3 is that client relationships may be viewed as an important source of knowledge and context of learning in business services. This is due to the interactive nature of client contacts in service delivery. Knowledge from client contacts accumulates a BSF's knowledge base and provides opportunity for creating value in service delivery and gaining competitive advantage. Knowledge absorption may provide a basis for the competitive advantage of a BSF in terms of: (1) the utilisation of client specific-knowledge in long-term client relationships and (2) non-specific knowledge leverage in other client relationships.

2.4.3 The definition of concepts related to knowledge absorption in client interface

Knowledge-intensive BSFs utilise knowledge in service delivery either (1) as an input implying the extensive use of experts with esoteric and idiosyncratic knowledge that is not widely shared (Starbuck, 1992) or (2) as an output in which the service itself may be a knowledge transfer or extension as Hedlund (1994) calls it. This suggests that knowledge is not only required for the transformation of inputs into outputs as neo-classical production function approach suggests (e.g., management consulting methodologies like BPR), but the role of knowledge as an input (knowledge of employees, data bases) as well as an output (management consulting, legal advice, etc.) in service production and delivery should be noted.

The client interface may be seen as a context of knowledge flows. Figure 4 shows a schematic illustration of knowledge flows between the client and the business service firm. Two basic knowledge flows may be identified in client

in an industry and that does not aim at some sort of co-operative development or diversification activities may be difficult to justify. Diversification alliances, on the other hand, may be aimed at exploiting economies of scope. These alliances typically involve learning as a firm pursues for new arenas and partners knowledge about new markets or technology as a complementary resource is needed.

interface: (1) the absorption of knowledge from the client and (2) extension (Hedlund, 1994) as (2a) a service delivery that transfers knowledge to the existing client (i = 1) or (2b) a service delivery that transfers knowledge to the new clients (i > 1). These two basic knowledge flows take place simultaneously as the client and the BSF interact in a service delivery. Based on one of the characteristics of knowledge this exchange does not diminish the knowledge bases of the firm, since knowledge, typically, does not deteriorate when used (Dierickx et al., 1989). In order to utilise knowledge absorption efficiently, some internal knowledge processes, (3) sharing, is needed for enhancing the utilisation of client-specific knowledge in long-term client relationships or knowledge leverage in general. Figure 4 illustrates the important factor; time dimension that will be used for pointing the crucial differences in the way knowledge may be absorbed and utilised. This depends on the nature of client relationships that determines the further utilisation opportunities of the absorbed knowledge. Distinctions between the opportunities that client-specific knowledge and non-specific knowledge may provide for a BSF will be discussed in more detailed in chapter four, in which some implications of differences in client relationships for knowledge absorption and utilisation opportunities will be proposed.

The absorption of knowledge is associated with the client's participation in service delivery. This is partly due to the fact that service delivery may require the combination of business service firm's and its client's knowledge. The close interaction and the actual process of delivering a service offer an opportunity for interface employees to absorb knowledge from the customers. Knowledge absorption will be associated with learning that provides experience and new knowledge about the tasks, clients and markets in general. Later, the next two chapters will take a closer look at the dynamism of knowledge absorption and define more specifically the type of knowledge absorbed in client contacts.

Knowledge about a client's activities may be utilised in long-term client relationships so that a BSF is (1) able to customise its services based on its experience and absorbed knowledge from the client or otherwise (2) able to plug into the client's activities and provide competent or cost efficient services. The deployment of absorbed knowledge in business service firm's other client relationships is called

knowledge leverage in the model. The concept of knowledge leverage refers to the use of absorbed knowledge and skills in other client contacts than the one where the knowledge was originally absorbed. Knowledge leverage requires that knowledge sharing (internal transfer and scanning of knowledge) is efficiently combined with extension so that the value of absorbed non-specific knowledge may be multiplied without extensive cost and effort within the firm.

There may be some hindering factors for knowledge leverage; if the client feels threatened by the potential diffusion of knowledge to its competitors. One way to deal with this problem may be to change either the industry or the topic in the future projects as the consulting firm, A. D. Little, did (Starbuck, 1992). This may, however, undermine a BSF's credibility since a BSF may not accumulate enough knowledge about the industry or the topic they are working with. Also A. D. Little encountered these problems and started to build expertise in specific functions and industries. Starbuck described the process: 'After advising a client about a topic, A. D. Little would not advise a different client from the same industry about the same project... A few years ago A. D. Little's senior manager concluded that they had become too amorphous. Hiring had become hard, because the firm had so few experts in any single speciality. Covering too many specialities for too many dissimilar clients was yielding neither enough profit nor enough client satisfaction. A survey revealed that clients were turning to other consultants to get 'focused depth of resources.' (1992: 734). A. D. Little case shows that the client contacts and a knowledge exchange in client relationships entail a paradox of learning in business services. The BSF learns extensively in its client contacts due to close interaction with the client. Client's participation is often crucial and knowledge exchange is required for delivering the service. If a client wants to get specialised services and if a BSF wants to create expertise in particular area (topic or context) the continuous flow of client contacts and knowledge exchange in this area is required and needs to be tolerated by the client.

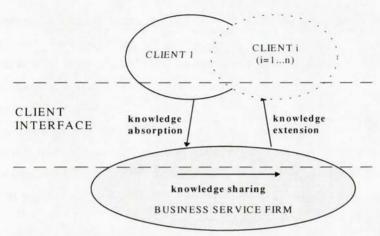


Figure 4 Knowledge flows in business service context

In addition to the knowledge flows in the client interface, a BSF has also internal knowledge flows, namely, the internal *sharing* of knowledge. In order to utilise and leverage knowledge in the future client assignments and in order to multiply the value of knowledge, internal sharing of knowledge is required. As Quinn, Anderson and Finkelstein pointed out: 'Information sharing is critical because intellectual assets, unlike physical assets, increase in value with use. Properly stimulated, knowledge and intellect grow exponentially when shared. All learning and experience curves have these characteristics.' (1992: 75). Sharing of knowledge includes transfer and scanning of relevant knowledge. Back office activities support client interface operations by (1) developing knowledge base of the BSF internally (e.g., business intelligence for management consulting) or (2) by utilising and sharing the experience and the knowledge of BSF's employees.

Conclusions

This chapter aimed at structuring and finding explanation for the following research questions:

- What are the determinants of the competitive advantage of a firm in business service context?
- What is the role of knowledge as a resource in the competitive advantage of a BSF? and
- How to acquire knowledge in a business service context?

The presented framework identified some critical factors of competitive advantage in a business service context. From the resource-based view, a firm should define its strategy inside-out and focus on dynamic capabilities that develop unique and distinctive resources. Particularly, customer interface interaction may provide critical opportunity to knowledge creation and learning. The issue of learning in client relationships will be analysed in chapter four by looking at (1) what are the determinants of client relationships from the point of view of the client and from the point of view of the BSF? and (2) how client relationships influence the opportunity for learning? Next, a closer look at the role of knowledge in client relationships will be taken in chapter three.

KNOWLEDGE IN CUSTOMER RELATIONSHIPS

3.1 INTRODUCTION

This chapter will focus on analysing the nature of knowledge and knowledge absorption in a BSF's customer contacts. Boisot's (1983 & 1995) ideas about knowledge structuring between the firm and the target group will be applied in the business service context. Knowledge conversion and transfer in customer relationships will be analysed from the point of view of (1) the transformation of knowledge (codification and absorption) in which the nature of knowledge changes from uncodified or tacit knowledge to codified knowledge and vice versa, and (2) the transfer of knowledge (extension and sharing) in which knowledge is being exchanged as such. The transformation and the transfer of knowledge are related, however. The codification of knowledge makes the knowledge transfer easier, but simultaneously increases the opportunity for imitation and the associated loss of value. This implies that tacit knowledge has characteristics that make it valuable for a BSF. This model will provide a basis for the analysis of knowledge transfer and transformation in this book.

Section 3.1 will analyse the role of knowledge in business services and focus on describing the nature of knowledge by making a distinction between tacit/uncodified and explicit/codified knowledge. Section 3.2 takes a look at the knowledge transfer and transformation in a BSF's customer relationships. Finally, section 3.3 will propose a model of knowledge absorption in client relationships. Based on that model, two basic determinants of knowledge absorption will be identified: (1) the transparency of the client and (2) the receptivity of the business service firm.

3.2 KNOWLEDGE IN BUSINESS SERVICE CONTEXT

3.2.1 Knowledge as a resource - nature of knowledge

The degree of codification of knowledge has often been used for describing the characteristics of knowledge (Boisot, 1995; Nonaka, 1994). The degree of codification influences the transferability of knowledge and the mechanisms of knowledge transfer. The codified knowledge, often called explicit knowledge, is articulated knowledge that may be transferred and absorbed more easily than uncodified or tacit knowledge. Codified knowledge may be stored in tangible sources: databanks, manuals, directives or professional journals and transferred fast and easily by technical means of transmission or transportation. However, as Nonaka suggested: 'Knowledge that can be expressed in words and numbers only represents the tip of the iceberg of the entire body of possible knowledge.' (1994: 16).

There is also a vast body of uncodified knowledge that may be tacit knowledge viz., it is difficult to articulate (Polanyi, 1966), or experiential knowledge, viz., it is absorbed or transferred by active participation (Penrose, 1959), and circumstantial knowledge and, viz., it is context dependent (Hayek, 1945). Typical for uncodified or tacit knowledge is that it is unorganised knowledge (Hayek, 1945). As Hayek pointed out: '...there is beyond question a body of very important but unorganized knowledge which cannot possibly be called scientific in the sense of knowledge of general rules: the knowledge of particular circumstances of time and place.' (1945: 521). Uncodified or tacit knowledge may be associated with (1) the skills and the competencies (co-ordinated set of activities) of the employees and teams that may be difficult to articulate and (2) experiential and circumstantial knowledge, like for instance experience that provides knowledge about the values and unwritten rules of specific context (e.g., the client's organisation). Uncodified knowledge may thus be (1) tacit in nature so that it is difficult to articulate and transfer as Polanyi (1966) suggested or (2) knowledge that may remain uncodified due to the rapidly changing circumstances as may be the case with Hayek's (1945) circumstantial knowledge. As Nonaka noted: 'Tacit knowledge is deeply rooted in action, commitment, and involvement in a specific context.' (1994: 16). This implies that the absorption and transfer of tacit knowledge requires action and participation.

3.2.2 Tacitness of knowledge

The classification of knowledge into two seemingly unrelated types of knowledge, tacit/uncodified and explicit/codified knowledge simplifies the nature of knowledge. That classification may be used, however, for describing processes that underlay these basic forms of knowledge. The basic idea is that tacit and explicit knowledge are connected by processes that transform tacit knowledge into explicit knowledge and vice versa. This means that the content of knowledge may be the same in many cases, but the degree of codification between tacit knowledge and explicit knowledge differs.

Particularly, circumstantial knowledge related to time, place and context may be such knowledge that has not been codified. There may be a number of reasons for why such knowledge has not been codified even if there are opportunities for codification. It may be the case that it is not worth codifying such knowledge due to the unstable nature of circumstantial knowledge. Being exposed constantly to the interaction with the environment provides better access to circumstantial knowledge and easier transfer of such knowledge by participation than by codification. However, in many cases it is not only the degree of codification that differs. Some skills may be almost impossible to articulate (Polanyi, 1966) and thus not worth trying to transfer with the help of codification. In addition to being difficult to articulate, uncodified knowledge may also be context- or time-specific knowledge, of which codification may be useless due to the rapidly changing circumstances. Regardless of the type of uncodified knowledge, it is valuable and productive knowledge, of which transfer process is either difficult or slow without participation.

The discussion about the nature of knowledge suggests that the ongoing transformation and transfer of knowledge characterise organisations (universities, firms, public administration etc.), in which knowledge is developed and deployed. The codification process transforms unorganised personal knowledge into classified and documented form of knowledge by abstraction, structuring and classification. The abstraction helps us to deal with the extensive and varied range of phenomena. This improves the individual knowledge processing capacities and offer mental economies (Boisot, 1983). The structuring and classification of knowledge, on the other hand, improves the transferability of knowledge by transforming it into

articulated form (Sanchez, 1997). However, the codification process always sacrifices the richness of tacit knowledge by simplifying and giving structure to it. As Boisot pointed out: 'Codification always involves a data sacrifice...Science and technology both progress by eliminating complexity, by giving structure to what was hitherto ineffable, by simplifying what was intractable...' (1995: 493).

Any activity provides, however, an opportunity for participation and creates experiences and tacit knowledge about that context. Tacit knowledge interacts with the existing codified knowledge, and fertilises the combinations of codified knowledge. This may provide an opportunity for new or more efficient combinations of codified knowledge (Nonaka, 1994). Knowledge from customers may be the major source of tacit knowledge for a business service firm (Sharma, 1992). Teece et al. (1994) have argued that tacit knowledge has the property of being difficult to replicate by competitors and being difficult to acquire from factor markets. Knowledge from customers has thus inherent properties that impede imitation. The incompleteness of factor markets for tacit knowledge (Dierickx et al., 1989) in the case of sometimes restricted client networks may also strengthen these properties and increase the value of knowledge from customers. Uncodified or tacit knowledge from customers may be argued to have properties that facilitate business service firm to gain and sustain the competitive advantage of the firm. Tacit knowledge is valuable in building knowledge resources that are: (1) idiosyncratic (firm-specific or network-specific, unique) (Amit & Schoemaker, 1993), (2) difficult to imitate (Dierickx et al., 1989), and (3) scarce (Peteraf, 1993).

3.3 KNOWLEDGE TRANSFER AND TRANSFORMATION IN BUSINESS SERVICE FIRM'S CLIENT RELATIONSHIPS

3.3.1 Interplay between uncodified and codified knowledge

The degree of codification of knowledge influences the transferability of knowledge between the BSF and its business environment. The framework of knowledge transfer and transformation in the context of business to business services will be built on Boisot's (1983 and 1995) study on knowledge flows. Some of his ideas will be applied in this section to business service context. Boisot (1983) has suggested that an ongoing transformation of knowledge from uncodified to codified and vice versa

and the associated diffusion of knowledge determine the knowledge flows. The diffusion of knowledge is determined by the degree of codification in a sense that more codified knowledge become more easily diffused.

There are a number of other classifications of knowledge. Normann et al. (1994) classified knowledge as generative, productive and representative. In their classification generative knowledge is associated with the creation and absorption of new knowledge that provides basis for a BSF's service production (productive knowledge) and service delivery (representative knowledge). It should be noted that in service context, knowledge transfer and transformation are overlapping. Service production and delivery are often simultaneous and it may be difficult to make a distinction between the use of productive and representative knowledge.

Nonaka (1994) analysed knowledge creation in organisations and proposed that knowledge may be created by converting (1) tacit knowledge to tacit knowledge (socialization), (2) explicit knowledge to explicit knowledge (combination), (3) tacit knowledge to explicit knowledge (externalization) and (4) explicit knowledge to tacit knowledge (internalization). The central difference between Nonaka's and the framework presented here is that in addition to creating new knowledge (transformation in the terminology used here), there is also an important aspect of knowledge related to its transfer. Thus, Nonaka (1994) focused on the creation of new knowledge by utilising the interplay between tacit and explicit knowledge. When Nonaka's ideas are integrated with Boisot's (1995) ideas, the transfer of knowledge may be analysed by using the same terms and concepts.

The need for the codification of knowledge may be reasoned in terms of mental economies (processing knowledge) (Boisot, 1983) and the facilitation of communication (transferring). Both these issues are important in a business service context, where the processing of knowledge and transfer of knowledge may be the central features of knowledge utilisation in service delivery. However, as knowledge will be codified in order to facilitate communication, its diffusion and imitation will become also easier. As Boisot points out: 'Once information has been transposed from individual brains into documents or physical objects it acquires a life of its own and can diffuse quite rapidly and extensively, more so perhaps in the case of physical objects - especially if these are portable - than of documents, since the latter

typically presuppose some prior knowledge of the codes and conventions used.' (1995: 492). This implies that even if codified knowledge is useful knowledge, it has also lost some of its scarcity in the codification process due to diffusion effects. This leads to the value paradox: 'Codified knowledge is inherently more diffusable than uncodified knowledge. That is to say, as it gains in utility it loses in scarcity.' (Boisot, 1995: 493). The creation of economic value in the market requires that firm's services offer simultaneously utility and scarcity to the customers.

Having diffused and applied, knowledge transforms once again into uncodified form due to learning by doing. As Boisot describes the learning processes: 'Absorption, by embedding the codes of explicit knowledge in a cocoon of tacit or uncodified knowledge, does not so much limit the diffusion of the former as reduce its relative utility. Without know-how that allows one to make an effective use of the codes, their mere possession may offer little competitive advantage.' (1995: 494). This implies that the absorption of tacit knowledge in the context of business services has the characteristic of developing a BSF's knowledge base so that a BSF is able to improve its use of codified knowledge in services. Having the properties of improving the competitive advantage, absorption may be seen as a way to protect the core knowledge of the BSF. In that sense, core knowledge of the BSF may be its tacit knowledge about the task that it performs for the client or the tacit knowledge about the client. There are thus two opposing forces that influence the processes of knowledge transfer: (1) the need for knowledge utilisation and (2) the need for protecting and building the knowledge base of a BSF.

The presented ideas will form the core in explaining knowledge transfer and transformation in a business service context. The following assumptions will be applied in building the model of knowledge transfer and transformation in a business service context. The basic assumptions for learning are: (1) a BSF learns and accumulates its knowledge base through the individual members of the organisation. (2) The codified knowledge is easier to transfer than tacit or uncodified knowledge, because the transfer of uncodified or tacit knowledge requires usually a face to face contact and participation. Figure 5 describes how the codification of knowledge is related to the location of knowledge (BSF vs. client/target group). The more codified the knowledge is, the easier it is to diffuse both to clients and to the

competitors. This implies that the diffusion of knowledge has two sides: codification makes knowledge easier to transfer and, thus, commercialise, but simultaneously codified knowledge is easier to imitate and may thus lose its rarity and uniqueness.

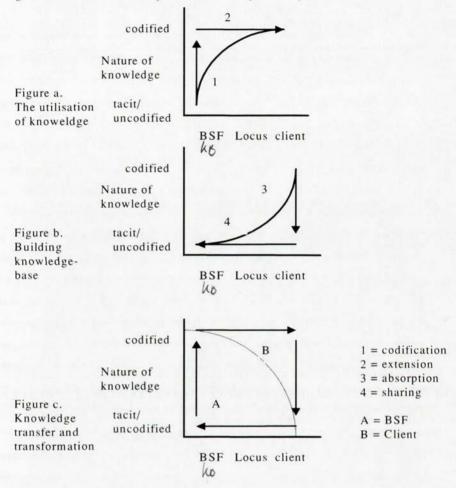


Figure 5 Transfer and transformation of knowledge in a BSF's customer relationships

Figure 5 a describes how the codification of uncodified or tacit knowledge (classification, the explanations of causalities, generalisation and making the knowledge more abstract) influences the transferability of knowledge. In the context of business services, the codification of knowledge facilitates the service delivery either by providing knowledge that is easy to transfer directly to the client or by providing codified knowledge for internal purposes in order to support the service

delivery. The utilisation of knowledge requires that uncodified or tacit knowledge is being codified (arrow 1) for facilitating the knowledge transfer in client interface, called extension in the presented model (arrow 2). This is a trajectory for utilising knowledge commercially in figure 5 a.

However, the more codified the knowledge, the more opportunities for diffusion regardless of the measures for preventing it (secrecy, patents etc.). Figure 5 b describes the competitors' opportunity for imitating the knowledge depending on the tacitness of knowledge. Once knowledge is codified, there is a greater chance of diffusion and imitation. The threat of imitation and the loss of uniqueness will drive the BSF to absorb uncodified or tacit knowledge from its environment. The absorption of knowledge in figure 5 b (arrow 3) transforms knowledge to more tacit form that is increasingly difficult to imitate by competitors. Since tacit knowledge is mainly absorbed by individuals, the knowledge needs to be shared internally (arrow 4) in order to safeguard the diffusion of tacit knowledge, e.g., in terms of jobhopping. This is a strategic trajectory of making the knowledge valuable to the BSF in figure 5 b. Tacit knowledge from client assignments improves the effective use of existing codified knowledge. E.g., customisation capability may be seen as a function of knowledge absorption in client relationships in terms of knowing what the customer prefers and knowing how to deliver it efficiently. The need to commercially utilise knowledge and the need to strategically defend the knowledge base, ties the BSF into a continuous knowledge exchange with its client environment and drives the BSF to balance the transformation between tacit and codified knowledge.

3.3.2 The modes of knowledge transfer and transformation

In figure 5c a dotted line is placed for describing the BSF/client boundary between a client and the BSF. Figure 5c proposes that *tacit or uncodified knowledge* and the processes associated with it, namely, codification and sharing, form the *core of the BSF*. This is due to the characteristics of tacit knowledge. Tacit knowledge is firm-specific and, thus, knowledge that makes the firm unique. In order to *transfer* knowledge as a service to the client, the *codification* of firm's tacit knowledge is often required. Codification in e.g. R&D activities that transform tacit knowledge into codified knowledge may be needed as prior related knowledge that facilitate knowledge absorption from external sources (Cohen & Levinthal, 1990). Once

codified, knowledge becomes transferable and easier to imitate. This creates pressures for diffusion of knowledge through different channels, e.g., employees changing jobs or clients changing their suppliers etc. During the process of service delivery a BSF *absorbs* uncodified or tacit knowledge from its environment and learns about the client environment and the service delivery. A firm intends to have some of its knowledge in a tacit form and *share* it internally through participation in the firm's activities. Absorbing and sharing tacit knowledge may thus have strategic importance in terms of developing a BSF's knowledge base so that it is difficult to imitate by competitors and thus may offer a sustainable source of competitive advantage.

Figure 5 c may be used as a tool for analysing the dynamism of knowledge transfer and transformation from the point of view of a BSF. The codification of uncodified or tacit knowledge (upward vertical move in figure 5 c) includes activities that classify, generalise, simplify and standardise the existing uncodified or tacit knowledge within the organisation. The interactive service delivery, in which knowledge is transferred to the client (horizontal move in figure 5c that describes the transfer of knowledge from the BSF to the target group), allows the service provider simultaneously to absorb and to deepen the knowledge about the client and the service delivery process (downward vertical move in figure 5 c). Most of this knowledge is typically tacit knowledge about the client (unwritten rules in client's organisation, informal power structures, client's preferences etc.) and tacit knowledge about delivering the service (task-oriented skills). Finally, in order to impede the diffusion of individually absorbed knowledge, it should be shared and scanned internally (horizontal move from client interface to the core of a BSF) in order to utilise tacit knowledge from customers firm wide.

Two basic knowledge processes may thus be identified with the help of figure 5: (1) transformation of knowledge and (2) transfer of knowledge. The vertical moves, codification and knowledge absorption *transform* the nature of *knowledge*. The horizontal moves, extension and sharing describe the *transfer of knowledge*. Depending on the nature of transferred knowledge, transfer of knowledge may be characterised by different processes. The transfer of tacit knowledge requires more participation, face to face contact and involvement than the transfer of codified

knowledge. Codification facilitates extension and decreases the need for interaction with the client by increasing the transferability of knowledge.

Since figure 5c describes knowledge transfer and transformation at the level of a client relationship, the BSF/client boundary in figure 5c is only a small part of the whole client interface that a BSF faces. Chapter four will introduce a framework for looking at knowledge transfer and transformation at the level of client base in terms of identifying codification requirements for different types of client relationships. Later in chapter eight some managerial implications for knowledge management in client interface at the level of client base will be suggested. The idea is that there is a linkage between the need for codification, locus of knowledge transfer and transformation and the type of client relationship.

3.4 THE DETERMINANTS OF KNOWLEDGE ABSORPTION IN CLIENT RELATIONSHIPS

3.4.1 Absorptive capacity of a business service firm

There are basically two factors that influence the extent of knowledge absorption in client relationships: (1) business service firm's capacity to absorb knowledge and (2) client's willingness to get involved with the interaction and co-operation. Some empirically grounded theories have been developed about the knowledge transfer in horizontal alliances (Hamel, 1991) and about the impacts of internal knowledge development for firm's absorptive capacity (Cohen et al., 1990). Hamel's (1991) research on the internalisation of knowledge in alliances will help us to identify the factors that determine the firm's capacity to absorb external knowledge. Cohen et al. (1990), on the other hand, have contributed to the issue by focusing on internal determinants of knowledge absorption.

Receptivity determines the firm's capacity to learn (Hamel, 1991). This concept is close to Cohen's et al. (1990) notion of absorptive capacity. Absorptive capacity, however, is defined more broadly to include the capacity to evaluate and utilise outside knowledge in addition to assimilating external knowledge. In that sense the absorptive capacity of the firm includes knowledge sharing and extension. The absorptive capacity of the firm has active and passive determinants. Active determinants are related to the development of prior related knowledge (R&D and

training) that facilitates the absorption of external knowledge. Also organisational factors like team building, the establishment of cross functional linkages and communication systems will increase the absorptive capacity of the firm internally (Cohen et al., 1990). Hamel (1991) presented the passive determinants of receptivity in three paradoxes: (1) learning requires often unlearning, (2) a small crisis abets learning and a big crisis limits learning and (3) the greater the need to learn, the higher the barriers to receptivity (1991: 97). Hamel's third paradox is similar to Cohen's et al. focus on prior related knowledge in a firm's capability of absorbing extramural knowledge. The idea that a prior knowledge about the phenomenon facilitates learning implies Hamel's third paradox.

Some other factors that limit the receptivity of a BSF may be identified. The employees of the business service firm may feel that they do not have anything to learn from the client. Alvesson (1994) provided interesting evidence for this. He studied Swedish advertising agencies and found out that 'The advertising people seldom think of the client's suggestions as expressions of knowledge or insightful evaluation. The client is someone who is always wrong, if he is not in agreement with the advertising people.' (1994: 549). The need to protect service provider's integrity or professional position may thus have effects on the attitude towards learning in client relationships. Alvesson suggested that:' the advertising people's comments and concepts concerning the client may be seen as part of a struggle to reach, protect, and strengthen their position regarding the 'right to express themselves regarding good advertising.'' (1994: 549).

The abundance of resources and industry leadership may also make the business service firm too arrogant to learn. As Hamel pointed out: 'learning is most likely to occur in the middle ground between abundance and arrogance on one side, and deprivation and resignation on the other' (1991: 97). Even if a business service firm may be a leader in its area, something may be learned from the co-operation with the client (e.g., the successful organisation for the joint task, critical factors in different phases of the project, client's preferences etc.).

Knowledge absorption from the client contacts may thus require firm's management to focus on the attitude of the people providing the service and the evaluation of learning experiences. The management needs to communicate this

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intent and establish incentive systems that encourage interface employees to acquire knowledge in an active way. This implies that even if the knowledge absorption from the client relationship may be regarded as a by-product that contributes to the development of knowledge bonds, the learning process or outcome is not a free good that comes as a "manna from heaven", but it needs to be identified and facilitated by the managers. Managers also need to focus on relevant locus of knowledge transfer and transformation. Depending on the type of service and the client, the focus may be on internal knowledge transfer and transformation like codification and standardisation or interface knowledge transfer and transformation like absorption.

3.4.2 Transparency of the client

Hamel's (1991) ideas about the transparency of horizontal partners may be applied to looking at the penetrability of a client's environment and knowledge base. Transparency of a partner describes the potential for learning (Hamel, 1991). Hamel (1991) provided a number of factors that affect the transparency of partner. One or more individuals may be charged with monitoring knowledge flows across the boundaries of firm (gatekeeping). The nature of joint tasks also affects the transparency. The more people are involved with co-operation and the more intermingling is needed in a service delivery, the more transparent are organisations. The narrowness of collaborative agreement affects also the transparency. If only a narrow range of activities in the project is included into the joint task, the transparency will be limited. Site selection and control may also limit the transparency of the client. To perform the joint tasks at, e.g. client's site may increase the transparency of the client.

Passive factors of transparency are related to the characteristics of a client's social context, tacitness of knowledge and the nature of relationship (competition vs. co-operation). Passive barriers to transparency may be even more efficient than active measures (Hamel, 1991). The business service firm may find it difficult to penetrate client's social context. E.g., different culture and defensive attitude towards outsiders may be barriers to transparency. As noted earlier, the nature of knowledge may be a natural barrier to transparency. Tacit knowledge (systemic knowledge, competencies, leading edge manufacturing knowledge) that requires

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participation and sharing of experiences and knowledge created in the process is more difficult to encode and transfer than more explicit knowledge (discrete knowledge, specific technologies and market intelligence) (Hamel, 1991).

3.4.3 Model of knowledge absorption in client interface

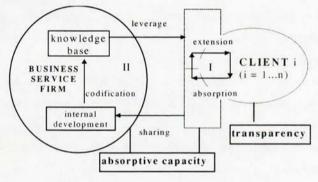
The model of knowledge absorption in client relationships integrates the proposed knowledge flows related to client contacts (figure 4) and knowledge processes (figure 5). Figure 6 presents the model that shows the linkages between the determinants of knowledge absorption in client relationships. The implications of the resource-based theory of the firm for the role of client relationships suggest two ways to influence the knowledge base of the firm: (1) the absorption of knowledge in client relationships (knowledge processes in client interface) and (2) the internal development of knowledge (internal knowledge processes).

Two knowledge circles may be identified in the context of a BSF's client relationships: (1) knowledge transfer and transformation in the client interface and (2) internal knowledge transfer and transformation. *Knowledge transfer and transformation in the client interface* consist of extension and absorption. The way the interaction with the client is configured influences the relative importance of each knowledge processes. It may be the case that they are overlapping and simultaneous, if the client relationships are co-operative. In that case there is not that much need for codification and the absorption of knowledge is strongly based on sharing experiences with the client. Typically these processes enhance and maintain the client relationships.

On the other hand the client relationships may also be distant so that extension is focused. This has some implications for *internal knowledge transfer and transformation*. In order to make extension efficient and leverage knowledge that has been absorbed by a BSF, there is need for sharing knowledge internally and codify that knowledge for further use. Knowledge sharing transfers and scans the relevance of tacit knowledge from client contacts for codification purposes. In that way internal development activities (training, R&D) codify the absorbed knowledge and may further facilitate the absorption of knowledge from downstream client contacts by providing prior related knowledge. The internal development of a firm's knowledge base by training of employees or conducting R&D activities does not

only develop the knowledge base of the firm directly, but also indirectly by facilitating the absorptive capacity of the firm (Cohen et al., 1993).

Codification and the absorption of knowledge develop the knowledge base of the business service firm in a complementary way. Internal development activities provide explicit knowledge that may be leveraged and absorption of knowledge provides tacit knowledge that may be further codified or utilised as such in service delivery. The absorption of knowledge is thus the function of a firm's own internal development, its absorptive capacity and the transparency of the client. The factor markets have also been suggested to be a source of knowledge for a business service firm (Sharma, 1992). However, the resource-based theory of the firm suggests that the idiosyncratic nature of firm's rent generating resources suggests that the market mechanisms for knowledge acquisition are less effective than the internal development of resources.



I = knowledge processes in client interface

II = internal knowledge processes

Figure 6 Model of knowledge absorption

In long-term client relationship (assignment n is with the same customer 1) the absorbed knowledge is utilised within the same client relationship. The earlier assignments and the associated learning from the co-operation may be argued to be beneficial for the client in terms of efficient and improved services. Prior knowledge about the client and the industry, and the established routines will facilitate the co-operation and service delivery. However, an aggressive utilisation of client's knowledge in service delivery may make it difficult to establish a long-term client

relationship, if the client feels that the business service firm is exploiting the client's resources.

As the future assignment n is with different client, client 1 may feel threatened by the potential knowledge transfer to competitors. The result may be the limitation of transparency or the refusal of repeat engagements. On the other hand, it should be noted that client 1 may also benefit from service provider's earlier assignments with different clients, when the relevant network knowledge is utilised e.g. in the customisation of services. As Elfring and Baven have noted: 'Customisation can be achieved faster and better when the service supplier has prior knowledge of the industry in which the customer operates. As a result, clients increasingly require a degree of knowledge from service suppliers about the industry concerned' (1994: 47). The balance between client's benefits from network knowledge and the fear of diffusion of knowledge to competitors is a paradox in providing knowledge-intensive business services that is difficult (or even impossible) to overcome. Trust between partners (Reve, 1990) and the use of network knowledge in combination with business service firm's own knowledge base so that the client-specific knowledge as such will not be rendered to client's competitors will ease the problem. In this respect, a business service firm should be able to create trust between partners and consensus about the mutual benefits from co-operative knowledge development and transfer.

3.4.4 Managing knowledge in client relationships

Knowledge management in client relationships will be viewed to include the organisational co-ordination mechanisms that influence the transformation and transfer of knowledge as a productive resource within the BSF and between the client and the BSF. Table 4 summarises the general co-ordination mechanisms for managing knowledge absorption in client relationships and associates them with the absorptive capacity of the BSF and the transparency of the client.

Table 4 Co-ordination of knowledge absorption in client relationships

Locus	Determinants of knowledge absorption	Co-ordination mechanisms	
Internal	absorptive capacity of a BSF: active: • development of prior knowledge (Cohen et al., 1990) • organisational factors and mechanisms (e.g., team building and - cross functional linkages) • communication systems passive: • learning specific factors (Hamel, 1991)	 organisational incentives (Reve, 1990) culture (Reve, 1990) routines (Teece et al., 1994) direction (Grant, 1994) managerial roles (Bartlett et al., 1993) organisational structures systems 	
Client interface	transparency of client: active: • gatekeeping • number of people involved in a project • restriction in collaboration agreement • site selection passive • social context • tacitness of knowledge and skills (Hamel, 1991)	interorganisational incentives (Reve, 1990) structure of cooperation routines of cooperation scripts as a coordination mechanism (Larsson & Bowen, 1989)	

Reve (1990) makes a distinction between internal and external co-ordination mechanisms. He suggested that the activities within the boundaries of the firm should be co-ordinated by internal co-ordination mechanisms like organisational incentives and culture¹⁰. In sum, the utilisation of firm's routines¹¹ (Teece et al., 1992),

¹⁰ Applying principal-agent theory and transaction cost economics, Reve (1990) conceptualises the organisation to be tied together and co-ordinated by organisational incentives and contracts that determine the authority of principal and the contribution of agent within the organisation. Within the organisations, managers may rely on hierarchical authority and establish the inducement-contribution balance that defines what the agent should do and receive from the contribution, and the limits of authority. This monitoring may be supplemented with softer incentives like trust, shared values and solidarity. Organisational incentives depend on the asset specificity and the measurability of performance of agents. If the performance can be easily measured some sort of result-based incentives (e.g., profits-based bonuses and stock options plans) should be used in monitoring and controlling the organisation. If the asset specificity is high and the performance is difficult to measure, other type of organisational incentives are needed. Internal labour market in bureaucracies and the shared values and trust may offer an incentive for an agent to perform efficiently. Learning as an organisational aim may require different approach to co-ordination, because high asset specificity (prior related knowledge) may be required and performance (learning) may be difficult to measure.

direction in terms of rules, guidelines, standard operating procedures and specific ad hoc instructions (Grant, 1994) and managerial roles (Bartlett & Ghoshal, 1993) have been suggested for the co-ordination of knowledge.

Internal co-ordination mechanisms - T WT

The organisational co-ordination mechanisms may also be divided into the primary mechanisms: organisational routines and direction, and the supporting mechanisms: systems and structures (Grant, 1994). It should be noted that in addition to the primary mechanisms and systems that support knowledge management, the organisational structure has also implications for knowledge sharing within a firm. The organisational structure will be seen as a set of established roles and routines for sharing and integrating knowledge of the members of organisation. The role of organisational structure in knowledge management (co-ordination of knowledge transfer and transformation) and the role of networks in facilitating knowledge transfer will be emphasised. The managerial challenge of knowledge sharing is related to two basic factors that influence communication and participation in an organisation. (1) Organisational structure influences the opportunity for communication and participation in work processes; and (2) individual attitude to knowledge sharing determines whether knowledge is being shared between the individuals or not.

The design of organisational structures may have important role in facilitating knowledge sharing. The functional organisation structure is efficient and creates organisational routines for integrating functional knowledge in a specific type of service (e.g., auditing). The problem with such a structure is that while a functional organisation is competent in providing specific services, it may lack the capability to customise the services and specialise in particular client sector. Integrating knowledge about a specific type of client in more market-oriented organisational

According to Teece et al. (1992) learning is the function of individual skills as well as the organisational context, because learning processes are social and collective phenomena including learning by imitation and learning from joint contributions. Common codes of communication are required in learning processes and coordinated search processes may facilitate the development of knowledge. Routines as the patterns of interaction facilitate the communication (by making it partly unnecessary) and may also reside in co-ordinated search processes. Especially with the communication of tacit dimensions of knowledge may be eased by routines. Teece et al. argued that routines represent firms' business capability and identified two types of routines: (1) static routines that embody the capacity to replicate previously performed tasks and (2) dynamic routines that are directed at establishing new competencies (1992: 28).

solutions may (1) improve the customisation capability of a firm and (2) facilitate the sharing of knowledge. Market-oriented organisational solutions like matrix organisation that combines the functional and market expertise is thus superior in internal knowledge sharing about client environment to the functionally structured organisations.

Mintzberg (1983) positions liaison devices/networks between matrix organisations and functional organisations in terms of their market-orientation. Networks may have an important role in sharing tacit knowledge within an organisation. Liaison devices/networks are utilised when interdependencies exist between tasks and positions after the structure of the organisation is established (Mintzberg, 1983). The interdependency means that a particular task is related to another task or that the accomplishment of the task requires knowledge about the other. Liaison devices/networks facilitate the communication between tasks and positions in the organisation and support service delivery that is horizontally specialised. Even if liaison devices/networks are established for facilitating the primary activity of the organisation like management consulting as a complex, horizontally specialised and highly interdependent service (Mintzberg, 1983), networks facilitate such service delivery by offering opportunity for the transfer of tacit knowledge due to the personal contacts and participation.

The co-ordination of a face to face communication and the participation in work processes are the critical parameters in designing organisational networks that facilitate the transfer of tacit knowledge in interfaces (e.g., inter-function or interdepartment interfaces). Organisational structures should be designed in a way that they will not impede internal sharing of knowledge, but allow knowledge to flow where it is needed. However, the benefits from transferring tacit knowledge needs to be weighted against the cost of organisational networks: the loss of organisational clarity due to unclear lines of authority, the sacrifice of peer evaluation, the efficiency of service delivery, implications for the co-ordination of client interface etc. (Mintzberg, 1983). The co-ordination of individual devices like establishing joint teams, encouraging job rotation, training and indoctrination, and other ways of lowering the departmental or functional boundaries that increase the communication and interaction between people may be used for facilitating and

supporting the transfer of tacit knowledge. Also, striking the balance between the professional integrity in terms of functional expertise and value creation to the client by mastering client-specific knowledge may challenge management activities.

The individual level of communication may be associated with the underlying values and the culture of the organisation and the individual preferences. For instance, the professionals are typically valued and positioned by their knowledge in an organisation. This suggests that professionals may inherently be opposing the sharing of the knowledge in order to defend their position in an organisation. Also different subgroups within a firm like accountants and management consultants may have different prior knowledge and mental models about the issues and tasks, so that the communication may suffer between them. The designs of incentive systems that encourage an individual professional to share knowledge with the other members of the organisation have a critical role in the co-ordination of knowledge transfer at individual level. Organisational incentives that control the employees may not be efficient co-ordination mechanisms for knowledgeable employees that basically carry the resources with them. As Mills et al. pointed out: "...controls within the professional context disrupt and impede the delicate personal relationship between the professional and the client. This suggests that traditional notions of supervision, which are focused on maintaining adherence to prescribed roles, rules and standards, generally are not subscribed to within the professional organizational structure...when task activities require flexibility, creativity and intellectual analysis...' (1983: 121).

What is the role of IT systems like Inter-, or Intranets in knowledge sharing and where are the limits of sharing knowledge by using IT systems? By definition, the organisational solutions are more adapt to internal transfer of tacit knowledge than the technological systems (carriers of codified knowledge), because organisational solutions rely on the established roles in an organisation that at least partly determine the participation in the organisation's activities. This implies that technological applications may be efficient in transferring codified knowledge, but the transfer of tacit knowledge suggests organisational solutions. The knowledge management will thus face the question of balancing the codification and transfer efforts with the need for sharing the experiences and learning from 'the real thing'.

The cost and benefit of codification and technical transfer of knowledge should be weighted against the cost and benefit of getting people in face to face contacts.

External co-ordination

The relationship with the client requires external co-ordination due to the lack of formal control over client's activities. The external co-ordination may be based on inter-organisational incentives like negotiations (Reve, 1990). Negotiations that specify the content and context of co-operation may thus used for influencing the transparency of the client. Contract that deals with a wide range of issues and gives an access to client's employees, documents, site and other source of information increase the client's transparency (Hamel, 1991). In this respect, external co-ordination may also be used for influencing client's transparency. Even if business service firm may be able to influence the transparency of the client only indirectly, a firm may be able to identify the issues associated with transparency and try to influence them. Developing client relationships into desirable direction may benefit from the recognition that differences in client relationships influence the opportunity for knowledge absorption. Also passive factors in transparency of the client, may require the development of commonly understood roles and interaction patterns. These routines of co-operation may facilitate the transfer of tacit knowledge.

A BSF may influence its client contacts by offering scripts for its customers to follow, or by selecting customers on the basis of what type of scripts the customers are willing to follow. As Larsson & Bowen noted: 'The importance of scripts is that they represent customer's knowledge of what to do for effective participation in the service production.' (1989: 225). By offering cues that indicate the desired behaviour in service delivery, a BSF may co-ordinate the interaction in service delivery. In general, Larsson et al., argued that 'organizations need to cue large roles when confronted with high customer motivation to participate; also, organizations cue loose scripts for conditions of high diversity of demand.' (1989: 226). The change of scripts may influence the nature of client relationship and the associated knowledge absorption opportunity.

The following research questions were looked at in this section:

· How the business service context influences the knowledge base of the firm?

- What type of knowledge is transferred in customer contacts?
- · How knowledge is transferred in customer contacts?
- What are the determinants of knowledge absorption?

It was pointed that client contacts are an important source of knowledge for the BSF. Particularly, client contacts may be most important sources of uncodified or tacit knowledge. Two types of uncodified knowledge may be identified: (1) tacit knowledge that is associated with skills that may be most difficult or impossible to codify and articulate; and (2) knowledge that is circumstantial and rapidly changing; and thus not worth codification. This implies that looking at the service delivery from the point of view of knowledge transfer and transformation provides an additional perspective to analysing service business. A model based on Boisot's (1995) ideas about social learning cycle was proposed for explaining the knowledge transfer in the context of business services. Two basic knowledge processes were identified: (1) transformation of knowledge (codification and absorption) and (2) transfer of knowledge (extension and sharing). It was argued that these knowledge processes are present both at client interface and inside the BSF.

Two major determinants of knowledge absorption in client relationships were identified: (1) transparency of the client and (2) absorptive capacity of the BSF. Next, the factors that influence the transparency of the client will be analysed in more detail. Chapter four will identify some critical factors that affect the opportunity for learning in client relationships. Based on those critical factors, the classification of client relationships will be presented. Propositions about the learning opportunity in different types of client relationships will be developed.

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4.1 INTRODUCTION

The previous chapters have shown that the client relationships deserve to be analysed from the learning perspective. How to analyse client relationships as a context of knowledge absorption? In order to analyse knowledge absorption in client relationships, a tool for structuring and describing the nature of client relationships is needed. A typology of client relationships will be developed in order to facilitate the following analysis of knowledge absorption in client relationships. Differences in client relationships like the duration and interaction-intensity of client relationships will be taken as the fixing point for the analysis of knowledge absorption in client relationships. This typology of client relationships will be utilised later in empirical research. This chapter will provide a classification of different types of client relationships based on the "match" between the client's preferences for its supplier relationships and the BSF's strategies. First, the vertical relationships from the point of view of client and client's strategies for managing their supplier relations will be introduced. Second, the configuration of client contacts from the point of view of a BSF will be looked at shortly and some implications for knowledge absorption opportunity will be suggested. Finally, a typology of client relationships will be developed based on some critical dimensions in terms of knowledge absorption in client relationships.

Section 4.2 will analyse client relationships both from the point of view of client and from the point of view of a BSF and a typology for the client relationships will be developed. With the help of that framework, implications for knowledge absorption will be identified in section 4.3.

4.2 CLIENT RELATIONSHIPS IN BUSINESS SERVICES

4.2.1 Client relationships in business services from both perspectives

Different types of client relationships will be analysed by identifying factors that influence the nature of client relationships. The analysis of those factors will aim at developing a typology of client relationships. Figure 7 provides an overview of the factors that influence the client relationships in knowledge-intensive business service context. A client relationship may be seen as the outcome of a "match" between business service firm's strategies and its client's strategies. Figure 7 suggests that the BSF's strategies (arrow 1) and the client's strategies (arrow 2) determine the nature of client relationships. The knowledge absorption opportunity is reflected by double arrow between the client relationship and knowledge absorption (arrow 3) showing that there is an ongoing exchange of information and knowledge in client relationships.

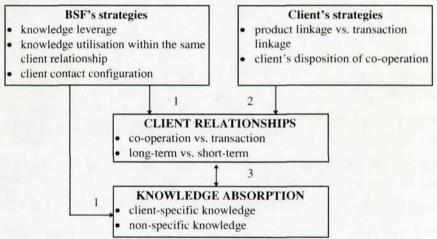


Figure 7 Central factors of knowledge transfer and learning in client relationships

The reconfiguration of client contacts may have a fundamental influence on competition in markets¹² in addition to its impacts on the opportunity for knowledge

The way customer contacts are reconfigured may influence or even change the rules of competition in an industry like in the case of IKEA. IKEA has reconfigured its customer contacts so that the customers have coproductive, but distant role in service delivery. IKEA designs, finds and manages suppliers; and packages the furniture in an efficient way. The customers do the rest: transport and assemble the furniture. By this customer contact reconfiguration IKEA has been able to shift some of the activities that service firms have done traditionally to its customers and decrease the cost of its services considerably. (Norman & Ramirez, 1994)

absorption. The reconfiguration of client contacts in a co-productive way may provide an opportunity for the absorption of client-specific knowledge from highly interactive and durable client relationships. This proves to be important in *the utilisation of client-specific knowledge in long-term client relationships* for customising the service and bonding the client in terms of establishing knowledge bonds.

The learning processes in more transactive client relationships may be internally oriented and focused on the absorption of non-specific knowledge due to the diverse, short-term and distant customer contacts. Such customer relationships may provide an incentive for the absorption of non-specific knowledge that may be widely utilised in diverse client relationships. The utilisation of knowledge in such way requires internal codification of knowledge in order to transfer it without direct interaction with the customers. *Knowledge leverage* may be appropriate in such client environment where bonding is relatively ineffective due for instance to the nature of service.

Clients' strategies for managing supplier relationships

This section will focus on the differences in client preferences. The clients may differ, for instance, in terms of service offering preferences (multiple vs. single service delivery) and co-operation preferences in terms of duration of client relationship (long-term vs. short-term) and the depth of interaction (co-operation vs. transaction orientation). The clients' strategies will be presented shortly in order to highlight the differences between the clients' preferences for interaction and in order to provide basis for developing a typology of client relationships later in this section. Baker's & Faulkner's (1991) model of client's strategies in managing their supplier relationships will be used for identifying and describing differences in the client's disposition of participation.

Baker & Faulkner (1991) looked at the client's strategies for managing their supplier relationships by discriminating between two dimensions: (1) product linkage and (2) transaction linkage. Baker's & Faulkner's typology of clients strategies is illustrated in figure 8. Product linkage depends on the clients' policy on purchasing related services from the same supplier. The transaction linkage identifies whether or not there is continuity over time in a client relationship. Four

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different types of strategies for managing supplier relationships were identified on the basis of these dimensions: (1) transactional strategy (no product or transaction linkages), (2) serial strategy (product linkage, but no transaction linkage), (3) fractional strategy (transaction linkage, but no product linkage) (4) relational strategy (both product or transactional linkages).

yes roduct linkage	Serial strategy	Relational strategy
no	Transactional strategy	Fractional strategy
	no Transactio	yes

Figure 8 Client's supplier strategies (adapted from Baker & Faulkner, 1991)

Client's preference for short-term relationships. The clients that use transactional strategy in their supplier relationships prefer an arm's length relationship with their suppliers. The assignments are short and independent of each other and the transactional relationship is discontinuous over time. The contact area between firms is typically narrow. In the serial strategy wide range of services are purchased from the same supplier, but the engagements will be granted to different suppliers over time.

Client's preference for long-term relationships. Opposite to the serial strategy, the fractional strategy focuses on granting a particular service for the same supplier over time. The assignments are piecemeal in nature, continuous relationship exists and the relationship is activated when needed. In the relational strategy a BSF's client aims at both to product linkage and transactional linkage. The client aims at building relationships with its supplier and the contact area is thus wide and the relationship continuous and stable.

Baker's & Faulkner's typology of clients strategies were presented in order to provide understanding of how the client may perceive its supplier relationships. The presented typology provides a picture about the variance of clients in terms of their disposition of participation with the supplier. Baker's & Faulkner's typology for client's strategies approaches the relationship between suppliers and customers from the point of view of the client and it is useful for describing how clients potentially perceive their supplier relations. However, the analysis of learning implications of different types of client relationships from the point of view of a BSF, benefit from the identification of critical dimensions of learning opportunity that may be utilised in developing a typology of client relationships. Next, another dimension will be added into the analysis of client relationships by taking a look at the configuration of client contacts more closely.

BSF's strategies

The BSF's strategies have been discussed in chapter two, in which a distinction between the utilisation of client-specific knowledge in long-term client relationships and knowledge leverage in new client relationships was made. The utilisation of client-specific knowledge aims at improving customisation and finding solutions to client-specific problems. Knowledge leverage in new client contacts aims at utilising non-specific knowledge in wide range of customer contacts. These strategies imply multiple roles for clients from the point of view of knowledge transfer.

Depending on the way *customer contacts* are *reconfigured* the customer may have (1) transactional role or (2) co-productive role in customer contacts. When (1) having transactional role clients are downstream buyers' of service offerings that embody knowledge from the BSF. It is typical for such transactions that there is a standardised solution for the client's problem and the client solves it by buying an existing or established product or service. However, the clients are often also co-producers of knowledge in cases where the solution to the client's problem or need is not obvious, at least not to the client itself.

Client contact configurations influence the opportunity for knowledge absorption. The co-ordination of service delivery may have strong influence on knowledge absorption in client relationships, because the way client contacts are organised determines how interactive is the client relationship and where is the

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focus of activities. Some frameworks have been developed for looking at the issues of organising service delivery in client interface (Larsson & Bowen, 1989; Mills, Hall, Leidecker, Margulius, 1983; Mills, 1986; Mills & Margulius, 1980 and Mills & Morris, 1986). Larsson et al. (1989) have proposed a framework for analysing the coordination of services and the reconfiguration of interaction with the customer. The differences in interdependence patterns require different design for customer interface activities. The identification of interdependence patterns was based on the diversity of demand and the customer's disposition to participate. Later on the customer's disposition to participate will be used as a critical dimension in explaining the co-ordination of activities in client interface.

In addition to the client's disposition to participate, the complexity of service may influence the way service delivery contacts are co-ordinated. The more complex the service is, the more useful may be the structural mechanisms for facilitating service delivery in client interface. High performance ambiguity in terms of (1) work flow uncertainty (input uncertainty due to the client's participation in Brass's (1985) classification) and (2) task uncertainty (conversion uncertainty due to incomplete knowledge of how to produce the service in Brass's (1985) classification) (Slocum & Sims, 1980), (3) intangibility of service, or (4) the degree of customisation (Schmenner, 1986) makes the service complex. Complex services require more interactions between the client and the front-line employees. Based on those two factors, (1) the complexity of service and (2) client's disposition of participation in service delivery, some guidelines for reconfiguring the client contacts may be suggested. Table 5 shows the dimensions of co-ordination and specifies some of the characteristics.

In the case of more standardised services the BSF may benefit from focusing on internal efficiency and reducing the input uncertainty that the interaction with the client may induce. The locus of activities may be found inside the BSF and focusing on the structured internal efficiency by creating efficient knowledge processing methods and routines, may be beneficial when the services are less complex. When the client's disposition to participate is low, the efficiency of operations may be increased if the client is buffered from the core activities of a BSF. High performance ambiguity in terms of input uncertainty, intangibility of service,

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or the degree of customisation makes the service complex and that requires more contact between the client and the front-line employees. Locus of activities is at client-interface. Increasing the structure of client interface may help to co-ordinate the delivery of complex services.

Table 5 Dimensions of co-ordination in client relationships

Dimensions of co- ordination	Characteristics
Structured	 scheduled agendas and working routines joint teams joint ventures joint ownership strict roles strict communication patterns strict business contacts
Non-structured	 non-scheduled ad hoc teams loose roles other social contacts
Co-operation	 free flow of information exchange of ideas exchange of resources penetration to client's environment letting the client to participate in service production
Buffering	 rising organisational boundaries offering pre-fixed roles for the client standardising the client's participation focus on a BSF's internal activities

Four different types of co-ordination schemes will be proposed with the help of figure 9: (1) non-structured interface buffering, (2) structured interface buffering, (3) non-structured interface co-operation and (4) structured interface co-operation. Client's disposition of participation determines whether the service delivery is co-produced or not. When the client prefers an arm's length approach to its suppliers, the service will have a character of exchange and the co-ordination will focus on the internal efficiency of service delivery. In the low interaction relationships there are clear organisational boundaries between the client and the BSF and the contact space between the client and the BSF is minimal. This is shown in figure 9 by separating the client's activities from the BSF's internal activities (F). The co-operation between

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the client and the BSF is shown in figure 9 by linking client's activities and the BSF's activities (C-F). The complexity of the service has impact on the primary locus of activities. The locus of activities is either in client interface like in the case of complex services (structured approach to client interface, described by the solid line in figure 9) or internal from the point of view of the BSF like in the case of more standardised services (non-structured approach to client interface, described by the dotted line in figure 9). Table 6 summarises the implications of different client contact configurations for knowledge absorption.

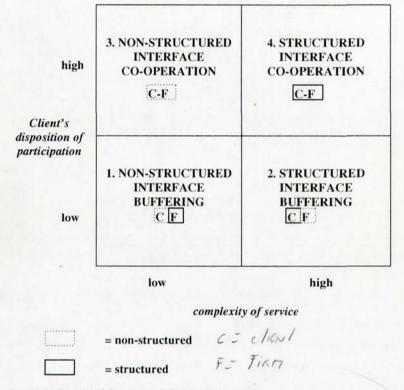


Figure 9 Configuration of client contacts in business service context

Non-structured interface buffering may be used in a service delivery situation, which is characterised by low complexity of services and low interaction with the client. The focus will be on managing the internal efficiency of service production by (1) buffering the client from the BSF's activities (F) and (2) focusing on internal efficiency of activities. This requires that (1) the client is informed how and where to

get the service and that (2) the BSF's internal activities are often standardised and well linked to the client interface activities. This suggests that the customer scripts are limited and specified. Non-structured interface buffering may have some implications for the knowledge absorption and learning in a client relationship. Due to the high organisational barriers between the client and the BSF and the standardised nature of the service, the knowledge absorption and learning from the individual client relationship may be limited. The organisational barriers may impede knowledge absorption in client relationships and focus will be on the BSF's internal activities like packaging the service and delivering it efficiently. This implies that codification and extension are focused.

Structured interface buffering may be utilised in the service delivery situation where the complexity of the service is relatively high, but the client prefers an arm's length approach to its supplier. In this case, the client's role in service delivery is rather independent, but structured before hand. This suggests that customer scripts are loose but specified. The focus of co-ordination is in the BSF's internal activities that provide support and guide the client in structured way. This kind of service delivery situation, which is characterised by a client's low disposition to participate, requires focus more on back-office preparation and support than would be the case if the client was willing to participate in co-production. This suggests limited learning opportunities for the BSF due to the client's lack of commitment to the service production. Client's controlled and buffered role may impede learning and knowledge absorption and the BSF's internal activities will be focused like creating procedures for controlling the client and specifying the client's roles.

Non-structured interface co-operation may be used in the service delivery situation where the service is relatively standard, but the client prefers co-operation with its supplier. The technical core of service may be highly structured and efficient, but the focus will be on co-operation with the client. This requires the focus on the efficient support from firm's internal activities (F) to the client interface activities. The close contact with the client may provide opportunity for broadening the contact area with the client and shift to the more complex services. Free exchange of tacit knowledge may be possible due to the loose roles and communication patterns.

Structured interface co-operation may be an appropriate way of dealing with the clients, when the service is complex and there is co-operation between the client and the BSF. The service delivery and interaction with the client will be structured and focused on client interface. Knowledge absorption may be intense due to high interaction and the complexity of the service. The management consulting services are typically this kind of services. Learning in such service delivery situation may be intense due to high interaction and the complexity of the service. A BSF does not only learn client-specific matters, but also the complexity of the service may induce learning that builds the competence of a BSF.

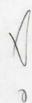
Table 6 Client contact configurations and the implications for knowledge absorption.

Type of client relationship	Low complexity of service	High complexity of service
Client's high disposition of participation	non-structured interface co- operation: • exchange of tacit knowledge due to the loose roles and communication patterns • focus on client interface activities	knowledge absorption may be intense due to high interaction and the complexity of the service. focus on client interface activities
Client's low disposition of participation	non-structured interface buffering: • the organisational barriers may impede the knowledge absorption in client relationships • focus on the BSF's internal activities like packaging the service and delivering it efficiently	structured interface buffering: client's controlled and buffered role may impede learning and knowledge absorption focus on the BSF's internal activities like creating procedures for controlling the client and specifying the client's roles

Discussion in this section suggests the following proposition:

Proposition 1. The nature of service has an impact on the opportunity for knowledge absorption in client relationships. The standardised services offer less opportunity for the absorption of tacit knowledge, because there are typically fewer interactions with the client in service delivery. Codification of knowledge is needed for facilitating and making the extension efficient. The more complex services offer

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better opportunity for the absorption and utilisation of tacit due to the increased need for interaction in service delivery.

4.2.2 The typology of client relationships from the point of view of a BSF

Two critical dimensions for analysing knowledge absorption opportunity in client relationships may be utilised: (1) the interaction-intensity of client relationship in terms of (a) the client's disposition of participation and (b) the BSF's configuration of client contacts (implied by the complexity of service), and (2) the duration of client relationship. Client's disposition of participation and the configuration of client contacts describe two different viewpoints into interaction-intensity of client relationships. By combining interaction-intensity with the duration of client relationships a typology of client relationships from the point of view of a BSF will be developed next. The typology of client relationships will utilise the dimensions that emerged from the previous discussion: (1) interaction-intensity and (2) the duration of client relationships. The client relationships will be approached from the point of view of a BSF and these two dimensions will be utilised in analysing knowledge absorption and learning in client relationships. Table 7 describes factors and specifies the dimensions that influence the nature of client relationships.

Client's disposition of interaction with the BSF may be divided into two opposite orientations: (1) transactional and (2) co-operative. In a transactional relationship the client has an arm's length approach to its suppliers and teams are not utilised in service delivery. It may be the case that there is a standardised solution to the customer's problems and a customer is able to solve them by simply purchasing an existing well-known service or product. The organisational boundaries between the BSF and the client may be high and difficult to penetrate. The exchange between the parties is market driven. The efficiency improvement associated with the competition between suppliers and the price of service dominates the relationships.

The interactive relationship, on the other hand, utilises co-operation in service delivery for solving the client's problems. It may be the case that the client does not know the solution for his or her problem and needs a partner for solving the problem. In these processes there may be an existing service that solves the problem, but the client is not aware of that and needs help in identifying the ways of solving

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the problem. On the other hand, there may not be any ready-to-use services for the client's problems and the client is willing to try to create new ways of solving the problem together with the BSF. The utilisation of teams, in which the ideas and knowledge are exchanged, is typical and organisational boundaries between the BSF and the client may become blurred.

Table 7 Dimensions of the nature of client relationships

Dimensions	Attributes	Characteristics
Interaction in client relationships	transaction	 client typically knows solution for his or her problem arm's length approach to suppliers no utilisation of co-operative teams clear and high organisational boundaries between the BSF and the client organisation market driven exchange of goods/services and money the market efficiency and the price of services dominates the relationship competition among suppliers
	co-operation	 one way flow of knowledge client does not know a solution for his or her problem co-operation in service delivery exchange of resources (ideas, knowledge, employees) utilisation of teams
Duration of client relationships	short-term	 blurred organisational boundaries two-way flow of knowledge single client assignments no bonds developed between the BSF and the client
	long-term	 project is in the middle of the activities task orientation identifiable and practical goals repeat engagements strong bonds between the BSF and the client relationship is in the middle of the activities long-term benefits for both parties

The duration of the client relationship may be used as another dimension in analysing client relationships. A clear distinction at the relationship level between the long-term and short-term client relationships is the existence of repeat

engagements. The long-term client relationships typically consist of a number of assignments (repeat engagements) and the occasional client assignment and new client assignments may be categorised as single assignments. In single assignments the project dominates the client contacts and the activities are task-oriented.

Table 7 will be used for developing a typology of client relationships. Four different types of client relationships may be identified with the help of figure 10, in which the dimensions discussed above, the interaction-intensity and the duration of client relationships, are linked: (1) the loyal client relationship, (2) the client partnership, (3) the co-makership and (4) the market exchange relationship.

The loyal relationship is a long-term client relationship accompanied with the client's transactional approach to its supplier relationships. The client may need a particular service regularly, but prefers an arm's length approach to its suppliers. As identified earlier, clients with transactional attitude towards their suppliers may be fully aware about the existing solutions for fulfilling their needs and prefer the ready-made packets of services. In such case, both the client (awareness and knowledge of existing solutions) and the BSF (solution content of knowledge) have knowledge that is needed for solving the client's problem. The client knows with whom and how to solve its problem and where to get this service. The BSF have a solution for the client's problem and is able to customise the service due to the experience from the repeat engagements.

The co-makership is typical in business service sector and it is characterised by close interaction with the client in service delivery. Identification of client's problem and service delivery require interaction with the client. Also the nature of service (complex services) may require interaction with the client. However, the co-makership is also a short-term client relationship in terms of repeat engagements. Co-makerships are based on solving client's problems on a non-recurring basis. This means that a BSF can not utilise the earlier knowledge about client, but it needs to rely on knowledge and experience about similar clients, industries and generic solutions to clients' problems. It may be essential in co-makerships, to be able to absorb generic and non-specific knowledge from client contacts and to create problem solving methods and procedures. A management consulting assignment may be an example of this kind client relationship.

A BSF may have co-operative associations with its clients. Client partnerships are client relationships that aim at achieving competitive advantage and benefit for both firms by knowledge development and utilisation the accumulated knowledge with the partner¹³. It may be the case that neither the client nor the BSF know the solution for the problems that they agree to start solving together. The client partnership may take a number of forms. It may be a joint venture with the client or it may be a client relationship, in which the client's and the BSF's processes have become aligned. E.g., the loyal client relationship may develop into the client partnership, in which there are multiple contact points with the BSF, if the BSF is capable offering additional services to the client.

long- term	LOYAL RELATIONSHIP	CLIENT PARTNERSHIP
short- term	MARKET EXCHANGE RELATIONSHIP	CO-MAKERSHIP
	transaction	co-operation

interaction

Figure 10 Typology of chent relationships

Finally, the market exchange relationship may be associated with the relationships with faceless clients, in which no co-operation between the BSF and the

¹⁵ How useful are the client partnerships for a BSF from the point of view of learning and resource development? Normann (1991) has suggested that customer satisfaction (implying the opportunity for the position of preferred supplier) may have paradoxical implications for organisational learning. The assumed asymmetrical knowledge position (the client is relatively uninformed about service production process like the confused) may lead to the situation in which the customer can not pressure the service provider to improve its services fundamentally. On the other hand, the competent client may turn out to be an ideal partner when the cooperative assignment is about creating new solutions for the client's problems.

client exists. In such client environment, clients are fully aware of how to solve their problems with existing services or products and the BSF has ready made solutions or "packages" that fulfil the clients' needs. That kind of service may be, e.g., non-customised software services or information services like providing stock market data for a large number of faceless clients. The market exchange relationship may be an important business area for the BSFs or just an entering stage for the other types of client relationships. Their importance depends on the type of assignments and the BSF's strategies.

This typology of client relationships will be critical for this research and it will provide a basis for the following analysis of knowledge absorption in client relationships in section 4.3. It will also be used in chapter five for the theoretical sampling of cases in empirical research. Finally, it will be used as the tool for looking at the implication for knowledge management in client relationships in chapter eight.

4.3 CLIENT RELATIONSHIPS AS THE BASIS FOR KNOWLEDGE ABSORPTION

Client relationships may be seen as the context of knowledge absorption and learning. This section will approach the client relationships from the learning perspective and view the client relationship as a context of knowledge absorption. Two dimensions are utilised in the following analysis: (1) the duration of client relationship and (2) the interaction-intensity of client relationship. First, the utilisation of knowledge in different types of client relationship will be analysed at the level of client base. The basic idea is that the opportunity for the transfer of tacit knowledge differs in different types of client relationships. Second, knowledge absorption in client relationships will be analysed and, based on the identified dimensions above, the implications for knowledge absorption and learning will be proposed.

¹⁴Client relationships has also been analysed as the context of transactions that imply transaction costs due to non-co-operative attitude and opportunism associated with the competitive relationships (Williamson, 1985). Increased asset specificity and performance ambiguity calls for governance mechanisms that decrease the transaction costs. However, the increased asset specificity due, for instance, to the long-term co-operation and interaction with the client may require governance mechanisms that inhibit learning in a client relationship by suggesting more hierarchical arrangements for client relationships. The hierarchical relationship with the client and strict roles may inhibit free flow of information in a client relationship and, thus, learning.

4.3.1 The positioning of client relationships in terms of knowledge processes

Table 8 describes some typical characteristics of tacit/uncodified knowledge and explicit/codified knowledge. Explicit knowledge is articulated knowledge and hard data that may be transferred without direct interaction to large audiences. Uncodified knowledge, on the other hand, may be associated with (1) tacit knowledge like complicated skills that needs to be learned by practising or (2) circumstantial knowledge that is either related to particular context or changing circumstances and time. In a tacit form, knowledge is transferred in an interaction by participation or by observation. The transfer of tacit knowledge is usually slow and it may often be transferred only to the limited audience (Boisot et al., 1997). There may be a number of reasons why tacit knowledge may not be codified in the first place. Polanyi's (1966) "people know more than they can tell"-reason implies that there are tacit components in skills and knowledge that are somehow inaccessible. The mastery is realised and gained in action second, the high context-specificity may make it useless to codify tacit knowledge further. It may be the case that it is easier and faster to learn by doing than to make all the effort of codifying and transferring knowledge in codified form. These two reasons imply that the transfer of tacit knowledge requires always participation and action. However, depending on the context of knowledge utilisation, the need for codification and the opportunity for the utilisation of codified and explicit knowledge differ.

Table 8 Examples and description of tacit and codified knowledge

Tacit/uncodified knowledge	Explicit/codified knowledge		
 skills circumstantial client-specific related to time and client's context soft data transferred in an interaction by participation and observation limited audience 	 articulated knowledge codified and stored e.g., into software systems hard data can be standardised may be transferred without interaction large audiences 		

Figure 11 below describes the basic idea behind the opportunity for the transfer of uncodified or tacit knowledge in different types of client relationships. Codification transforms *tacit knowledge* into *codified knowledge* that is easier to utilise and transfer than tacit knowledge. The dotted line in figure 11 represents the

BSF/client boundary at the level of client base, in which a firm may have a number of different types of client relationships. Depending on the interaction-intensity and the duration of client relationships, they are positioned along the BSF/client boundary so that the more interactive and the longer-term client relationships offer better opportunity for the transfer of tacit knowledge in service delivery. It is assumed in figure 11 that the transfer of tacit knowledge in service delivery is easier in the longer-term client relationships due to the opportunity for making observations about the client over time. This implies that the codification requirements increases in more distant and transactive relations along the BSF/client boundary and the transfer of knowledge in service delivery is increasingly about transferring explicit knowledge to the client.

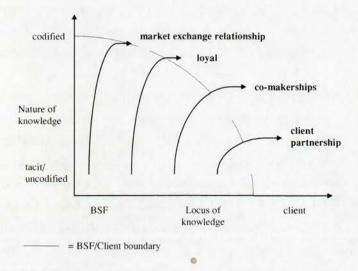


Figure 11 Different types of client relationships along the BSF/client boundary

The positioning of different types of client relationships along the BSF/client boundary in figure 11 suggests that knowledge transfer and utilisation in service delivery is not only primarily depending on the firm's ability to manage articulation processes of tacit knowledge as Sanchez (1997) suggested, but the differences in the context where knowledge is utilised determines the need for codification. More specifically, the higher the interaction-intensity in service delivery is, the higher is the opportunity for the conversion of knowledge (tacit to uncodified and vice versa)

during the joint project with the client. The more distant and transactive the client contacts, the greater the need for codification of knowledge. The higher the duration of client relationship is, the higher is the opportunity to utilise client-specific knowledge like contextual tacit knowledge within the same client relationship. This discussion suggests:

Proposition 2. The context of knowledge transfer and transformation determines the opportunity for knowledge absorption and the need for codification in different types of client relationships.

4.3.2 The implications of client relationships for knowledge absorption

Von Hippel (1976) pointed to the relevance of the content of new knowledge (innovations) obtained from customers¹⁵. He made a distinction between solution content and need content of new knowledge that may be derived from the prototypes that the users have developed for the manufacturers of scientific instruments16. Similar classification of content of absorbed knowledge will be utilised in this study. The role of the content of absorbed knowledge in terms of the specificity of knowledge will be looked at in terms of (1) non-specific knowledge, (2) client-specific knowledge. Number of other ways for classifying content of knowledge (or knowledge-based capabilities and competencies) has been suggested. For instance, Hamel & Heene (1994) made a distinction between market-access competencies and integrity- and functionality-related competencies (see chapter two) in a similar way as Elfring & Baven (1994) distinguished functional and application capabilities. Market-access competencies and application capabilities are associated in this study with client-specific knowledge and integrity- and functionality-related competencies and capabilities are associated with non-specific knowledge.

Non-specific knowledge refers to knowledge and skills that may be leveraged in general to new clients without breaking the trust with ex-clients. Non-specific

¹⁵ von Hippel referred to prior research based on Utterback's (1974) list of eight quantiative studies into the innovation process that suggested that the "accurate understanding of user need" correlates strongly with innovation success.

In his study von Hippel (1976) showed that in 78% of cases where a user prototype was preceding a commercialised innovation, solution content of innovation was obtained from the prototype. However, he did not have data about the frequency of need content in commercialised innovations.

knowledge is close to solution content in Von Hippel's (1976) classification. The absorption of user industry knowledge as benchmarking data to be utilised in further assignments or professional skill development may be given as examples of non-specific knowledge absorption. The high interaction with the client enhances the skill development and the more demanding the situation, the steeper the learning curve.

Client-specific knowledge is knowledge about client environment in codified or in tacit form that, for instance, improves a BSF's understanding of client's processes. Client-specific knowledge improves a BSF's ability to offer additional services that support client's processes or to customise its services. Client-specific knowledge resembles with von Hippel's (1976) need content of new knowledge. Client-specific knowledge is often contextual knowledge about particular clients and it may be used for relationship marketing purposes. Client-specific knowledge is idiosyncratic and often tacit in nature. In general, client-specific knowledge helps a BSF to understand the client context and the client's processes better. It may also be the case that the idiosyncratic knowledge absorbed from the client relationship may not be applied to the other clients' problems due to for instance the confidentiality or the high client-specificity of knowledge.

Figure 12 provides an integrative scheme for analysing the type of knowledge absorbed in client relationships. The duration of client relationship is proposed to influence the specificity of absorbed knowledge. The longer-term the client relationship, the more opportunity for the absorption of client-specific knowledge. The less opportunity for repeat engagements, the higher the motivation for the absorption and utilisation of non-specific knowledge. The interaction-intensity on the other hand is proposed to influence the opportunity for the absorption of tacit knowledge. The more intense the interaction and co-operation with the client, the more opportunity for the absorption of tacit knowledge. More specifically,

- the longer the client relationship the higher the transparency of the client and more tacit and client-specific knowledge may be absorbed by the BSF.
- the *short-term* client relationships (a) make the client less transparent and do not provide such basis for the absorption of client-specific knowledge, but (b) the

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repetitive assignments with different clients may induce the absorption of nonspecific knowledge.

- the higher the interaction in the client relationships, (a) the higher the transparency of the client and more client-specific knowledge and tacit knowledge may be absorbed by the BSF.
- the client's transactional approach to its suppliers (a) may induce non-specific knowledge absorption, but (b) may make the absorption of client-specific knowledge difficult.

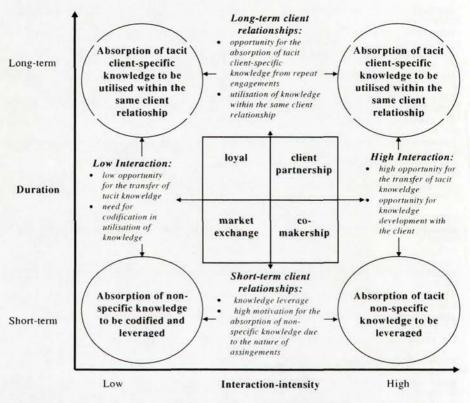


Figure 12 Key integrative scheme: Client relationships as the context of knowledge absorption

Since the dimensions are partly overlapping in terms of learning implications, it is proposed that absorption of tacit client-specific knowledge occurs in the client relationships that are characterised by either high duration of client relationship or high interaction or both: loyal, co-makership and client partnership. Low interaction

and the short duration of client relationship in market exchange suggest that knowledge absorption is focused on non-specific knowledge and particularly it is difficult to absorb tacit knowledge from clients. However, learning may be induced in nature, meaning that the BSF does not actually learn from the interaction with the client, but is pressured to learn internally by often demanding clients¹⁷.

Propositions about knowledge absorption opportunities

Using these assumptions, propositions are developed about knowledge absorption in different types of client relationships. These propositions will be illustrated by case studies that investigate knowledge absorption in business service firm's client relationships. The aim of the propositions is to highlight some differences in the knowledge absorption opportunities that the client relationships offer at business service context. After suggesting a general proposition, the central differences between the nature of knowledge absorption in different types of client relationships are proposed.

Proposition 3. The opportunity and the incentive for knowledge absorption in client relationships differ due to the differences in the interaction-intensity and the duration of client relationships.

Corollaries to proposition 3:

Proposition 3 a. The loyal client relationship offers an opportunity to the absorption of tacit knowledge by making observations in the long-term client relationship. There is also a strong incentive to absorb client-specific knowledge that may be utilised within the same client relationship.

Proposition 3 b. The short-term nature of co-makership induces a BSF to focus on non-specific knowledge that may be leveraged to new client relationships. The absorption of tacit knowledge from diverse client contacts contribute to the building of problem solving methods, tools and databases that facilitate problem solving in new client contexts.

Proposition 3 c. The extensive and long-term interaction in client partnership offers an opportunity for the development of new knowledge together with the

Whether of not this may be perceived as learning is matter of definition. If learning in client relationships is understood as an outcome of changes in the knowledge base of the BSF due to the client contacts, the induced internal learning processes due to the client contacts may be viewed as learning.

client and an opportunity for the absorption of tacit client-specific knowledge that may be utilised within the client partnership.

Proposition 3d. The market exchange relationships provide incentive for the absorption of non-specific knowledge that may be further utilised in service delivery to a large number of customers. The absorption of tacit knowledge is difficult; and knowledge that is utilised in service delivery needs to be highly codified in market exchange relationships.

The following research questions were highlighted in this chapter:

- · What are the determinants of knowledge absorption in client relationships?
- How to classify different types of client relationships in terms of knowledge absorption opportunity?
- What are the implications of different types of client relationships for knowledge absorption?

The developed client relationship typology identified some critical differences in client relationships. Based on those differences, implications for knowledge absorption were proposed. In chapter five a look at the previous research on knowledge absorption from client contacts will be taken. After the overview of some important contributions to research on learning from customers, the research design for the empirical research will be presented. The research design will shortly introduce the case study firms and prepare the ground for the following case descriptions in chapters six and seven.

OVERVIEW OF PREVIOUS RESEARCH AND CASE STUDY DESIGN

5.1 INTRODUCTION

The resource-based theory of the firm suggests that the characteristics of unique firms implementing and sustaining unique strategies should be studied. This approach implies the need for an analysis that can make a distinction between firms and particularly focus on outliers that are the best or worst performers instead of representative firms in an industry¹⁸ (Aharoni, 1993). As Starbuck pointed out: 'To appreciate such currents, beauty and intricacy, social scientists need to stop averaging across large, diverse categories. The average painting is flat grey, the average day is neither hot nor cold and has 12 hours of daylight, the average firm is mediocre and short-lived, and the average expert knows little about any field. In the social sciences, broad patterns oversimplify and capture only small fractions of what is happening. They leave scientists in worlds that look random. Broad patterns also tend to emphasise what is consistent with the past and to overlook subtle changes. There is also a world of bright colours, sizzling days, exceptional firms and rare experts, and peculiar KIFs [knowledge-intensive firms]' (1992: 738). In this study Starbuck's message has been taken seriously and unique firms, like the case study firms of the study, KPMG and Tieto Group19, have been investigated by looking at the knowledge absorption in their client relationships.

During the last decade cross-sectional and population-oriented analysis has been typical for the empirical research in strategic management due to the focus on industry level factors and due to the intellectual roots (IO economics) of competitive positioning approach. This type of research is well equipped to discover the general characteristics of the population of firms (industries), but statistical generalisation and cross-sectional studies may not be appropriate research methods for looking at firm-specific or context-specific issues (Aharoni, 1993).

¹⁹ Curiously, the name of Finnish case study company Tieto means knowledge in English

Case study research is, in general, a suitable research method for examining contemporary events, when the boundaries between the phenomenon and context are not clearly evident (Yin, 1989: 23), like in this study. Both the client relationships as the investigated context and knowledge absorption as the investigated phenomenon may have impacts on each other. This means that in addition to providing basis for learning, client relationships may be influenced with the absorbed knowledge and its utilisation. For instance, prior knowledge about the client may increase the likelihood of repeat engagements due to the better opportunity for customisation. The empirical research will focus on investigating the impacts of client relationships on knowledge absorption.

Recently, Howells described the problems associated with research on tacit knowledge: '...tacit knowledge is so difficult to define and quantify. Indeed, ... even the hint that a scientific process involved some element or form of tacit knowledge led to its foreclosing as a scientific activity for study.' (1996: 91). This suggests that the task of doing research on the absorption of tacit knowledge is not an easy one. Being aware of these difficulties, investigation into the role of tacit knowledge in knowledge absorption from customers will be started. The research on knowledge transfer in client relationships will highlight some of the issues related to tacit knowledge, like how can it be described and what are the implications of different client relationship for its absorption? The empirical research will be carried out in the belief that 'as more research is undertaken on tacit knowledge and it is no longer an area of study to be avoided, it is likely that those areas of knowledge that are truly 'tacit' in nature are smaller than initially thought' (Howells, 1996: 103).

Next, a look into the prior research on learning implications of customer contacts will be taken. Section 5.2 will present some results from previous research. Section 5.3 will present the research design in this study and section 5.4 will describe the research process at case study firms. The theoretical sampling of individual cases at client relationship level will be described and the description of the context of case study firms will be given.

5.2 EMPIRICAL RESEARCH ON LEARNING FROM CUSTOMER CONTACTS

5.2.1 Background

What do we know about the role of customer contacts in knowledge absorption? The role of customers as a source of knowledge has received most attention in technology and innovation management studies (e.g., von Hippel, 1976, 1978; Rothwell 1986; Gardiner & Rothwell, 1985; Rothwell & Gardiner, 1985; Voss, 1985; Foxall, 1989). Innovation studies have focused on customers as a source of innovations (new knowledge) and technical knowledge. Innovation studies have also noted the point that knowledge or "accurate understanding" of customer or user needs are important in innovation processes (von Hippel, 1976). Studies on the role of customer in knowledge creation processes like innovation processes, may be identified both in manufacturing industries and service industries.

5.2.2 Manufacturing context

The stream of research on customer's role or user's role in innovation process was initiated by von Hippel's (1976) seminal article about the dominant role of users in the scientific instrument innovation process. Based on Utterback's (1974) list of eight quantitative studies into the innovation process that suggested that the "accurate understanding of user need" correlates strongly with innovation success, von Hippel (1976) raised questions like how this knowledge is acquired and what does this kind of knowledge "look like". The basic message was that three out of four commercially successful innovation projects are typically initiated in response to a strong involvement of users. He showed that 'In 81% of all major improvement innovation cases, we find it is the user who: perceives that an advance ... is required; invents the instrument; builds a prototype; proves the prototype's value...; diffuses detailed information on the value of his invention ... to instrument companies.' (1976: 220-221).

The user's active role was not relevant only for those that were unable to innovate by themselves. It seems to be an integrated part of innovation process in general. As von Hippel emphasised: 'that the pattern of a user-dominated innovation process appears hold for companies who are established manufacturers

of a given product line - manufacturers who "ought to know" about improvements needed in their present product line and be working on them - as well as for manufacturers for whom a given innovation represents their first entry into a product line new to them.' (1976: 222).

von Hippel (1976) also pointed to the relevance of the content of innovations (new knowledge) obtained from customers. He made a distinction between solution content and need content of new knowledge that may be derived from the prototypes that the users have developed for the manufacturers of scientific instruments. In his study von Hippel (1976) showed that in 78% of cases where a user prototype was preceding a commercialised innovation, solution content of innovation was obtained from the prototype. However, he did not have data about the frequency of need content in commercialised innovations.

Like von Hippel's research, most of the research on knowledge absorption in client contacts has been conducted in manufacturing industries (E.g., Rothwell 1986; Gardiner & Rothwell, 1985; Rothewell & Gardiner, 1985). Rothewell (1986) showed that 84% of successful innovations studied in UK textile industry associated with outside collaboration. In the 66% of cases the collaboration was with customers. Rothwell and Gardiner have proposed that in addition to the fact that customers have important role in innovation process, as suggested by von Hippel, the type of customer influences the outcome of innovation process. Their basic idea is that 'tough' and demanding customers make good designs (Gardiner et al., 1985) and robust innovations (Rothwell, 1986). The cases of US Army and Pan Am as Boeing's tough customers in the development of Boeing 747 and Boeing itself being tough customer for Rolls Royce when developing Boeing 757 showed that tough customers demand more robust requirements that eventually lead to better design (Gardiner et al., 1985). In addition to Boeing case of the chain of demanding customers, a case study of British hovercraft development (Rothewell et at., 1985) and Howard's development of rotary cultivators (Gardiner et al., 1985) supported the thesis of demanding customers being important sources of knowledge. Rothwell notes that While it is important, where feasible, actively to involve customers in the design and development process it is, of course, important to interact with customers who themselves are innovative and technically progressive.' (1986: 116). This suggests an

additional role for the customers. In addition to having tough and demanding customers, firms also benefit from the customer relationships, in which the customers are competent as well.

These cases have highlighted the role of customers in manufacturing industries and they basically suggest that demanding customers, in addition to being sources of knowledge, initiate internal knowledge processes in the firms that eventually lead to learning and better products. In addition to initiating firm's internal learning processes, customers were suggested to have also direct role in innovation process. Collaboration with the competent customers improves the innovation processes. These examples emphasise the need for closer interaction and the utilisation of customer contacts in innovation processes. Understanding customer needs by listening to them and by co-operating with them increases the chances of success in innovation processes.

5.2.3 Service context - Case of software development

Being manufacturing-oriented the presented cases neglected some important learning implications that client relationships may offer. Service delivery offers inherently better opportunity for interaction with the customer than the manufacturing business. Service is a process that often relies on the skills of the service provider. This suggests that the role of experience in handling the service delivery becomes more important in service context. Some cases that describe the role of customers and users as sources of knowledge in service context may be identified (Voss, 1985; Foxall, 1989, Sharma, 1992; Reischeld, 1996). Voss's (1985) study in service context will illustrate the role of customers in innovation process and as a source of prior knowledge.

Voss (1985) investigated the role of the user in the innovation process in computer software industry. The degree of participation was identified as a critical factor in explaining the role of users in Voss's study. He analysed 63 software innovations and found out that more than 30% of innovation processes were user active, meaning that user has formulated the idea in the first place. Table 9 will present the results of the survey.

The relatively lower percentage of user active innovations compared to von Hippel's findings may be explained by the fact that many firms develop software applications for their own use and do not transfer them to markets for commercial purposes. This may be due to e.g., need to appropriate the value that the software applications offer for the firm. As Voss stated about the result: 'it is likely that many users who developed good software and systems, but had not transferred or marketed them, will have been missed. The results of the analysis, therefore, will likely understate the level of user participation in the innovation process.' (1985: 116).

Table 9 Degree of participation of users in the development of applications software

General participation category	No. of innovations in category	% of innovations in category	Users had expertise (% of 36 cases)	Users did not have expertise (% of 36 cases)	Data not available
User active	19	32	6 (37, 5)	10 (62,5)	3
Supplier active	40	66,5	7 (35)	13 (65)	20
Not classified	1	1,5	-	-	-
NA	3		-	-	
Total	63	100	13 (36,1)	23 (63,9)	23

Source: Voss (1985)

Table 9 shows also that the user's technical expertise is not essential in software development. In 63,9% of cases in the studied 36 innovations, where the user's expertise was determined, user did not have technical expertise, but still contributed to the development of software applications. Voss gives an example of this: 'The user, a person without any computer knowledge, approached a supplier, IBM, with a problem that he thought IBM could solve. IBM proposed a solution based on a mainframe computer that would not have worked because it required batch processing. The user recognised the difficulty and specified in his own mind the general nature of technical means to solve the problem, namely a small computer with real time software. He did his own search for a suitable computer and then, on his own, with considerable do-it-yourself learning, developed the innovation.' (1985: 117). This example shows that customer's can indeed provide new knowledge for a firm. Whether or not a firm is able to learn from these client contacts and utilise the potential knowledge from clients is a different issue.

The role of user industry knowledge turns out to be an important element in developing and applying new knowledge by the supplier. Prior industry knowledge

facilitates the development of innovations and new knowledge. Voss (1985) showed in his study of 40 suppliers that suppliers with prior industry knowledge were more active producing new knowledge and innovations. 65% of active suppliers were reported to have prior knowledge about user industry in comparison with 83% of nonactive suppliers that were reported not to possess prior knowledge about industry. This line of reasoning turns Cohen's et al. (1990) proposition about the positive implications of prior knowledge in terms of R&D activities for knowledge absorption on its head by suggesting that prior knowledge about industry facilitates R&D activities. This suggests two lines of reasoning that are not necessarily competing, but shows the interactive nature of knowledge absorption and internal knowledge development. (1) Prior knowledge in terms of internal knowledge development increases the firm's capacity to absorb knowledge from its environment (Cohen et al., 1990). (2) Prior knowledge about the user industry facilitate the internal knowledge development activities (Voss, 1985).

Table 10 shows the sources of prior industry knowledge to be mainly associated with the contacts with the customers in user industry. Voss (1985) asked the source used in learning about the user industry from 32 active suppliers. In 54% of the cases the source of knowledge was the customer either in terms of previous work or discussions. This kind of knowledge is typically associated with experience and thus has tacit elements. It should be noted that only in 9% of the cases knowledge was in codified form and the source of knowledge was text books, procedure manuals etc.. This shows that customer contacts are important sources of knowledge in service context due to the customer's ability and willingness to reveal and sometimes articulate their needs. However, it should be noted that knowledge from client contacts is often tacit in nature.

Table 10 Sources of industry knowledge

Source of knowledge	No. of respondents	% of respondents
Previous work by company in the user industry	15	27
Discussion with company in the user industry	15	27
Previous work by individual(s) for user industry in previous supplier employment	9	16
Employment in the user industry by individual(s) prior to joining supplier	7	13
Textbook, procedure manuals, etc.	5	9
Company is part of industry	4	7
Total	55*	100

^{*)} The totals add up to more than sample size (32), as respondents gave more than one response.

Source: Voss (1985)

5.2.4 Lessons from previous empirical studies on learning from customers

The research on innovation processes in some industries have shown that (1) the customer's or user's role may be crucial in innovation processes (von Hippel, 1976) and that (2) successful innovation projects are often associated with outside collaboration, mostly with customers (Rothwell, 1986). In contrast to manufacturing industries where the contact with demanding and competent customers may offer important knowledge creation opportunities (Rothwell & Gardiner, 1985), the customer's technical competence may not be that essential in knowledge creation processes in service industries (Voss, 1985). (3) It should be noted that it is not only technical or solution content that matters, also need content²⁰ may be important knowledge that needs to be absorbed. Finally, Voss's (1985) study showed that (4) most of prior knowledge about the user industry in service context is uncodified²¹ in

Reischeld (1996) described an anonymous case about the bank that initiated a learning program for improving the understanding of customer needs and for removing the sources of failure. The case shows that it is not just technical knowledge that may be absorbed from customers, but understanding client's need may also be seen as relevant knowledge. In the case of absorbing client-specific knowledge that increases customer loyalty, customer is a major source of knowledge as in the case of innovation processes. However, understanding customer needs may require that the firm learns not only from existing customers, but also from defecting customers.

Based on the interviews with representatives of 25 Swedish technical consultancy firms (TCFs) and the data about Swedish technical consultants' foreign operations Sharma (1992) highlighted the role of customers as a source of experiential and tacit knowledge in knowledge-intensive service context. He points out that the most significant resource that the knowledge-intensive firms like TCFs possess is knowledge of the employees. Regardless of the years of education and formal training of the staff, Sharma suggests that 'the major portion of the TCF's knowledge is, however, experience... the experiential knowledge is more subtle and particularistic

nature, instead of codified knowledge like text books, procedure manuals etc. Prior knowledge about the user industry is typically acquired in customer contacts in terms of previous work or discussions in the user industry.

The presented cases showed that customers and downstream users do have an important role in knowledge processes like innovation processes that produce new knowledge. Studies both in manufacturing industries and in service sector showed that the innovation process is often user-dominated. Competent users may be useful collaboration partners, but in service context, like in the case of software development, it was shown that users do not have to be experienced in order to participate in the innovation process. This is due to the increasing importance of understanding customer's needs, as service is often about customising and tailoring service offerings in close interaction with the customer.

These results show that customer contacts may be an important source of new knowledge (innovations) and useful prior knowledge about the user industry. Also the result that the absorbed knowledge is often uncodified or tacit in nature suggests that particularly in service context knowledge absorption from customer contacts may be strongly influenced by the contextual factors like the nature of client contact. This study departs from innovation studies by (1) analysing how knowledge absorption is in general driven by knowledge processes in customer contacts (the characteristics of context²² influence the transferability and the utilisation of knowledge), and (2) clarifying the essential role of the absorbed tacit knowledge in the BSF's knowledge building processes.

and accumulated by those who participate in an action.' (1992: 130). Implying that learning in client relationships is the major source of tacit knowledge for BSFs.

The case of a US law firm Wachell, Lipton provides indirect, but inconclusive evidence about the implications of client context on knowledge processes. Due to a crisis with their major client during the firm's second year, the partners decided to adapt a policy that decreases the dependency from long-term clients. After this incident the partners at Wachell, Lipton decided to follow a policy of not to present the client in a continuous basis and to do only non-recurring jobs. Limiting the firm to short-term assignments had some profound consequences. The law firm developed innovations (in this case legal innovations, like poison pill against hostile take-overs) and expertise in its area so that nowadays the clients offer the firm eight times more cases that it can handle. According to Starbuck: '[Wachell, Lipton] can pick the cases that look most interesting and best suit its abilities. The cases that potential clients bring are non-routine ones that involve large sums and they often concern immediate threats. Such cases draw attention as do Wachell, Lipton's legal innovations' (1992, p721). This case

5.3 RESEARCH DESIGN FOR CASE STUDY

5.3.1 Background for the empirical research

There may be a number of research strategies for doing empirical research on knowledge absorption and learning from customers. For instance, survey or financial analysis²³ may be appropriate methods for testing hypothesis that are derived from already developed theory and for providing statistical evidence on the frequency of investigated phenomenon. However, finding answers to the questions like what sort of knowledge is absorbed from the client, how knowledge is being absorbed, what are the factors that influence knowledge absorption and what kind of impacts different client relationships have on knowledge absorption, require a more fine grained approach to empirical research. Case study research may be used for building theoretical frameworks and studying areas that are new and emerging (Eisenhardt, 1989). The research will be theory building in nature and focus on emerging area in strategic management: knowledge management. The research aimed at building theoretical frameworks with the help of case studies about (1) the strategic importance of knowledge in firm's activities, (2) the role of context in knowledge processes and (3) the peculiarities of business service firms: the opportunity of learning in client relationships.

The selection of cases is critical in the case studies. The selection of cases is based on theoretical sampling in case studies instead of random sampling used in surveys. Cases that fill the theoretical categories, represent polar types or provide transparent observations of some extreme situations may be useful in theory

shows that client context (in this case short-term client relationships) may influence knowledge processes in terms of developing new knowledge and expertise in specific area.

2ELFOE

The analysis of financial data in the population of knowledge-intensive business service firms may also be useful in looking at the role of firm's intangible assets. This approach requires that the value of intangible assets may be measured. Some firms show indeed persistent tendency to deliver value in excess to their book value. This difference between the market value of the company and the book value of the company has been suggested to describe the existence of intangible assets (Brealey et al., 1988: 653). This method is based on the idea that investors are able to recognise that some expenditures that do not at once improve the financial statements of the company, like R&D or training expenditures, are investments in the future that improve or increase the intangible assets of the company and are the basis for future earnings. Intangible assets are difficult to evaluate, because they do not have exchange value (Hall, 1993: 607) or they are heterogeneous (Grant, 1991: 119).

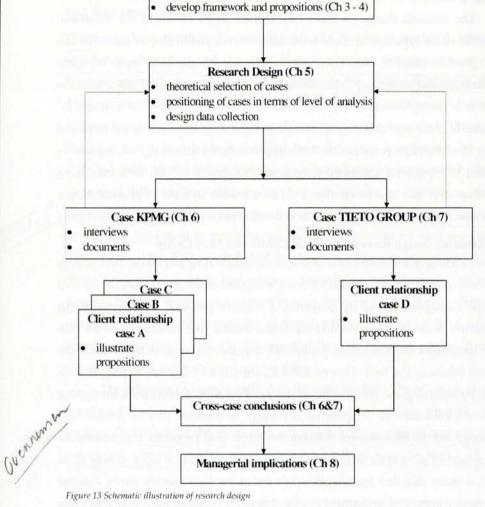
building (Eisenhardt, 1989). This means that the cases are selected on the basis of an emerging theory.

The research design in this study will be based on filling the theoretical categories in the typology of client relationships developed in chapter four. The aim is to provide insights into knowledge absorption in different types of client relationships and to develop frameworks based on those findings. Even if this case study is a multiple case study, the cases are not strictly used for replication²⁴ purposes in other way that they all show that client context influences the locus and nature of knowledge processes, and the opportunity for knowledge absorption. In addition to replicating the basic propositions (propositions 1-3), each case is an individual case that will be compared with each other in order to provide insight into contextual differences and in order to develop further theoretical frameworks.

5.3.2 Research design for case studies at KPMG and Tieto Group

Figure 13 will give the description of case study design at KPMG and at Tieto Group. The research project was initiated by doing a detailed study on the relevant areas of strategic management and by preparing a research proposal that identified the preliminary research questions and theoretical models. Before entering to the case study companies the theoretical framework was developed in order to focus the research efforts in the field. Theory development related this study to the previous theory by analysing the resource-based theory of the firm. A framework for looking at the determinants of competitive advantage in business service context was developed and the relationships between the factors were proposed. This framework was presented in chapter two. In order to be able to analyse more closely these issues, a more detailed framework was needed for two reasons. More detailed frameworks, presented in chapters three and four, (1) increased the managerial value of research and (2) made the general framework about dynamic capabilities and resources more operational in terms of research.

²⁴ Yin points that in multiple-case design: 'Each case may be carefully selected so that it either (a) predicts similar results (a literal replication) or (b) produces contrary results but for predictable reasons (a theoretical replication)' (1989: 53).



Theory development (Ch 2-4) related study to previous theory (Ch 2)

It should be noted that exploratory case study is an iterative process, in which theory building and case research is partly overlapping. The research started by analysing the business service firm's context at KPMG. Distinction between the role of short-term client relationships and long-term client relationships in the context of business services turned out to be important. Based on the analysis of client context a framework for classifying client relationships presented in chapter four was developed. Issues related to case selection and the data collection procedures were

planned in order to ensure the reliability of case study results (Yin, 1989) before entering the field. Due to the nature of research object, tacit knowledge and learning, interviews were selected as the major mean of collecting data about the subject. The more detailed frameworks, the typology of client relationships, guided us in the selection of appropriate client relationship cases for investigation. As proposed in chapter four, two critical dimensions in client relationships were used as criteria for selecting cases. Client relationship cases were discriminated by the differences in the duration and the interaction-intensity of client relationships.

After discussing with the managers about the central issues in the research project, access to carry out research on knowledge processes in client contacts was granted. Multiple sources of evidence, like interviews and company documents were utilised in case studies for ensuring the construct validity of study (Yin, 1989). Internal and external documents about the case study firms and the specific client contexts were used for supplementing the interviews and all the key informants reviewed the draft case reports for the sake of construct validity. Due to the nature of efforts, development of theoretical frameworks, explanation building was carried out during the case studies in a continuous basis for enhancing the internal validity of case study results. Next, the context and the selection of individual cases are introduced, followed by the description of the research process at KPMG and at Tieto Group.

5.3.3 Theoretical sampling of cases

Case selection

There are number of options for designing case studies. Based on two dimensions, the number of case studies conducted (single vs. multiple) and the number of units of analysis (holistic vs. embedded), Yin (1989) identified four basic types of designs for case studies: (1) holistic single-case design, (2) holistic multiple-case design, (3) embedded single-case design and (4) embedded multiple-case design. The empirical research required multiple-case design due to the developed theoretical framework used in case selection. The basic reason for selecting a multiple-case design is to increase the generalisation of theoretical frameworks developed in chapters three and four and to get richer data for further developing frameworks about learning from customers. Client relationships will be focused as a unit of analysis in this

study and inference about the learning implications will be made at that level of analysis. The selection of cases, based on theoretical sampling, is shown in figure 14.

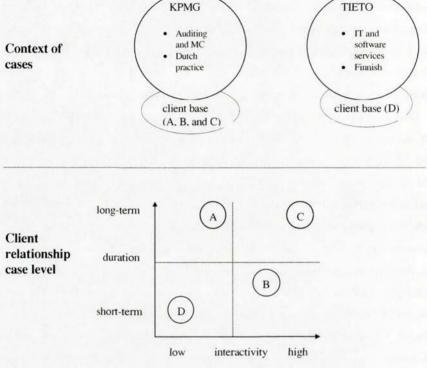


Figure 14 The level of analysis and the positioning of cases

Figure 14 shows that the client relationship cases are selected from two different BSFs. These firms operate in different businesses and in different countries. The reason for choosing cases from two different BSFs with the risk of making the case comparisons more difficult is simple. All the theoretical categories in the typology of client relationships need to get filled and there was not any appropriate case at KPMG for looking at the nature of knowledge processes in market exchange client relationships. Auditing and management consulting are typically coproductive and often also long-term client relationships. Cases A, B and C at KPMG, thus, present the more traditional client relationships in business services being coproductive or long-term in nature. Case D at Tieto group provided us an opportunity to take a look at the more peculiar type of client relationship in business

services. Information technology and software services offer some basis for more product-oriented approach to business, in which market exchange type of client relationships are possible. Regardless of the fact that the BSFs are situated in different countries, the individual client relationship cases will be compared in terms of (a) duration of cases or (b) interaction-intensity of cases. In the following case analysis the focus is on comparing individual client relationship cases without explicitly comparing differences in the context of case study firms.

The context of client relationship cases

The empirical research was conducted at two large business service firms that provide knowledge-intensive business services: KPMG and Tieto Group. Table 11 will provide a general description of case study firms.

Table 11 General description of case study companies

Characteristics	KPMG	Tieto Group
Turnover*	7 467 (world-wide)404 (The Netherlands)	• 408
Employees	74 400 (world-wide)3 700 (The Netherlands)	3 700300 abroad
HQ	The Netherlands, Amstelveen	• Finland, Espoo
Offices	830 (world-wide) more than 40 (The Netherlands)	more than 2034 abroad
Countries	• 136	• 11
Main services	auditing management consultancy tax consultancy other specializations like management services, IT assurance services and legal services	IT consulting software services network and operating services

Sources: KPMG Annual report, 1995, Tieto Group Annual report, 1995 and Tieto Today (http://www.tietogroup.com).

KPMG is one of the largest auditing and management consulting firms in the world generating a turnover of 7467 million US dollars with 74400 people world-wide. Around five percent of them are located in the Netherlands, where KPMG case study was conducted. Tieto Group, on the other hand, is the biggest IT consulting firm in Finland. Tieto Group is about the same size as Dutch KPMG practice in terms of turnover (around 400 million US dollars) and number of people employed

^{*}millions of US dollars

(around 3700 employers). Both of the firms are characterised by prestigious client relationships and strategic associations with their clients. For instance, KPMG provides services to 54 of the top 100 firms world-wide. Tieto Group, on the other hand, provides IT consulting and processing service to all the major Finnish firms having a dominant position in Finnish markets.

Comparable client relationship cases

The selection of these cases was carried out so that a typology of client relationships may be investigated from the point of view of knowledge absorption. Based on two critical dimensions of client relationships, duration and interaction-intensity, different types of client relationship cases were selected. Figure 14 shows what types of cases were selected. At KPMG three cases (A, B and C) that resemble client relationship types loyal, co-makership and client partnership were investigated. At Tieto Group case D that is similar to the market exchange client relationship in the typology of client relationships presented in chapter four was analysed. As figure 14 shows the investigated client relationship cases are not any pure client relationship types so that each case would represent some ideal form of client relationships. For instance, the client relationship in case A is more interactive than client relationships in case D, even if both cases are characterised by arm's length distance between the BSF and the client. Table 12 gives a short description of client relationship cases that will be presented in chapters six and seven and analysed more closely from the point of view of knowledge absorption in chapter eight.

The inference about knowledge absorption opportunity will be made on the basis of identified differences in client relationships. The selection of client relationship cases in terms of duration of client relationship and the client's disposition of interaction provide an opportunity for making the inference of the impact on knowledge absorption. By comparing cases A and C on the one hand, and D and B on the other hand, the aim is to fix the duration of client relationships and analyse what are the implications of different interaction settings for knowledge absorption opportunity. In a similar manner by comparing cases A and D, and cases B and C, an inference will be made about how differences in the duration of client relationships influences knowledge absorption.

Table 12 Description of client relationship cases

	Case A	Case B	Case C	Case D
Case study firm	KPMG	KPMG	KPMG	Tieto Group
Service	auditing	management consulting	auditing	Compact software service
Client(s)	Japanese client	Dutch client	Dutch-based client	small and medium sized firms

5.3.4 Description of the research process

About conducting case study at KPMG

The KPMG case study was conducted in the Netherlands during September 1995 till August 1996. The data collection included primarily interviews with two partners, two senior managers and four managers and management consultants in client relationship cases. At least three interviews were carried out on each client relationship case. The interviewed managers ranged from manager level to partner level in auditing client relationships. In management consulting client relationship senior consultant and project manager were interviewed. Each interview lasted about two hours and the discussions with KPMG managers were open ended in nature. In addition to the client relationship cases, knowledge transfer at BPR network was investigated. The manager and the co-ordinator of BPR network centre in the Netherlands were interviewed for that purpose.

The interviews were taped and typed out. After the completion of interviews in each client relationship case the case report was written. Involving peers and the interviewed persons into the process of reviewing the case reports validated the case results. The case descriptions that will be presented in the next two chapters will lean heavily on the direct quotes from the interviews. This is due to the peculiar nature of the research subject. The interviews revealed that it was, indeed, rather difficult for the interviewed managers to try to clarify the tacit aspects of learning processes in the investigated client relationships. One of the KPMG managers pointed to the general problem of analysing and investigating the characteristics of knowledge absorption and tacit knowledge: 'It is difficult to state explicitly what I learned from the situations with the client. I learned something, but I cannot transfer it to you in words.' The manager's efforts for articulating tacit processes will be

presented as such in describing the issue of learning in client relationship. Regardless of the difficulties in describing the tacit aspects of knowledge the interviews aimed at identifying some specific examples in client relationships that describe the role of tacit knowledge in client relationships.

Description of case study at Tieto Group

The case study at Tieto Group was initiated in Finland in August 1996 and it lasted till the end of 1996. Identifying relevant cases with Tieto Group business development manager and two CEOs of Tieto Group's business units started the case study. After having investigated three typical business service client relationships at KPMG, a look at the learning implications of atypical client relationships, market exchange client relationships was taken at Tieto Group. There were two reasons for this. Filling the remaining category in theoretical framework improved the symmetry of the research design and provided case material that improves the comparability of cases, even if conducted at different contexts. The case about product-oriented service delivery offered an interesting challenge to investigate client relationships that may be expected to offer little direct basis for knowledge absorption from the customers. However, it turned out to be an interesting case of how providing business services in an untraditional and new way may offer great learning opportunities.

As with the KPMG cases, data collection leaned heavily on interviews. Interviews were held with a manager at Unic that was responsible for business development in general and heading Compact and Wintime software service development. Also two other Compact team members that were responsible for marketing and customer support were interviewed. Five taped interviews were conducted on Tieto Group case, each lasting about two hours. Involving the persons interviewed into the process of reviewing the case report was used for improving the validation of the case results. The interviewed persons corrected all the possible mistakes and misunderstandings in order to provide truthful picture about Compact case. These interviews were complemented by the discussions with CEO and vice CEO of Unic. The interviewed persons themselves have checked the quotes in case descriptions. In many cases this process provided some additional insight to the

issues that were described by the case report. Table 13 presents a list of interviewed persons at KPMG and at Tieto Group.

Table 13 List of interviewed persons in case study firms

Tieto Group		
 Tieto Group Case D - Compact case Unic business development manager and Compact team leader Compact team member responsible for marketing Compact team member responsible for customer support CEO of Unic vice CEO of Unic Tieto Group business development manager 		

The interviewed persons at KPMG preferred the anonymity due to the sensitive nature of client relationships. Client relationships are highly respected and valued at KPMG and managers do not pose any threat to their client relationships. As a KPMG senior manager told us: 'It is not a long time ago, when for instance the wives of auditing partners did not know for which client their husband was working.' This implies that client relationships in auditing are traditionally viewed to be confidential in a similar manner as medical doctor-patient relationships. Indeed, at first there was a risk that auditors and management consultants may be reluctant to discuss about their client relationships. Fortunately, managers at KPMG and at Tieto Group allowed this research project on managing knowledge absorption in client relationships to be carried out as long as the client relationships would remain anonymous and would not be harmed by the case study.

Chapters six and seven will present the case studies. At the end of chapters six and seven the cases will be compared in general and finally some managerial implications of knowledge absorption in client relationships will be proposed in chapter eight. Even if tacit knowledge and its absorption is a difficult and a slippery subject and the evidence about causalities may be difficult to generate, it is attempted in this study in order to increase the understanding about the role of

learning and knowledge in the competitive advantage of a BSF. As Rumelt et al. have pointed: 'While the origins of strategic management lies in practice and codification, its advancement increasingly depends upon building theory that helps explain and predict organizational success and failure...theory is necessary, tested theory capable of prediction desirable, and the search and creation of both to better practice.' (1991: 7).

KNOWLEDGE ABSORPTION IN CLIENT RELATIONSHIPS AT KPMG

6.1 INTRODUCTION

KPMG shows pride in knowing its clients' business and investing in client relationships. The fact that KPMG provides services to 54 of the top 100 companies in the world supports those claims. KPMG annual report provides some ideas about how KPMG perceives its client relationships: 'The [service delivery] is arrived at in dialogue with the client. As we see it, auditing is a customised product - a service that lends itself particularly well to an active role on the part of the client, or comakership... In order to perform the function effectively the auditor must have a thorough knowledge of the company and industry in question; be a good listener...' (KPMG annual report, 1994: 1-6).

In order to illustrate the frameworks developed in chapters three and four, a number of case studies have been conducted at KPMG in the Netherlands. The KPMG case study was focusing on analysing what are the implications of typical client relationships in business service context (co-productive and often durable) for knowledge absorption. This chapter will present the findings from fieldwork at KPMG. Three client relationship cases were investigated at KPMG: (1) Case A (a long-term auditing relationship with the Japanese firm), (2) Case B (a long-term auditing relationship with Dutch real estate fund) and (3) Case C (a short-term management consulting (MC) client relationship with the Dutch leasing firm).

The section 6.2 will present the overview of KPMG and identify organisational development trends at KPMG. Sections 6.3, 6.4 and 6.5 will take a look at the knowledge absorption at the client relationship cases A, B and C. In addition to looking at the issues of knowledge absorption in different client

relationships, a look at knowledge sharing at Business Process Redesign (BPR) network in section 6.3 will be taken. BPR network case is based on Dutch KPMG practise that is known to be among the most developed in Europe. Description of BPR network as part of case C will show how knowledge sharing networks facilitate knowledge leverage and function as linking points between absorption and extension. The description of BPR network case and the client relationship cases are based on the interviews and internal material from Dutch KPMG.

6.2 OVERVIEW OF KNOWLEDGE TRANSFER AT KPMG

6.2.1 Overview of KPMG

KPMG belongs to the group of major accounting firms in the world, called the 'big six'. Within the "big six", KPMG is estimated to be the biggest in terms of international presence and number of offices. KPMG global network consists of 830 offices worldwide with 6000 partners employing 49900 professionals and 16800 administrative staff in 136 countries. The annual turnover was 7467 million US dollars, of which 50 % was generated in Europe in 1995. KPMG has been estimated to possess a leading position particularly in Europe in terms of revenues, number of offices or personnel. (KPMG Annual report, 1995; internal documents from KPMG)

KPMG has typically a strong market position with big companies globally. 344 of the world's 1000 largest companies are KPMG's clients. What type of clients does KPMG serve in general? A KPMG partner gave an estimate of the relative amount of different types of clients: 'Approximately quarter of our client relationships may be identified as long-term co-operative client relationships and roughly half of the client relationships just long-term client relationships. The remaining client relationships are one off client relationships. In the auditing the number of non-recurring jobs²⁵ decreases considerably. It is difficult to find a client contact that is only transaction based and very short. Usually the non-recurrent jobs are still provided in the context of existing ongoing relationship, so the transactional pure market exchange client relationships are rare.'

Non-recurring job means that the assignment is just for one time and it should be decided for the next time. E.g., an investigation to buy a company or to check a contract or to make an evaluation of shares are typically non-recurring jobs.

As presented in chapter four, the client relationships that are characterised by close interaction or the longer duration are the most typical in business services. KPMG has however also some more transactional client relationships. As a KPMG partner points out: 'Even if we may have some short-term client relationships²⁶ they are usually first steps into longer-term and interactive client relationships. But that takes time. In that sense we do have short-term client contacts²⁷, but I see them as an introduction stage to the long-term client relationships. The short-term client relationships are the most difficult in terms of knowledge transfer.' Chapter seven will take look at the knowledge absorption in such client relationships. This chapter will focus on co-operative or long-term client relationships.

As proposed in theoretical chapters the client relationships offer opportunity for (1) selling new or additional services for the same client (knowledge leverage) or (2) getting repeat engagements over time. A KPMG senior manager emphasised the value of long-term client relationships: 'I am not focusing all the time on selling new services to my clients. That is not my purpose. That is what I did three years ago, but that was not successful. Our work is about sharing the client's problems and if I know someone from our firm who can help them I am happy to help my client with those connections.' Also KPMG engagement partner's comment on the priorities in the client relationship illustrates the preference at KPMG: 'We may be able to sell our service by linking client with some of the other service KPMG is providing like management consulting, but I think we should not be too focused on selling services. We should be focused on listening to the client and trying to help them. Every now and then, the opportunity comes across and you are able to help the client by offering some additional services.' So, there seems to be a strong preference for enhancing the existing client relationships at KPMG, even if selling new services for

A KPMG partner: 'Within the Japanese network we have come in contact with new Japanese small companies that do not have any advisor. They need to do some financial statements for the first time and the files should be found some where, but they do not know where. Then we send a letter in which we explain what they were supposed to do and how they should meet the official rules. Next year they are answering the next question and little be little they will become loyal.'

²⁷ A KPMG partner: 'The right way to react to these assignments and the right timing to send that letter and the letter should contain the information and have the proper length. If it is too short we do not pay enough attention to the client and if it is too long we may trouble the client too much with reading. That letter is the key to the future contact with that client.'

the client is seen as a viable solution if these activities do not endanger the continuity of client relationship.

The preference for long-term client relationships makes sense in service business where the cost of providing services declines over time in the same client relationship, the cost of attracting new customers may be high when compared to cost of maintaining the existing client relationships. KPMG engagement partner's comment supports the idea that in service industry, taking care of the client relationships are important from the point of view of competitive advantage. As he pointed out: 'The cost of winning a new client is tremendous and if you can continue your engagement trough next year or the next problem that they have, it just comes to you without having to put in all the money into the proposal. It is much more profitable. You should not do the one without the other, but if you have to shift the priorities, then maintaining the present client base is more important than getting new clients.'

6.2.2 The Dutch KPMG organisation from the point of view of knowledge management

Dutch KPMG organisation

KPMG is organised globally as a network of local offices that operate rather autonomously. The organisation resembles the typical organisational solution in professional services, the partnership, even if, some of the offices have already changed their legal status and adopted the corporate structure and status (e.g., in the Netherlands). This is due to the fear of increased liability suits (The Economist, 1996, January 16). The local practises are typically organised along the functional lines. These are accountancy, management consulting, tax consultancy and other specialised services. Typically, accountancy is split into regional offices and management consulting is split into functions like IT & Administrative Management, Management and Human Resources Economic Research, Management Training etc.. In addition to the functional areas of expertise there have also been established some integrated units, market groups that integrate further the KPMG expertise at audit, MC and tax consultancy in order to provide context-specific services.

Figure 15 presents the organisational chart of KPMG in the Netherlands²⁸. It is a sort of hybrid organisation with the mix of functional- and market-orientation. There are two main functional activities: accountancy and management consulting (MC). There are also some other functional specialisations, like EDP auditors, management services, corporate finance, certification etc. In addition to these, there are market-oriented specialisations that are divided into market groups and business units.

Management consulting is organised into the business units that are specialised in a specific area of practice like IT consulting. The ad hoc teams typically carry out client assignments due to the short-term nature of the client relationships. Opposite to MC practise the auditing activities are organised regionally and focused on the long-term client relationships. Auditing is a complex, but rather standardised service that may be co-ordinated by direction and supported by hierarchy (sometimes more than 4 organisational layers). Management consulting and other advisory activities may require the use of flatter teams that develop their own routines, for instance with the help of BPR network. BPR network provides background models for BPR operations and common language for the consultants (see von Krogh, Roos & Slocum (1994) about organizational "languaging" process).

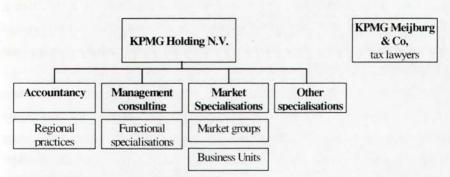


Figure 15 KPMG organisation chart in the Netherlands

^{**} KPMG partner describes the organisation: 'So, if you look at KPMG right now, we have the board of directors and four market groups. Then you have what we call the management team for accountancy with below it the regional practices accounting and you have separate management team for management consulting. These are integrated groups of accountancy and management consultancy. The market groups are integrated groups of consultants and accountants. There are also sector group that are similar to the market groups. They have people from MC, tax advisors and auditors, but the sector groups do not have a formal status. They are not cost centres as a fiat. Maybe gradually they will develop into something big enough and they will be transferred to market group. The sector groups are in the process of developing into market groups.'

At Dutch KPMG practise the market specialisation are divided into market groups for financial services, industrial, transport & distribution and public sector & non profit, and business units for town and country planning & construction, information, communication & services and international markets. A KPMG partner describes the role of market groups and the development of KPMG into more market-oriented organisation: 'Looking at the process, KPMG is moving from the functional orientation to market orientation and the market groups have progressed the most. The vision of how we should operate from five to ten years from now is that we should all be market groups.'

Knowledge management at KPMG

In addition to the functional organisation, KPMG is currently adding market groups into its organisation for dealing with the specialised market needs. KPMG has established market groups in order to focus on market and industry specific expertise. The market groups are divided in general into health care and life sciences, government service, manufacturing, retail and distribution, information and communication and financial services. The focus on market groups and the expertise in particular industry contexts implies the greater emphasis on client needs. The client is focused instead of the professional, functional or geographic orientation that has dominated professional services traditionally. By restructuring the organisation, KPMG tries to capture and leverage the experience and knowledge from previous client relationships and engagements, and build their knowledge base in particular industry areas.

A senior manager at KPMG pointed out: 'The process of co-ordinating knowledge transfer is starting at KPMG.' KPMG has started to change its organisation in order to manage the knowledge in a focused manner by integrating and capturing the benefits from both the functional expertise and the market-oriented specialisation in market groups. Each market group provides services to a particular type of clients. The market groups at KPMG organisation may be seen as a solution to the knowledge integration needs in service delivery: (1) client-specific knowledge and (2) non-specific knowledge. The established market groups complement the traditional functional organisation at KPMG. This arrangement creates a sort of matrix organisation within the market groups in which expertise in

different functional areas will be combined by the market groups that specialise in particular client environment context²⁹.

The market groups at KPMG may be viewed from the perspective of managing the knowledge transfer and learning in a focused manner by integrating and capturing the benefits from both the functional expertise and the market-oriented specialisation in market groups. The functional knowledge and the market-or client-specific knowledge is integrated in market groups in order to provide a full range of specialised services to particular type of clients. This is done (1) by building multi-functional teams (teams consisting members from different functions) and (2) by improving knowledge sharing over functional barriers.

Next, a closer look at the knowledge absorption in client relationships at KPMG will be taken. The following cases will illustrate important aspects of knowledge absorption in client relationships. The case of long-term auditing relationship, in which the cultural differences between KPMG and the client makes the relationship distant and less co-operative will be investigated first.

6.3 KPMG CLIENT RELATIONSHIP CASE A

The client relationship case A describes knowledge absorption at KPMG in a long-term client relationship, which is not particularly co-operative. Client relationship A resembles most closely to the loyal client relationships. The analysis of client context helps us to typify the client and analyse the influence of client relationship on knowledge absorption.

The KPMG client relationship case A describes a long-term auditing client relationship with a Japanese based industrial corporation. The Japanese client is among the world's biggest industrial corporations. An auditing relationship provides a strong opportunity for repeat engagements. KPMG has been the auditor for the Japanese client since its establishment in Europe. Thus, the client shows loyalty for its auditor and strong bonds between the BSF and the client have been

By this exercise KPMG reflects partly to the fact that the increasing amount of fee income comes from the consultancy (e.g., consultancy turnover increased 14% having the share in total turnover 42% in 1994 at KPMG in the Netherlands) and consultancy requires a different approach in organising the activities than accounting. Also the nature of service may have changed so that more and more the auditing clients require advice from KPMG and accountants will become more like consultants. (KPMG Annual Review, 1994)

established. Even if Japanese firms are well known for their loyalty and claimed to behave co-operatively with their suppliers, this case will show that, at least in different cultural context (Europe), the close co-operation with the European business service firm (supplier) is not fully blown. The Japanese client will be shown to have some of the characteristics of arm's length orientation in its relationship with KPMG.

The case description will first identify the long-term and transaction-oriented nature of client relationship. Second, a description of how client contact is configured in case A is given. Finally, a look into knowledge processes and particularly into the knowledge absorption in this client relationship is taken in order to illustrate the frameworks developed earlier in chapter four. The investigation of the long-term client relationship with the Japanese client aims at (1) classifying the type of knowledge absorbed in a client relationship, (2) identifying the implications of the client relationship for knowledge absorption opportunity and (3) identifying the role of tacit knowledge in such client relationship. The analysis of case study results and the conclusion from case studies will be drawn at the end of chapters six and seven, where all the cases are compared in order to reflect to the theoretical propositions.

6.3.1 Client context

The long-term nature of client relationship

The type of client will be identified first by illustrating the Japanese client's preference for the long-term relationships. Later, the client's arm's length approach to its supplier due to the cultural differences will be illustrated. The bonds between the client and the BSF do not only increase the duration of a relationship, but the type of bond may influence the client's disposition of co-operation with its auditor. The type of bonds that tie the client and the BSF together in the case of auditing may thus have implications for client's willingness to co-operate with the BSF.

Loyalty and long-term orientation in supplier relationships are typically associated with the Japanese approach to doing business (Baden-Fuller & Stopford, 1992: 164). This is also the case in this client relationship. KPMG senior manager described the client relationship with the Japanese client to be stable with its

auditors. This is due to the client's preference for long-term relationships. As a KPMG senior manager stated: 'Japanese people like long-term relationships. Typically, Japanese more or less never change their auditors. Japanese put effort on building up relationships with their suppliers and they respect those relationships.' Senior manager also added that the client values the continuity of relationship in terms of same people taking care of the account over time: 'The client does not like the change of partner that has run the client's account for longer time. They want to have the same partner, because the partner knows their business. With a new one they have to build the relationship again. That takes a lot of time and energy; and it's complicated for the client.' A KPMG senior manager associated this view with the typical characteristics of Japanese culture and decision making process: 'Japanese decision making process takes a long time (consensus making phase), but once the decision is made they stick to it.'

Auditing differs from many other business services, because there is a legal obligation for the firms in general to get their financial statements audited by an external auditor. This implies that there is a quasi-legal bond between the client and the auditor, even if the client is free to change its auditor. KPMG senior manager's statement describes this: 'The auditor may be seen as an obligation. However, this is not a typical perception of the role of an auditor in general among the clients and some more co-operative companies may be able to take an advantage out of this obligation.' Getting advice from auditors etc. may be useful for the client. However, in this case the Japanese client does not try to utilise its auditing relationship in such way. As KPMG senior manager states: 'The external advice is regarded as an implication of the weakness in the Japanese culture and the client does not want to be confronted with the weaknesses. The client wants its auditors to stick to their own area of expertise and not to provide advice in any other area.'

Social bonds, even if important, may be temporary in nature and thus contribute more to smooth service delivery than maintaining the client relationship in this case. As a KPMG partner described the nature of social bonds in the client relationship: 'The nature of social bonds is very temporary. The main client officials will be transferred from Japan to Europe in every five or six years. They will usually return to Japan. This means that there is an ongoing process of changing of officials

of the client. At the same time also in our own firm there is a certain turnover of staff. In other words, the social bond should be understood in terms of limited period of four, five six years.'

Having such a temporary nature, other bonds than social bonds, like knowledge bonds, may have important role in enhancing the client relationship. The KPMG partner's comment on the relative importance of knowledge bonds and social bonds illustrates the point: 'When it comes to the historical monitoring of the client it may happen that some of our people do know more about the background of certain things and certain systems than the client does. This is because they face changes in terms of turnover of staff. This implies that the temporary nature of social bonds may increase the relative importance of knowledge bonds.' In section 6.3.4 a closer look at the type of knowledge absorbed in this client relationship will be taken. Before that, the other part of the relationship, the client's disposition of interaction, will be described.

The transactional nature of the client relationship

The client has an arm's length approach to KPMG, even if KPMG would prefer a closer relationship and working together as a team. As a KPMG senior manager put it: 'In this case the client and KPMG are not always working as a team. Even if KPMG tries to work with the client as a team, the client prefers to have more distant relationship. Perhaps it is related to the role of auditor from the legal point of view.' Regardless of preferring long-term relationship, the client and the relationship may also be rather complicated due to cultural differences between the client and the service firm. As KPMG senior manager put it: 'The relationship between the Japanese and Dutch is complicated, because the relationship is not an open one. Open relationship appears to mean something else in Europe than in Japan. In a similar manner, the Japanese do not have an open relationship with other European people within their organisation. People are not talking to each other or communicating.'

The lack of communication was identified to be a reflection of the client's internal communication. Only parts of knowledge are communicated in client's organisation and tasks cover always only part of the activities in order to control the

employees at the Japanese firm. As KPMG senior manager describes the situation in the client's organisation: 'People do not know the full overview of all details. They are given only part of the job, task or the problem. People in another department do not know what the people in another department are doing.'

The implications are twofold. On one hand KPMG senior manager is sometimes the person that knows the overall problem better than the clients employees. As KPMG senior manager said: 'It facilitates dealing with the client. E.g., by checking first what the people know about the issue and then inform them about it.' On the other hand it has also implications for the opportunity of knowledge absorption in the client relationship. The client applies the same policy or stricter policy in its external contacts. The more specific examples will be given in section 6.3.4.

6.3.2 The type of client relationship

The client relationship case A seems to be stable in the way that the client expects a long-term relationship from their suppliers. On the other hand, the cultural differences between the firms and the transactional approach of the Japanese client seem to make the relationship less co-operative. The client relationship case A, thus, resembles the loyal client relationships in the typology of client relationships developed in chapter four. Based on the empirical material from the interviews at KPMG, table 14 will show the summary of the characteristics of Japanese client relationship.

Table 14 Characteristics of case A

Case A	Examples
Long-term	 client's loyalty and the preference for long-term relationships with its auditor established bonds: quasi-legal bonds knowledge bonds social bonds
Transactional	 no utilisation of teams client's arm's length approach to its auditor complexity due to the cultural differences

The Japanese client relationship case resembles to the client relationship that was classified in chapter four as the loyal relationship: a long-term client relationship, in which a client has a transactional approach to its supplier. This kind of client relationship may look like as a paradox at the first glance, but as this case shows such relationships exist. This may be due to the nature of service. The auditing as a legal obligation combined with the relatively high transaction costs for changing the auditor may make the exit barriers for the client high. On the other, the case also showed that, knowledge and social bonds contribute to the enhancing the client relationship.

6.3.3 The client contact configuration and the identification of knowledge processes in client relationship case A

The structure of interaction in client relationship case A

The client relationship case A investigated at KPMG was characterised by client's low disposition to co-operation as shown above and the relatively low complexity of service due to the highly standardised auditing routines. The criterion from chapter four for assessing the complexity of auditing service will be used. The complexity of auditing service is estimated to be low, because the work flow uncertainty is low due to the established audit agenda and also task uncertainty is low due to the well established professional practise in auditing. The complexity of service was argued to increase due to the intangible nature of service and the increased scope of interaction and customisation. In this case the Japanese client was reluctant to increase the scope of interaction and customisation by refusing to take advice from KPMG.

The framework of client contact configuration in chapter four proposed that in the case like this the interaction with the client in service delivery should be non-structured and buffered. The BSF's internal activities should be focused and structured. The audit team will be described first. Second, a look at the characteristics of knowledge transfer between the clients and the audit team will be taken by identifying knowledge processes in this client relationship.

The structure of audit team³⁰ and the client counterparts for each level are presented in figure 16. It is notable that an audit team for a large client consists of five organisational layers that have contacts with the client at different level. The arrows describe the level of contacts between the client's organisation and the audit team.

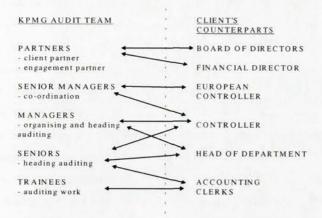


Figure 16 The audit team and contacts with the counterparts in client's organisation

As figure 16 suggests, there is a clear organisational boundary between the client and KPMG and there are not any joint teams involved in service delivery. This may be understood as an indication of buffering. At the same time audit team is highly hierarchical having five organisational layers. This implies that audit work is highly structured and standardised. The focus is on internal efficiency and it will be achieved by standardising workflow. The use of audit files for standardising the auditing process suggests that the efficiency of internal operations is focused. Creating codified knowledge about the audit process and routines for conducting

The senior manager describes the structure of the audit team: For each client KPMG have an audit team, which is headed by a partner. Partner is a director of our firm who has the overall responsibility and who is authorised to sign financial statements of our client. Depending on the volume of the client there may be one or more partners. In the audit team for the Japanese client KPMG has two partners. One is the client partner and the other one is the engagement partner. The client partner is responsible for the relationship with the client. The engagement partner has the overall responsibility for the audit. Furthermore, for most of our clients the team consists a senior manager or a manager. Senior manager is responsible for the co-ordination of the audit in Europe. Manager is responsible for consolidation and he is assisting the senior manager with the co-ordination. He is also responsible for the audit of the financial statements of the client. Senior is responsible for the day to day audit activities during the period in which the financial statements are audited and assistants who are responsible for doing the work. The trainees will conduct the auditing work under the supervision of seniors who head the auditing work.

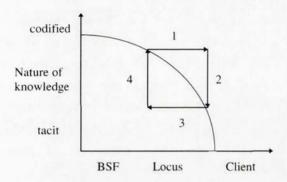
the audit does this. The audit files may be used for codification of client-specific knowledge and for co-ordinating internal activities. As the KPMG senior manager pointed out: 'In principle, auditing is so standardised that the junior staff could do the auditing work without the involvement of senior staff.'

Knowledge processes in case A

Figure 17 describes the positioning of knowledge processes in case A. (1) An auditing service transfers knowledge, for instance, embodied in auditing reports in codified form to the client. The more detailed description of the nature of (2) knowledge absorption in this client relationship will be given in the next section. In this client relationship KPMG learns from the client "over time" and utilises client-specific knowledge in the same long-term client relationships by (3) sharing and (4) codifying the absorbed knowledge internally with the help of audit files. This is described in figure 17, in which knowledge processes of a loyal client relationship is positioned in "the middle of BSF/client boundary". This implies that knowledge transfer in such client relationship is at least partly facilitated by codification. Also, the arrows 2 and 4 are separated by time and sequential in a way that during each client assignment some client-specific knowledge may be absorbed and utilised during the next assignment.

In case A, the use of auditing files shows that (1) explicit knowledge about client is created by codifying knowledge from client assignment into audit files and (2) that absorption and codification is at least partly separated by time. The audit files are used for controlling the audit process and in addition to knowledge about the auditing method, they consist of knowledge about the client. The audit files are thus an important way of creating and transferring codified knowledge about auditing and about the client. KPMG senior manager describes the audit files: 'For the Japanese client we have around 20 files. A general file includes information that facilitates the control of the audit. These include the financial statements of last year, the reporting of last year, the planning of people and risk, and planning the important audit steps and audit cycles. There is also recently published information about the client. There is planning in hours, which work the people in the audit team should do during the audit. There is a review of the client's internal control system. Also the audit program is in the file. There is also a permanent file that contain

information from the client like authorisation schedule, legal structure, articles of the association, contracts. We have also system permanent file. In that file you will find a description of the client's systems like EDP system and the sales cycle. The work permanent files are set up on the basis of financial statements of the client.'



1 = auditing service

2 = knowledge absorption partly for

the next assignments

3 + 4 = audit files

= BSF/client boundary

Figure 17 Locus of knowledge processes in case A

6.3.4 The examples of knowledge absorption in client relationship A

This section presents the case study results about knowledge absorption in the case A. After that conclusion about knowledge absorption in the client relationship case A will be drawn. The propositions about different outcomes of knowledge absorption: non-specific knowledge vs. client-specific knowledge and tacitness of knowledge will be illustrated at the end of chapters six and seven.

Non-specific knowledge

An example of absorption of non-specific knowledge in client relationship case A will be presented next. The development of *auditing skills* in client contacts will be focused for giving an example of absorption of non-specific knowledge.

The interview with a KPMG senior manager suggested that trainees develop their auditing skills, so that they are better able to do auditing for any client. This is

related to their position in the organisation and the phase of professional development. Senior manager at KPMG describes the activities of trainees and how they develop their skills: 'The trainee is not in fact trying to learn something from the client. The trainee is developing his own skills and for the trainee it is not so important what is the content what he is doing. E.g., for the trainee it does not make any difference whether he is doing work at Client A or Client B. The trainee's only target is to learn how we should audit, e.g., the provision for inventory, the technical issues like which variables and assumptions he should take into account for such a review. That is what the trainee is willing to learn and that is what he is learning. The trainees are transformed from a student with theoretical background to very task-oriented professionals within the first three months.' This example illustrates that at junior staff level learning and knowledge absorption is very task-oriented and non-specific.

The other way of learning is to learn from example. The more experienced employee will always accompany the trainee as they visit the client for the beginning. Senior managers describes this:' If a trainee is going for the first time to client and asking questions, most of the time senior or assistant with more experience is going with him or her to the client. Senior is teaching her or him how we should operate with the client. Senior should also look how trainees are talking with the client and give some feedback if trainees do not do it in the right way.' This example shows also that non-specific knowledge that is absorbed in case A may be associated with the improvement of auditing skills like in the case of trainees learning during the assignment. The trainees learn by practising under the supervisor's guidance and by making mistakes. These skills are leveraged when auditing other clients.

These examples illustrated learning processes and particularly at junior staff level, learning in this client relationship was identified to be rather non-specific that may be leveraged in other client relationships. However, some of the absorbed knowledge at junior level is also client-specific in nature. The experimenting was mentioned to be an important way for trainees to absorb non-specific knowledge from the client's environment and to improve their skills: 'By learning the technical issues and skills with the client, the trainee gets an impression of the business

environment. The trainee uses that when working for the client, because at trainee stage the trainee can experiment. How to act with the client? How to act with the Japanese client? How the Japanese employees are acting? How to get the right information? Trainees are learning by doing and by making mistakes. Trainees may make mistakes that senior can not. At senior level the client expects that the senior knows the client.' Experimentation may thus be identified as junior level privilege that facilitates learning.

Client-specific knowledge

Client relationship case A showed that most valued knowledge absorbed in such client relationship is client-specific knowledge that may be used for customising the services and enhancing the client relationship. Client-specific knowledge has often tacit elements due to the context-specificity. The following examples provide illustrations of tacit knowledge about client and describe how tacit knowledge about the client may be utilised in non-interactive client relationships. Some other examples that describe the Japanese context-specific issues were identified³¹, but the illustration of the characteristics of client-specific knowledge will be based on the following examples: (1) making a proposal to the Japanese client and (2) IT project with the client.

MC proposal to the Japanese client. This example shows how MC proposals may be improved by utilising client-specific knowledge from customers. A KPMG senior manager describes the importance of absorbed client-specific knowledge from the Japanese client: 'It takes quite some time for the person, who does not know Japanese culture to get to know what are the typical Japanese issues³² and to be able to make a proposal for the Japanese client.' She gave an example about the unsuccessful proposal to the client (IT proposal): 'The management consultants were

³¹A KPMG partner gave an example of a typical issue with the Japanese clients. With the Japanese client the decision making requires that it is well prepared before hand in the lower level of hierarchy. As KPMG partner describes the Japanese context: 'The issues never come up to the client partner or the board of directors level with the Japanese client in general, because any decisions to be made at top level is prepared already during other meetings. If the decision would have an unexpected nature, it would impossible for the Japanese official to handle it. So, any decision to be made at top level have to be prepared beforehand. This is typical for the Japanese clients.'

³² The Japanese issues are: it [e.g., the proposal] should be concrete, it may not be fake, it should not be too much strategy, it should be very easy to understand (English) and it should be clear. First it should be a small project and later on you make it a bigger project. They (Japanese) want first to get feeling of what kind of people are we working with? And the later stage you can say this was a review and now we start with the real object.

preparing a proposal to the client, but they did not inform the auditors in time about this proposal. The auditing team was not able to inform the management consultants until just a few days before the presentation that this proposal is not what the Japanese client likes. As a result the client was unhappy with the proposal and KPMG lost the project.' As a KPMG senior manager concluded: 'The proposal showed that KPMG did not know how to deal with Japanese organisation and KPMG did not reflect on issues in client's organisation. It appeared to be very important to sit together and share the understanding of foreign culture and the client's preferences, before other people from KPMG approach this client.'

IT project with the client. The senior manager identified that the prior knowledge and the experience about the client is important in managing the client relationship. Often, the knowledge has been absorbed due to the fact that the client has an arm's length approach to its auditor. This type of behaviour may induce the absorption of client-specific knowledge due to the client's attitude on avoiding cooperation. The client-specific knowledge may be about, e.g., how to deal with the client's difficult approach to co-operation and it is usually tacit in nature.

Senior manager gave an example about tacit aspects of knowledge related to getting access to the client's project about developing a new software system: 'As the Japanese client is not willing to involve KPMG in the project, we are trying to find other ways for introducing people from KPMG into the project. The project is carried out in a Japanese environment and it is not normal that the auditors are directly from the start involved into the project. It is tacit knowledge that you know that it is a little bit difficult to ask for direct involvement for the projects with the Japanese firm.' The senior manager overcame the problem by making a proposal to the client: 'We want to improve the reliability of client's IT system and KPMG wants to start by participating in that project.' After some discussions with the client, the controller understood that it is important that KPMG is involved right from the beginning of the project and KPMG got access to the project. The example shows that by utilising the prior knowledge about the client's attitude, KPMG senior manager is able to influence the activities in the client relationship.

A KPMG senior manager gave another illustration of tacit knowledge: 'Another thing that may be tacit knowledge is to know that this Japanese client does

not learn from past mistakes³³. The first big IT project that is run in that way may be given as an example. No explicit statement was made after that IT project that something should be learned from it. It is typical for the Japanese that they are running the projects like that from the IT standpoint and not from the organisational standpoint or from the user's standpoint. So, IT is in the middle of the whole project, not the user. It appears that is very difficult for the Japanese to learn.'

6.3.5 Summary - learning implications of the client relationship case A

Table 15 presents the summary of knowledge absorption in the client relationship A. Due to the long-term nature of that client relationship, the accumulation of codified knowledge (audit files and financial data about the client) is evident. Also tacit knowledge like knowing the code of behaviour, e.g., not mentioning of the mistakes the Japanese make, what type of proposals client prefers, who is making decisions and client's approach to projects, e.g., task orientation was mentioned during the interviews. The absorption of client-specific knowledge may be associated with the experience of auditing the Japanese client for a long time.

Table 15 Knowledge absorption and learning in case A

	Non-specific knowledge	Client-specific knowledge
Case A	auditing skills	 learning how to overcome client's arm's length attitude (how to get involved to the projects) knowing what type of proposals client prefers client's approach to projects (e.g., task orientation) auditing files (client-specific knowledge and financial data) Japanese culture (e.g. How to act with the Japanese client? How the Japanese employees are acting?)

A KPMG senior manager specified other tacit aspects of knowledge about client: 'The project KPMG participates with the Japanese firm is a very difficult and complex project with a lot of relationships within European environment and European subsidiaries. It requires a complete change of IT management for whole Europe. But the Japanese firm is neglecting that. The Japanese are not describing in their project what are all the effects on their system. I think that is another typical Japanese thing. This client organises the teams that work around the task and try to improve the results, control and management of their IT system. The Japanese have straightforward way of doing it. So, based on my past experience, this project will have the same weaknesses as the last projects.'

The absorbed non-specific knowledge in client relationship case A was typically general in nature and focused on improving the auditing skills in general. Most of the knowledge absorbed in client relationship case A was argued to be client-specific, like knowing how to overcome client's arm's length attitude, what type of proposals client prefers, client's approach to projects and Japanese culture.

6.4 KPMG CLIENT RELATIONSHIP CASE B

This section will give description about knowledge absorption in a KPMG client relationship case B. Client relationship B resembles most closely the co-makership in the typology of client relationships presented in chapter four. First, the client assignment is identified to be a typical co-makership. Second, the issues of knowledge processes and absorption in this client relationship will be illustrated. The focus will be on describing knowledge conversion during the assignment in a such client relationship.

The client relationship case B at KPMG was a management consulting (MC) assignment with a Dutch leasing company. Client's main business area is leasing cars and trucks. This client relationship is influenced by client's previous non-satisfactory experience with the management consultants (other than KPMG) that made the client rather demanding. A management consultant from KPMG describes the background of the client relationship and its attitude towards management consultants: 'The client had quite a history of doing this kind of work with consultants. The client was quite critical about working with consultants in general. In the beginning, it took a lot of adjustment from the side of KPMG to get along with the client, because the client had such a bad experience with consultants.'

Even if the client assignment was difficult, KPMG project manager pointed out that client contacts are in general are important sources of knowledge, even if the learning process is not that structured and explicit: 'There is more or less two way flow of knowledge. You might expect that the employees of the client firm know more about their business than the consultants. In that way doing a number of projects with e.g., the different leasing companies eventually the consultant will gain knowledge about leasing business. But that is not so explicitly as you would like it to be.'

6.4.1 Client context and MC Assignment: BPR project

The MC assignment in this case was a business process re-engineering (BPR) project and, thus short-term in nature. A KPMG management consultant specifies the nature of MC and BPR projects: 'Most of the MC work is basically about doing the assignment and then you go away. MC really has the character of doing the assignment highly interactively with the client. BPR projects are highly interactive with the clients and there will be joint teams utilised in working with the client. That is very important in our methodology of doing BPR work to have mixed teams, so that it is not the expert from KPMG telling the client what to do.'

MC projects are in general characterised by the close interaction and cooperation between the client and the BSF. This was also the case with this client. As
project manager described the relationship with the client during the assignment:
'Co-operation in service delivery is 100% in this case. Within internal project team of
the client, all the deliverables were made together and the knowledge transfer, the
methodology, techniques and the understanding of the methodology during the
process, was mainly done by co-operative approach.' Project manager added about
the *utilisation of teams*: 'There is definitively utilisation of joint teams in this client
assignment. KPMG consultants were seen as the ones that know how to do BPR and
how to support the process. If there was a quiet moment during the workshop,
everybody was looking at the consultant for advise. So, in the sense as seeing us as
the team member like they saw themselves that was not the question in this case.
The client was also very insecure about the process especially in the beginning and
they look for confidence in the methodology'

Whether or not there are blurred organisational boundaries between the client and the BSF depends on how the client perceives the consultant's role. The client may treat the management consultants as one of the team, or as an external advisor. In this case the organisational boundaries between the client and KPMG became at least partly blurred. KPMG senior consultant described the process: 'Every team member participates into project not as KPMG member or client member, but as an individual whose knowledge of the processes is utilised at team. The team members associate themselves primarily to the team instead of KPMG or the client organisation. This is due to the way consultants operate. The projects are typically

short-term and team members become very attached to the result they develop with the team. The work is very task-oriented and within the team there are blurred organisational boundaries.' The blurred organisational boundaries were suggested to increase client's transparency and facilitate knowledge absorption in chapter four. A closer look into the structure of co-operation with the client will be taken in section 6.4.3.

The reason why the client had sceptical and demanding approach to the management consultants in general was due their prior experience with the consultants³⁴. The client had done a BPR project with the other consulting company in the other part of the company. The previous consultants took partly over the management responsibilities that the general manager regarded as his managers' responsibility, like for instance giving the presentations of the project and by planning the project steps and the use of resources in it. So, the client felt that they should have the lead in the project and the external advisors should be there in order to facilitate the process. This prior experience made the client demanding, since they were afraid that the same situation would occur again. A KPMG senior consultant identified the client to be rather demanding due the negative experience they have had with management consultants. He also gave an example about the implications of this attitude: 'The client could be said to be demanding, because they are sceptical about MC. They wanted to have very clear methods and path from KPMG all the time.'

The more specific example illustrates the point. A KPMG senior consultant told about an incident that describes the demanding attitude: 'Before the implementation phase they asked KPMG to deliver a checklist for implementation. In some areas that is impossible, but they still demanded those check lists. So I was forced to deliver the checklist for areas that were thought to be impossible

During the process of quick scan KPMG had some doubts about the commitment of the client's general manager. The first reaction from KPMG was that there is no basis for BPR. A KPMG auditing partner knew the general manager and together with him the management consultants tried to figure out how to handle the situation. On the basis of that discussion KPMG management consultants explained to the general manager what KPMG expects from him during BPR project and the general manager he promised commitment to BPR project. The project manager commented the type of knowledge needed in handling the situation: 'It is hard to specify what information was useful in this case. It is a mixture of things that gives a picture about someone, a person or a situation. It is information about his position and also his relation with his managers, this management style, his communication and how to interpret that. It is tacit knowledge.'

beforehand. Normally, I would say this does not work, but in this case I said: 'OK, I'll give you the checklist if that makes you happy, but you will still meet all the problems that you would meet normally. We have to find a solution for those problems then. If the check list will get the client over the first bump, then I will give the checklist. It was a paradoxical situation. They wanted to have the lead in the project, but at the same time they wanted the management consultants to direct the project in a straightforward manner.'

A KPMG senior consultant added that in addition to being demanding they may also be identified as competent in their business. However, even if the client was competent in their own business, the long-term nature of BPR project was difficult for the client according to a KPMG senior consultant: 'Basically the client's sales people are fairly competent, but they are very short-term oriented that is probably the characteristics of their organisation. They are also very practical. The long-term nature of BPR projects is difficult for this types of organisations, because they tend to solve the problem when met and get back to business as usual. KPMG consultants constantly have to remind them about the long-term goals and try to stretch the client organisation to meet those goals.'

The BPR project was assessed to be successful and as a KPMG senior consultant evaluated: 'The amount of trust has evolved in this relationship. The client appreciated a lot the fact that KPMG let the client to take a lead in BPR project. KPMG showed that they understood the client context and managed the project and the client relationship accordingly. In addition to normal phases in BPR projects there were also clear evolution in the client relationship from the sceptical to trust and appreciation. The client was very sceptical in the beginning and it was very instrumental. During the project the relationship grew to the level where there was more trust and they saw us as part of the group of people that were working towards their solutions.'

6.4.2 Type of client relationship

The client relationship is short-term relationship, since most of the MC assignments like this one are non-recurring assignments. However, this client relationship is also very interactive due to the nature of the BPR project. This suggests that this client

relationship is a *co-makership*. Table 16 summarises the examples given in the last section about the characteristics of the client relationship. The client may not be identified as demanding simply by being short-termist. The client was demanding due to the previous disappointments of working with other management consultants. The implications for knowledge absorption will be looked at next.

Table 16 Characteristics of case B

Case B	Examples
Short-term	MC is basically about doing the assignment and going away
Co-operative	 all the deliverables were made together within project teams utilisation of joint teams co-operative approach to knowledge transfer (the methodology, techniques and the understanding of the methodology during the process) the nature of BPR project client is demanding due to its prior MC experience

6.4.3 The client contact reconfiguration and the nature of knowledge processes in client relationship case B

The structure of interaction in client relationship case B

The client relationship case B investigated at KPMG was characterised by high interaction and high complexity of service delivery. Management consulting assignments are characterised by workflow and task uncertainty. In many cases MC projects aim at initiating large changes in client's organisation and in order to do that client's participation is required. Particularly, workflow uncertainty is evident in projects like BPR that threaten the existing positions and thus make the employees of the client organisation less willing to co-operate in some cases. Also the MC service is often highly intangible and customised to client context. All these factors make the service delivery complex.

The framework of client contact configurations in chapter four proposed that the client interface requires structuring in order to deliver the service and that the activities at client interface should be focused. Figure 18 illustrates the structure of joint team³⁵ utilised in the BPR assignment. It should be noted that the co-operation

³⁰ KPMG senior consultant about the structure of joint team: The team leader is from the client. In addition to team leader, there will be around 5-6 team members from the client that know the processes very well. Administrator is also from the client and works all the time for the BPR project and get the required data. The

was highly structured and the focus of activities was in client interface. There are two reasons for this. First, the BPR assignment is a highly complex service that requires that client is closely involved with the project. Second, the client's prior experience with management consultants influenced the role that the client wanted to have in this case. KPMG had to adjust the co-ordination of activities due to this prior experience. As a senior consultant describes the situation during the BPR assignment: 'The client wanted to be in control and KPMG let the client to have an idea that they were having the lead. KPMG let the things run more in the way the client wanted them to proceed, but we always thought that in the end we get the same results. Typically, KPMG always do the administration and we keep all the data etc.. In this case the client wanted to do the administration and team leader was also from the client.'

The management team of the BPR project was co-operative. As a KPMG project manager told about the co-operation in the management team: 'I had primarily contact with the general manager and with the project manager. We had regular discussions with the three of us. The managing partner from KPMG had more an arm's length relation with the client. The three of us formed a management team for the BPR project. One of the senior consultants was specialised with the change management and when it was necessary during the project sometimes to discuss this with the general manager and the project manager that consultant was also present in the meeting with the general manager and the project manager. Sometimes we had workshops with the complete management team. The general manager was directly responsible for the project, the decision making and discussions about the deliverables of the project also with the management team during the presentations of the workshops. During the first phase of the project there was one team (the strict focus phase) and out of the strict focus phase came two redesign projects and that was handled by two teams. In that point of time we split up as a team of KPMG. The senior consultants' role was on the BPR level and the change management aspects of the project.'

client also involved some trainees on BPR project. Both of the teams look at different processes. In the case of this client the processes were (1) sales processes and (2) financial processes.'

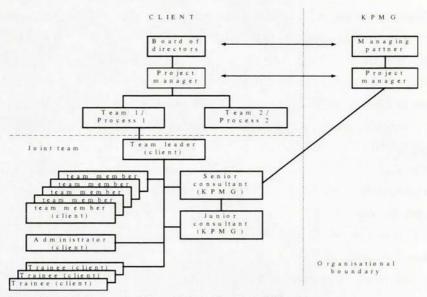


Figure 18 Structure of co-operation between KPMG and the client in BPR projects

Different phases in the BPR assignment have implications also for the structure. Figure 19 shows how the structure of co-operation changed as the project proceeded to implementation phase. A KPMG senior consultant describes this: When you get closer the implementation the client usually wants to do more by themselves. And they are right, because it is their business. This also has some changes in the role of the consultant. In the redesign phase, KPMG sort of had the lead, because we knew where to go. In the implementation the client is having more the lead and the structure of the team will also change. There will be only one team member left from KPMG that is actively involved with the implementation. Also the managing partner will supervise the implementation phase. There are many implementation teams within that leasing company and one consultant from KPMG that participate their meetings. There are around 3-4 teams. The KPMG consultant acts as an liaison officer between the teams and KPMG. The role of the consultant is to remind the client what we intended to do in redesign and to look that the client will be on the right track during the implementation. And also it is important to try to get some things politically done. If there is a need for a short cut to the board, the consultant talks to the managing partner and he takes the issue to the board and so tires to get things done.'

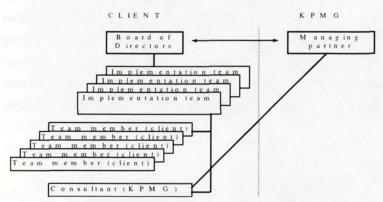


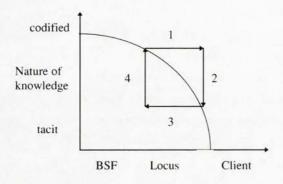
Figure 19 Structure of co-operation between the client and KPMG at the BPR implementation phase

This case illustrates the co-ordination requirements of highly complex services accompanied by the client's willingness to co-operate. As the case shows the focus of activities will be on client interface with little contacts to or support from back office activities. Also the structured client interface may facilitate the service delivery. This has some implications for knowledge absorption. Being interactive and structured, the client relationship provides good opportunity for the absorption of knowledge from client contacts.

Knowledge processes in case B

Figure 20 displays the knowledge processes in client interface in client relationship case B. (1) Service delivery in MC projects is characterised by knowledge transfer to the client in terms of providing methods and benchmarking data for analysing the client organisation's activities. BPR projects initiate large changes in client's organisation and in order to do that client's participation is required. Knowledge conversion during the client assignment turned out to be important in client relationship case B. As the project manager describes it: 'Our primary role was to introduce methodology, examples and cases to the client and help them to come up with the deliverables. They made the analysis, they came up with suggestions and design proposals. We were much more a mirror in the sense that they came up with suggestions that we could benchmark with other ideas we have seen in the market or in other markets with comparable processes.'

Knowledge conversion during the assignment includes (2) knowledge absorption in terms of identifying client's problems and (3 and 4) finding solutions to these problems by utilising existing knowledge (sharing) and by creating solutions for the client's problem (codification) together with the client. In these processes the client may be ignorant of solutions for its problem and it important for the service provider to be able to identify the client's problem and find a codified solution for it.



1 = BPR MC service

2 = problem identification

3 = BPR network

4 = problem solving during the assignment

assignment

= BSF/client boundary

Figure 20 Locus of knowledge processes in case B

Co-productive client relationships focus on knowledge processes at client interface. The following example illustrates the ongoing transformation of knowledge at client interface in case B. Knowledge is exchanged between the client and the BSF and during the knowledge exchange process it will be transformed from explicit knowledge into tacit knowledge by working together with the client, for instance in benchmarking exercise. A KPMG project manager describes the process: 'We did a lot about data transfer, because in the BPR project you try to identify directions and you try to collect some data about it. The questions emerge: Can we measure this, how big is this? So you ask the client to provide some data and then we analyse the data together. When we work together with this data we learn about

the way the client likes to operate, their personality in addition to the hard facts of data...' More specifically to BPR project the project manager comments: 'It is also the case when you are doing the focus phase in the BPR project. By looking at the performance of a typical process against what the client feels that he has to do. They can first look of course the codified knowledge, numbers and figures. But then the question is why is that performance so good as the codified knowledge is telling us. Then, for the great deal tacit knowledge helps you to answer that question.'

BPR network is described next as an important way of facilitating client's problem solving by internal sharing, scanning and codifying knowledge about BPR method. KPMG has launched a global BPR network for transferring knowledge about a specific method and related tools for providing management consulting services in BPR projects. BPR network (1) gives training to the consultants for BPR projects, (2) provides a database for BPR projects, (3) provide a contact point for BPR consultants. In addition to the improvement and utilisation of knowledge about a specific industry context (the aim of market groups), the specific management consulting tools and methods may be leveraged to other market groups through knowledge transfer networks like BPR network. This argument is illustrated in figure 21.

The knowledge transfer process may be described in following terms. First, BPR network provides training for those consultants who wish to get involved with BPR projects. This training develops the participants' BPR project implementation capability by teaching them how to use BPR tools and database and by granting access to BPR network (people and technical). In the training process tacit knowledge about BPR projects will be partly codified and thus transferred to the participants directly. Typically, the training sessions include also simulations of

BPR network is built around a BPR network centre that co-ordinates the network. Within this network, knowledge from client assignments is being shared internally by organising training for BPR consultants and using the actual client assignments as examples of conducting BPR projects. There is an ongoing interplay, transfer and exchange of knowledge in BPR network. BPR network provides a platform for the sharing of knowledge about BPR approach (know-why), tools (know-how) and the examples of BPR assignments showing patterns in BPR projects (know-what). The client assignments are the source of industry-specific knowledge and the examples of BPR project implementation will be used for showing patterns in BPR projects in order to increase the BPR implementation capabilities within the BPR network.

³⁷ BPR network transfers and distributes rather openly their knowledge about BPR. The reason for this is the tacit aspect of BPR knowledge. The BPR co-ordinators claim that the tacit aspects of conducting a BPR project are so dominant that even if the BPR knowledge is freely distributed, those without BPR training and experience do not know how to use that knowledge about BPR.

client assignments that aim at transforming the given codified knowledge to tacit knowledge. In the simulation process also tacit knowledge about BPR projects are being shared facilitating the knowledge absorption and sharing of tacit knowledge about BPR projects. Obviously, the real client contact is the greatest teacher, but internal training provides routines for conducting a BPR project (known patterns). BPR training will make the integration of the specialised knowledge of each consultant efficient by providing a common language to the BPR consultants.

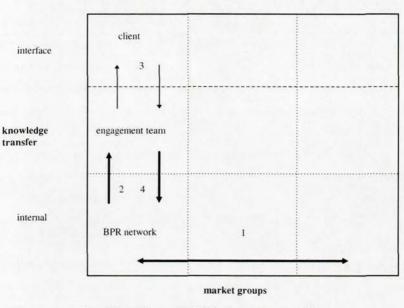
Second, BPR network supports the BPR projects (service delivery), by offering access to database (previous engagements, members of the network, templates of presentation sheets) and manual (introduction, methodology and tools) for the members of BPR network (The Yellow Pages). This is a typical example of internal transfer in which the codified knowledge will be simply transferred via different ways (books, manuals, written lists, files etc.). BPR network provides also access to the people network through meetings and presentations. This characteristic of a network facilitates the internal sharing of knowledge through codification.

Third, client assignment, as service delivery, provides an opportunity for absorbing knowledge from the client and its environment and to test and improve the BPR tools. When an engagement team works together with the client, the shared experiences and participation in the process develops tacit knowledge about the client context and, thus, the management consultants absorb knowledge. Also building experience and knowledge about client's context will improve the success in getting new engagements with different clients³⁸.

Fourth, the BPR database and manual will be updated frequently by collecting data about the BPR assignments. The codification of tacit knowledge is dominant in this phase. However, the discussions with the BPR co-ordinators revealed that knowledge about where to find tacit knowledge (lists of BPR consultants) may be much more important than the articulated knowledge about previous engagements. Also during the updating phase, BPR co-ordinators behave as personal contact points in a network, providing knowledge about ongoing BPR

³⁸ The co-ordinator of BPR network provided an interesting example about the role of client as an active reference in the client relationship leverage: 'In a new BPR proposal the client is invited to discuss with the previous client about its BPR experience.'

projects to the network. This ongoing (as long as BPR approach remains a popular management approach)³⁹ knowledge building within BPR network describes some of the interesting aspects of linking external and internal knowledge transfer.



- 1 = training and leveraging BPR implementation capability
- 2 = support by BPR network
- 3 = service delivery and knowledge absorption
- 4 = experience and knowledge about BPR projects and tools
- _ _= organisational boundaries

Figure 21 Interplay between external and internal transfer of knowledge

Case B illustrates that there is a dynamic relation between codified knowledge and tacit knowledge and the BSF's ability to manage knowledge conversion during the assignment is essential. The project manager provided following example of knowledge processes in BPR redesign phase: 'It is also in the redesign phase that you think that same kind of design will work and deliver what you expect the process to deliver. But then you have to come up with the evidence that it will work. So it is also an example of moving from tacit to codified knowledge and maybe back again.

³⁹ The head of BPR network co-ordination in the Netherlands mentioned that whether the network is built around BPR, TQM or any other management approach is not important. What is important is the utilisation of the network as a mechanism for transferring knowledge over the organisational boundaries.

And perhaps if you have the codified knowledge that show that it will not work then perhaps you go back to tacit knowledge and come up with the idea what could be done about it and then try to codify the idea again to see if it works. You also see the importance of methodology and techniques for the junior consultant or senior consultant. The junior consultant works with the cookbook. And you have to do that in order to grasp the meaning and the interrelation between the steps and the effect of the steps. As the senior consultant you are above the uncertainty and you can oversee the impact of some kind of steps within the methodology and the reasoning behind the methodology. You can tailor the methodology for the client situation by using tacit knowledge. And then you make it codified, because you translate it into the approach for that particular project. And maybe that is relevant for another project or for the senior consultant to take that conclusion and with his tacit knowledge transfer it to another tailor made approach for another client.'

It should be noted that codification has its limitations. Not all issues and experiences can be codified and some of the experiences may loose their meaning and value when codified. Codification process is always a simplification process even if it may also have some learning effects on its own. As KPMG Project manager points out: 'Numbers and figures and case descriptions or solutions that is not a problem. That is something you can write down and find from a library or database. The intangible aspects of knowledge are important and simultaneously hard to transfer. The only way to transfer that kind of knowledge is by discussion and in a conversation and not so much by writing it down. Because the interpretation of what is written down could be different from the things you would want to know.'

6.4.4 Knowledge absorption in case B

This section will identify some examples of knowledge absorption in this client relationship and start by looking at the absorption of non-specific knowledge.

Non-specific knowledge

The management consultants learn a lot in their client assignments. Typically, they focus on knowledge that may be used in the other client assignments. This is due to the nature of MC assignments. They are non-recurring assignments and consultants do not benefit that much from absorbing client-specific knowledge. Knowledge that

may be used or applied in other client assignments is most useful for management consultants as the KPMG project manager described the knowledge absorption in general: 'The exchange of resources, like information, knowledge is typical in this cooperative approach. Sometimes we gained also new insights and new ideas for other projects, but that is not so explicit during the project. We do not handle that in an explicit way. It is more in the mind of the consultant and you take it with you when you will be going to do another project and the consultant makes the link during the project, because then it is relevant to make that link.'

Often consultants improve their skills during the assignment. Senior manager mentioned an example about learning in this client relationship: 'Doing BPR workshops and working all day, make people annoyed and they need a break every now and then. They easily do not co-operate anymore. I learned how to handle those situations by doing experiments. I was experimenting how the person may be brought into the position that he or she has to contribute to the process. I learned many tricks that worked very well. So I actually learned skills for managing the workshops.'

Project manager gave some other examples of non-specific knowledge absorption in this client assignment. He comments on his recognition about the usefulness of the soft consulting skills during this client assignment: 'During the evaluation with the client, one of the things that came over was that my skills and the skills of the change management consultant were complementary to each other and gave a good balance in the hard and the soft consulting approach during that kind of sessions. So, one thing I have learned with this client, is that when I am alone with the workshop I have to pay more attention to the soft side of skills, which I need during the workshop or the session. By soft side I mean, the way you end the discussion which is leading nowhere and get them to the main point of discussion and focus them in that.'

The project manager gave another example of non-specific knowledge absorption. It was about the need for improving the training of the client: 'The other thing that I learned was that perhaps in the comparable situation with this client you have to pay more attention affront with the educating the team members of the client in methodology. The overview that we gave about BPR was too abstract and perhaps

some game situation or to do the case more extensively would have been useful to show them what kind of processes they will be going through. Also the techniques and what kind of deliverables they have to come up with and what the relationships between the deliverables are and having a lot discussions like why is it important to do this and why can't we do that instead or skip it all together and those discussions might have improved the process. Paying more attention to that affront before starting the project might have increased the effectiveness.'

Client-specific knowledge

Senior consultant gave examples about absorbing tacit aspects about the client. He specified that in addition to working together with the client, the consultant may learn about the client by making observations: 'The consultants learn the power structure in the client company and stuff like that. It is not necessary really to talk about these things in order to learn these tacit aspects about the client. By seeing the way they behave you learn something about that. You learn trough the team about the organisation. One of things that we learned was that this client is very operationally oriented. So, they liked to do things instead of planning and thinking about them. We learned that, e.g., on the one hand within BPR method we need to say you have to plan things affront, but what I learned was that it was better for this client to make a very rough planning and sort of take it as it gets along. So, we decided to stick to the week by week planning. That would be best for this client. That is tacit knowledge about the way things work within this company.'

The management consultant provided some other examples about client-specific knowledge: 'The exercise of providing checklists for the difficult situations was useful for me to learn how to keep the client happy and still get the end result. By preparing the checklist, I learned more about managing the client relationship than about BPR. I basically learned how to manage this particular client. Of course this learning might be useful also for the next assignment, but this typically one of the things that you have to look at per client. It is so client-specific that it can not be used like that for other client relationships. This type of tacit knowledge is more useful for the same client during the re-engagement than any other client.'

6.4.5 Summary - learning implications of the case B

Conclusions from case B

Table 17 summarises the discussion about knowledge absorption in a case B. The tacitness of knowledge dominated the knowledge processes in that client relationship. This is mainly due to the high interaction between the client and KPMG.

Table 17 Knowledge absorption and learning in case B

	Non-specific knowledge	Client-specific knowledge
Case B	 new insights and new ideas for other projects how to do workshops need for attention to the soft side of skills knowledge about client's business the client provides data for benchmarking 	power structure in the client company how to manage particular client

In this client relationship case, knowledge absorption was mainly focused on non-specific knowledge for improving the BPR skills. Client contacts provided new insights and new ideas for other projects and improved skills for organising workshops. Also management consultants increased their expertise in particular industry by improving their knowledge about client's business, for instance by getting data from client in benchmarking exercises. The client-specific knowledge was less valued by the management consultants due to the non-recurring nature of MC assignments. The next case study proves to be interesting, because it differs from other KPMG cases by being much more co-operative than any other cases investigated at KPMG.

6.5 KPMG CLIENT RELATIONSHIP CASE C

The client relationship case C that was investigated at KPMG is a long-term auditing relationship. The client is a large real estate fund and KPMG has audited the financial statements since its establishment. This client relationship has developed into an co-operative relationship. A KPMG engagement partner describes the

atmosphere in the client relationship: 'The word demanding with the negative associations is not appropriate for describing the client. I think is more fun working this way than with some of my other real estate clients. I know that if I would not deliver quality service they would be offended, hurt and unhappy about it. I do not see this client in terms of them pressurising me. I am committed to providing this level of service and they are used to this level of service and this way of selling the service. It is fun. It is satisfying for KPMG team. We get a lot out of it.' The processes that led to increased interaction between KPMG and the client will be described next.

6.5.1 Client context - The path from loyal relationship to client partnership

The change in the client relationship

This client relationship used to be a typical auditing relationship, in which the client prefers some distance with its auditors and is reluctant to share information freely. As the engagement partner from KPMG describes the situation: 'Up until three years ago there was a management team that was not willing to share information. It did not only obtain to relationship with KPMG, but they operated in the same manner with their supervisory board of directors. The management board wanted the auditors to be the outside party. The client was not only reluctant to share information with the auditors, but KPMG felt that is was a very difficult client relationship due to the clients attitude towards its auditors.' Some of the problems in that client relationship were specified by a KPMG engagement partner: 'In the audit relationship with KPMG, the client did not share information, but they let it up to KPMG auditors to detect where the issues of concern were and what kind of goal the client wanted to serve by taking that particular point of view. They were not willing to share the information with KPMG auditors. The KPMG manager felt that time being more the police officer than the auditor. 40 The client was very reluctant to give KPMG any information that would give us a full view of what considerations would be to defend the position taken. It was a very difficult relationship.'

⁴⁰ A KPMG engagement partner: 'E. g., the client may use different kinds of gimmicks to pump up the net income in financial statements and not invite the auditor in until they would have manipulated the net income to that extent and then leave it up to the auditor to investigate what kind of tricks they have been using. They did not share that information with KPMG auditors, but it was up to KPMG auditors to detect and say that we disagree with that.'

Some time ago, one of the executive board members left and the new general managing director was appointed. He set a new example for the company. The engagement partner describes the new general managing director: 'He was really strong on being open, outgoing, extrovert and sharing information with KPMG. The new general managing director wanted KPMG to have full view of what was going on in his company.' Soon after the first change in the executive board, the other remaining director left the company and was replaced by a person whom KPMG helped to get this job. The new finance director had been working to one of KPMG's other clients. KPMG introduced him to the client and he was appointed by the supervisory board of directors. A KPMG engagement partner describes the process: 'KPMG did not push the client to choose the finance director, but KPMG brought the two together. KPMG left it up to the client to choose the finance director. However, this matching process has been kind of bonding between the client and KPMG, because KPMG had the relationship with the finance director already beforehand and this matching may only deepen the relationship.' The engagement partner tells about the finance director: 'The new finance director was again someone who said: Well, I want to have an open relationship with my auditors. I want my auditors to know what I aim for, what my purposes are and what considerations I have taken when making up my mind? I want my auditors to evaluate to what extent you can agree with what I have been doing or maybe help me in finding ways of what I have been doing."

These internal changes in the client firm changed also the nature of client relationship and the knowledge transfer within the client relationship. The client relationship became more open and co-operative. As the engagement partner shortly makes the point: 'So, there was a full replacement of executive board of directors. The police officer attitude was gone immediately after this replacement.' The contact space between the client and KPMG has been widening after the change of management team. In addition to exchanging information more freely, KPMG is also participating to client's other activities more closely. The engagement partner describes his attitude for building the client relationship into partnerships: 'I try to escape the audit boundaries. I try to get beyond those boundaries and that is when it becomes interesting. For the audit as such you do not need that much knowledge

transfer. You need the certain amount of knowledge transfer, but not as much if you really want establish an overall relationship with the client. During the audit process the client's and my interest are running parallel. He can not go to his shareholders without my opinion. After that the client goes his way and I go my way. These other nine months of the year I need to work on establishing the relationship and keeping them in the mood that they have the auditor that is worthwhile.'

Changing patterns of interaction

Changing patterns of communications may have important implications for learning opportunity. KPMG partner told about the recent changes in client partnership at KPMG: 'We have changed the format of management letters⁴¹. We agreed with the client that we would take different approach and identify one or two business processes within the company, review one or two of these processes and share our observations with the client. We have been very explicit in agreeing on the fact that this could imply that we would have observations to make for which there may not be recommendations. Some of these processes are so specialised that we as auditors can not claim to better informed than they are. So we agreed that if we would make observations in these specialised type of processes, we would put question marks in place, without us going as far as saying we know how to solve it⁴². The general idea is that if you change your attitude with regard to the management letter from not only giving observations and recommendations, but also daring to give observations without having the recommendations, you basically recommend the client to think, because we do not have the solutions but they might have the solutions.'

The change in the content of communication had implications for learning and knowledge creation in the client relationship. The engagement partner describes the changes and the implications: 'The next step is that you just forget about putting

⁴¹ The engagement partner describes the idea of management letter: 'Originally, in the management letter there is first an observation on for instance the way the client do their treasury management and we start with this observation. This is followed by our recommendation and the third part are the management comments. What is important that we always put first the observation followed by recommendation.'

⁴² The engagement partner: To give an example, the client was thinking about enquiring property in a foreign country and they were buying it from the property developer and they wanted to have market study. We found out that the market study that they used for the decision making process was made by the property developer himself. And of course you can imagine that he is very positive about the market potential, because he wants to sell the property. After consulting with the market research department of the client, and we notified the client that we find it strange that the client is buying a market study from a company that is presently trying to sell you property. Question mark!

it in writing in terms of letter, but just give a short presentation of what your observations are and spend the rest of your time doing brain storming with the client and allowing the creative process to happen. That would probably add more value from the client's perspective. It would also have visual effect that we would not have to spend so much time writing. It takes a lot of time and it is probably not worth it if you compare it with the presentation with the free flow of information and creative processes. These presentations will increase the interaction and the transfer of tacit knowledge.'

6.5.2 Type of client

As an auditing relationship client relationship C is a long-term client relationship. After the full replacement of executive board of directors the client relationship developed into client partnership, in which the co-operation between the client and KPMG increased substantially. Table 18 summarises the examples that describe the type of client relationship. The client relationship became more open and the contact space got broader. The implications of these changes for knowledge processes and absorption will be discussed in the next section that will give some examples for illustrating and specifying the knowledge processes in this client relationship.

Table 18 Characteristics of case C

Case C	Examples	
Long-term	 KPMG has audited the client's financial statements since its establishment 	
Co-operative	 after full replacement of executive board of directors client wanted to have open relationship with its auditors co-operative approach to knowledge transfer advisory activities with the client activities beyond the audit boundaries 	

6.5.3 The structure of interaction in client relationship case C

Cases C and A are both auditing relationships that were argued to be non-complex due to the standardised nature of auditing activities. However, the increased interaction and customisation of services increases the complexity of service in case C. Case C was characterised by non-structured approach to interface co-operation. The interface interaction with the client is not structured, for instance, by utilising

joint teams etc. in this case. Figure 22 describes the structure of co-operation between KPMG and the client. Figure 22 gives only a schematic picture of the audit team and simplifies the audit team that is characterised by six organisational layers. The audit team and the audit work are highly structured. This increases the efficiency of service delivery in the case of non-complex service.

Regardless of the lack of formal ways of boosting interaction, there is a lot of communication and co-operation within this client relationship. The engagement partner suggested that the structure of co-operation is secondary to other issues that determine the nature of co-operation and communication in client contacts: 'The structure of co-operation may not be that important. The main thing is the attitude, the personality of the people involved and the way that these personalities match. The structure of auditing process or the settings during the process is not the basis of the relationship anymore. It used to be, but now the continuous interaction during the year is more important than the structure we have put into place.'

The engagement partner even goes further and argues that the structure may inhibit the development of the client relationship and knowledge absorption. He emphasised the importance of informal knowledge flows in client relationships: 'If you really want to establish the relationship with the client beyond doing the job, delivering the product and then pulling out again, then you have to let go the structure. If you try to establish such a relationship and go ahead with agendas and stuff like that then it will not work. You finish the agenda and then you pull out. I try to bring some issues in without structured agenda. We may talk about the football matches or about the golf games they played last week or the problems with the family they have. I prefer to leave that open to the client and myself during the meeting and sometimes we talk business and sometimes we talk anything but business. When the relationship with the client is an open relationship, the auditors dare to bring points to the table.'

Structuring interaction with the client may have influence on knowledge processes, if the structure supplements creativity or blocks free change of ideas and knowledge. The structured co-operation may inhibit the exchange of knowledge and ideas that lead to creative knowledge processes. As KPMG engagement partner pointed out: 'If the relationship with the client is too structured there may not be

room for free flow of information that might be of interest for you and for the client. If the consultant or accountant have a structured mind in terms of talking only about business with the client, they may not even be able to address certain management issues that they have had experience with other clients in other industry. The over structuring in the interaction with the client discourages the free flow of information. The creative processes that are present in unstructured relationships and discussions are very important for learning from the relationship, allowing freedom for flexibility and participation the context may become appropriate for the exchange of ideas and knowledge.'

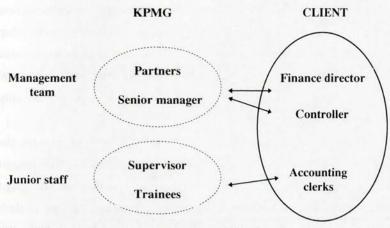


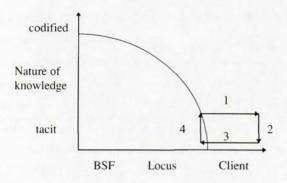
Figure 22 Structure of co-operation between the client and KPMG in case C

The transfer of knowledge from junior staff into higher level in the audit team was identified as important, but problematic. The engagement partner describes the division of tasks in the auditing team: 'As KPMG goes to fieldwork, on the daily basis the junior staff have more interaction at their level within the client organisation than the senior staff team. The senior staff team will go in probably once or twice a week and the junior staff will be at the client five days a week interacting with the client. The junior staff will be acting at different level. The junior staff does the real audit and they bring up the issues that they have to the senior manager and the partner. If the senior staff team decides that there is a issue we bring it to the finance director. The junior staff do more or less the routine type of work in which they have to interact with certain levels of the client and senior staff do most of the non-routine work and make the final decisions.'

Knowledge processes in case C

Figure 23 displays the positioning of knowledge processes in case C. The positioning implies that the locus of knowledge processes is in client interface and that the transfer of tacit knowledge is easier than in the other cases. The case C shows that such client relationships may be ideal for joint knowledge development for the client's problems, in which neither client nor the BSF may have the ready-made answers for the problems. In those processes, new knowledge may be created in a client interface in a continuous cycle of knowledge processes. Typically, a client may push its supplier to its limits in knowledge development by asking questions that are out of the official expertise of the service provider. The nature of client partnership suggests that there will be no problems with the appropriability of jointly created knowledge and the client is willing to share highly client-specific and confidential knowledge with its supplier due to the trust that such knowledge will be only utilised within that client relationship.

The partnership type of client relationship allows KPMG to increase the advisory role in the client relationship and to face new challenges. The engagement partner describes the outcome of the openness and co-operation in the client relationship: 'Having these non-structured discussions, we are contributing to their process of defining issues that have strategic importance. We are not involved with the formal process of finding the strategy, but we do contribute by having these discussions. It is also an advisory function, but it is not structured necessarily. It is informal and they pay for it. That is the nice thing. We had the discussion with the present finance director. We asked: 'what kind of budget do you want to put together the audit? Do you want a budget that gives you a bare bone audit (just doing audit and getting out of here)? Or do you want a budget that would allow for the interaction on the regular basis?' The finance director was very strict on that and he said: 'I want a budget that allows the interaction and we do not want to be bothered with additional invoices for every time you come over to my office and we talk about this and that.' The client partnership pays off. For the client I hope, for me I know.'



1 = auditing services & additional services (e.g., recruitment)
2 = learning due to the new areas of co-operation
3 + 4 = problem solving in open discussions

= BSF/client boundary

Figure 23 Locus of knowledge processes in case C

A KPMG engagement partner describes the nature of knowledge creation in client partnership: 'This new situation will stretch me to learn these issues. And this is an easy way of learning, because the client gives you an opportunity to explore these areas that you have never thought of before. It is an easy way of learning because it is like kid's play.'

A KPMG engagement partner added about the implications of this type of cooperation for knowledge creation: 'By sharing ideas with the client we are developing knowledge in this particular field. I am not sitting there with my client to get my way through. I am just sitting there to share my views. I try not to be frustrated if the client will not follow my view. It is no war. You do not need to win. There is no losing there either. Its kid's play and at the same time it bonds. It helps to establishing the bond between the client and yourself, because the two of you are going to the process of exploration.'

Some difficulties in knowledge sharing within the audit team were identified at KPMG, (1) extensive standardisation and task-orientation⁴³, (2) superior's

⁶⁹ The standardisation of skills and knowledge (e.g., the members of the audit team have all the same professional education and training) by standardisation of work processes (e.g., audit files) and by direct supervision (often

attitude⁴⁴, (3) professional education⁴⁵ and (4) professional attitude⁴⁶. An engagement partner at KPMG comments how he tries to manage with that problem: 'My challenge is to extract the knowledge that the trainees learn from the client. One of my challenges is that I am convinced that they have so many observations of what is going on with the client that for one reason or the other they are reluctant to communicate. I try to communicate the fact I expect that from them and at the same time I try to give them examples of things that has happened over the last couple of months and show to them how they could have helped me and KPMG and the client, if they would have felt comfortable with sharing the information.'

Increasingly there was a need for shifting the activities to the client interface in case C. As a KPMG partner pointed out: 'It is pity that we have not yet been able to mobilise all the knowledge that is within the junior staff. That would help us in doing the proper job. The junior staff spends too much time in the room where we have our files, going through numbers and putting check marks on paper. I am convinced that they would get much more information even audit evidence if they would leave the accountant's room and go to the appropriate persons within the

at least five organisational layers within teams at KPMG) may be barriers for knowledge sharing. An engagement partner at KPMG identified some barriers to knowledge sharing within the audit team: I think that this problem has to do with the fact that trainees and other junior staff has different concept of what it means to do good job than the senior staff. The junior staff probably think that they do good job if they would complete a professional audit. To get the right numbers at the right places at the right amounts being very task oriented. As the senior staff probably would feel that we have done a good job if the client is happy with us. That gap between our idea for the good job versus junior staff's idea of the good job is probably the gap that we will have to bridge if we want to do the proper amount of information sharing and knowledge sharing within the team. Task orientation is another barrier that hinders the information sharing."

[&]quot;An engagement partner at KPMG proposed that knowledge sharing in general may not be appreciated by people at senior positions due to the strict *traditional perception* about the interaction with the client: 'The other thing is that not all the partners would appreciate or allow for this information to be shared. I think that some of the partners would feel more comfortable with the bare bone audit type of idea than with co-operative client relationship.'

An engagement partner at KPMG blamed also the professional education of accountant for hindering knowledge sharing: The professional education of the accountants may also be seen as an barrier. One of the things that I blame is an article in the ethical code of accountants that says: 'you do not come to an conclusion without a thorough foundation or base.' That rule within the ethical code prohibits a lot of people from feeling free and saying: 'Don't ask me to prove it, but my gut feeling tells me that this is wrong'. This makes people to feel prohibited to share this kind of information like tacit knowledge.'

The professional attitude, e.g. of an accountant, may be a barrier to knowledge sharing. An engagement partner at KPMG compared the attitudinal differences between auditors and management consultants: The management consultants are much more comfortable with just walking through a client organisation, keeping their eyes and ears open, going back home, getting all the information together, linking it and admitting that their gut feeling tells them that this is the way things are going on and this is the solution that the client should be aiming at. That type of attitude is completely different from the attitude that the accountants get from their education, even if most of our managers change their attitudes, as they grow through the positions in the firm.'

client and just sit down with them, talk business with them and talk all kinds of other things with them. If they would go out and do the same type of thing that I am doing with my client, they would probably establish relationships at their level that would allow them first of all to do the audit properly and second to get all this tacit information that we would need.'

6.5.4 Knowledge absorption in client partnership

KPMG partner's statement describes well the implications of the change at the client context for knowledge absorption and learning: I doubt whether I had any opportunities for the absorption of tacit knowledge in the old prechange situation. The client did not tell me too much about what was going on in their mind and what was going on in their business and about what they were considering doing in the future. They were more inclined to focus on the past year. Auditing is looking back to the past year and they limited me to that discussion.' He specified: I recall that during certain stages that I was aware that they were working on finding a new strategy I asked them to provide me the copy of the strategy document. Once they had decided on it and decided that that would be the way to go during the next couple of years. Although they said they would send it to me, they never sent it to me. There was no freedom in the relationship that would have allowed me to absorb knowledge from the client. And given that situation I was not that focused on developing ways to absorb knowledge, because I was maybe too much focused on being the 'police officer'.'

The next example shows how co-operative client relationships induce and facilitate knowledge absorption and knowledge creation. The more co-operative the client relationship, the more it offers space for experimentation and exploration. This example also shows how one thing may lead to another and induce learning about issues that were not the actual aim of the activity. A KPMG engagement partner describes the role of experimentation and exploration in learning processes: 'After the change I had management across the table that was willing to discuss anything and that was interested in my views, even views on issues that I had ever never in my life thought about. I was being challenged and provoked. There was a completely new view to what was relevant in my relationship with the client. They started asking me questions and they wanted to have my feedback on how to deal

with certain human resource problems that they were encountering⁴⁷. It starts with the interview and feedback and you end up with the general discussion about the client's plans. I would not have learned these issues in the relationship before the change.' Some examples of non-specific and client-specific knowledge absorption in this client relationship are given next.

Non-specific knowledge

Non-specific knowledge that was absorbed in this client relationship was typically rather general in nature like in other KPMG cases. A KPMG engagement partner gave an example about non-specific knowledge from client relationship that may be applied in other contexts: 'I learn as well from the process of interacting with the client. I learn from the client (executive board of directors), for instance, the political processes that they have to go trough in establishing their relationship with the supervisory directors. The executive board has to manage the change process. The way they deal with the supervisory board and the way they deal with different individual personalities within the board is something that is really very helpful for me not in terms of this client relationship, but these processes work in any environment, with new clients, with other clients as well. This is rather non-specific knowledge that I learn from them.'

A KPMG engagement partner added another example about non-specific knowledge absorption: 'There is also some information about their industry and their business that they give me and I learn that as well. Besides that industry-specific knowledge they give me information, problems, issues that they deal with that I can project on other situations with other clients and learn from the experience at the client and add that to another client who is working on the similar situation or myself within this organisation.'

FKPMG engagement partner: 'They asked me to help to hire a new controller for they US operations and although they had a search bureau hunting this guy and although they are well qualified to talk to this guy by themselves and giving an opinion about how good or how bad this guy was, they nevertheless wanted me to meet with him as well. They wanted to hear what I think of him. All these things and opportunities come to mind right now and it did not come to my mind before the change. You sit down with this potential new controller and afterwards you go and have some feedback with the chief financial officer and the discussion starts with what do you think of this candidate and it ends the discussion and focuses on what their plans are for the US portfolio, whether they want to expand it or whether they want to reduce it or whether they need to concentrate on one geographical area or spread it all over the country.'

Partner describes the *knowledge absorption in the audit team*: 'Most of the knowledge that junior staff gets from the client is technical knowledge and does not pertain to tacit knowledge of the company. The trainees will get a lot of explicit knowledge. The importance of tacit knowledge will increase as you go up in a hierarchy. Most of the information that I get from client's management is not factual. It is conceptual. Most of the knowledge that the trainees will get from the client is factual and not conceptual. At the same time I do believe that the experiences that the staff in this engagement gets is tacit knowledge. It may be tacit knowledge that does not directly pertain to the client or the industry, but, e.g., pertains more to people management, organisational structures, how people respond to certain issues, politics that go on, that kind of tacit knowledge.'

KPMG partner points out that the knowledge and experience the junior staff absorbs in the client relationship is basically non-specific in nature: 'They are not necessarily going to use it at that same client, they can use that kind of general knowledge at that client and at the other client as well as at KPMG and in their social life outside the firm. They see things and how people behave and how people respond to changes in their environment. They see how change management becomes important. I am sure that this is tacit knowledge. But it is not knowledge that they can immediately bounce back to another client in that particular type of industry. It is more general. In that respect it is not that specific. But they learn. It is similar to the knowledge they would gain when they play team sports.'

Client-specific knowledge

Client-specific knowledge absorption was dominant in this relationship. A KPMG engagement partner gave some examples of client-specific knowledge that is absorbed from client contacts: 'One of the things that the client have told me is that they want to basically distance themselves from certain things that the other companies at the same type of industry or in this industry have been doing in terms of how they value the properties they have, how they determine income, what the strategic things are. Some companies say that they want to be real estate funds specialised in shops, or specialised in shops in the Netherlands etc. The client teaches me their point of view on how the strategy should look like, what they think that

their company should be in five years and how they are going to go there. They tell me that information and that is not industry-specific, but client-specific information that I get from there.'

Due to the high interaction with the client, tacit knowledge is important in client relationship. Most of the explicit knowledge is acquired from external source, other than the client. The engagement partner comments on the role of tacit knowledge in the client relationship: 'Most of the knowledge that I get from the client is tacit knowledge. I mainly get the industry-specific or client-specific explicit knowledge by reading the publications of the real estate industry and the press releases of the client. So usually that is not something that we address in our meetings. Of course when the client tells me that they are going to hire this or that person that may be explicit knowledge, but I do not attach too much value to that type of knowledge. Most of the knowledge I get that I am interested in is tacit knowledge. What are the issues that the client is dealing with, what the client perceive to be the problem, how do the client deal with these problems, that is something that is not qualified to be put in writing. You have to have interaction to get that kind of knowledge. I think my interaction to the client is probably more a mix of the two.'

A KPMG engagement partner describes the sharing of knowledge with the client: 'There are certain things that I can put into writing. There is explicit knowledge that I share with them and there is tacit knowledge that I share with them as well. From my perspective it is a bit of both. From the client's perspective it is probably more tacit than explicit knowledge that they give to me.'

6.5.5 Summary and conclusions

Learning implications of the case C

Table 19 summarises the examples of non-specific and client-specific knowledge absorption in case C. Particularly, the opportunity for the absorption of client-specific knowledge was showed to be substantial due to the positive influence of the co-operativeness and the long-term nature of the client partnership.

Table 19 Knowledge absorption and learning in case C

Non-specific knowledge		Client-specific knowledge	
Case C	 how to manage the change process with different individual personalities in any environment knowledge that pertains to people management, organisational structures, how people respond to certain issues, politics that go on information about the client's industry and business 	 client's strategy (what their company should be in five years and how they are going to go there) the issues that the client is dealing with and what the client perceive to be the problem? how do the client deal with these problems? 	

Case C showed that client partnership may offer good opportunity for knowledge absorption and knowledge development together with the client due to the close co-operation and the broadened scope of activities. The co-operation does no only ease the absorption of knowledge in a client partnership. It also induce the need for learning more about the client and its business due to the new role that the auditor has in the client relationship. As a KPMG engagement partner tells about learning processes: 'It is difficult and it is challenging. Sometimes they ask me questions on issues that I have never given thought before. So you have to deal with it. What do I do? Do I pretend that I am knowledgeable in this area or do I choose to act and show them that I so not have relevant expertise in this area? Will that heart me in that relationship with my client? Or will it honestly help me in my relationship with my client? You get all these kind of questions. It would be safer to stick to the area of expertise of the accounting, because that is where I am qualified.'

6.6 SUMMARY OF KNOWLEDGE ABSORPTION AT KPMG CLIENT RELATIONSHIP CASES A, B AND C

Even if the investigated cases do not represent the pure types of client relationships, we were able to indicate some basic differences and implications of client relationships for knowledge processes and knowledge absorption. In order to show the differences in the specificity and tacitness of absorbed knowledge, the client relationship cases will be compared in structured way by fixing one of the dimensions at a time. The impact of duration of client relationships on the specificity of knowledge may be analysed by comparing cases that are both either transactive or

co-operative, but differ in terms of duration of client relationships. In a similar way the differences in the tacitness of knowledge may be looked at by fixing the time dimension of client relationships and by comparing cases that differ in terms of interaction-intensity.

Specificity of knowledge: Comparisons of client relationship cases B and C

Client relationship cases B and C were both characterised by co-operative and interactive client relationships. However, they differed in terms of duration of client relationships. Case B was a management consulting assignment that was a non-recurring job. The client relationship case B showed that co-makerships might offer great potential in improving the skills if the client was competent and demanding. In this case the client was demanding and this attitude did induce some learning. In addition to learning how to manage the particular client relationship, new insights and new ideas for other projects, knowledge about client's business, benchmarking data and some other soft skills in management consulting identified to be gained in the co-makership client relationship at KPMG.

Case C, on the other hand, was a long-term client relationship in a way that since the establishment of client firm, KPMG had been the client's auditor. The client relationship case C was the most co-operative client relationship investigated at KPMG. As proposed in chapter four, a free exchange of ideas and knowledge were identified to take place in that client relationship. Particularly, the absorption of client-specific knowledge was substantial at the top level. In addition to offering basis for client-specific knowledge absorption, also the demanding nature of partnership in general may induce some learning. A KPMG senior manager in case C described the relationship to be rather demanding in a way that the client may ask questions that are outside of the competence of an auditor. This implies the demanding nature of client partnership that on the one hand offers great potential for knowing the client's business in details, but on the other hand is very demanding due to the increased scope of issues discussed and worked with. The client that takes a co-operative role in the supplier relationship thus also demands more from the supplier. This was identified to pressure people at KPMG to broaden their expertise and knowledge. Even if case B was not the most co-operative client relationship due to the client's bad previous experience with other management consultants it may be

compared with case C that was characterised by increased communication and enlarged scope of activities.

Case B showed that in non-recurring assignments the focus of knowledge absorption is on non-specific knowledge that may be leveraged in new assignments. Table 20 summarises the identified learning categories. Case C, on the other hand, illustrated that in client partnership the emphasis will be put on understanding the client context so that this knowledge may be utilised within the same client relationship. The best way to transfer this knowledge between partners was argued to be the open-ended discussions in which people from the BSF and the client share their problems, intentions and strategic plans.

These results from cases provide support the proposition 3 and its corollaries. The duration of client relationships seems to influence the specificity of absorbed knowledge in client relationships. The longer-term client relationships provide incentive for the absorption of client-specific knowledge. In short-term client relationships that are characterised by non-recurring engagements, BSFs focus on the absorption of non-specific knowledge that may be leveraged in new engagements.

Table 20 Comparison of cases B and C in terms of specificity of knowledge

Case	Non-specific knowledge	Client-specific knowledge
Case B	Tacit: new insights and new ideas for other projects skills in organising workshops attention to the soft side of skills Explicit: knowledge about client's business benchmarking data	Tacit: • power structure in the client company • the management of particular client • the handling of the general manager
Case C	Tacit: • the management of change process • people management (how people respond to certain issues) Explicit: • information about the client's industry and business	Tacit: client's strategy the issues that the client is dealing with and what the client perceive to be the problem? the way the client deals with these problems?

Tacitness of knowledge: Comparisons of client relationship cases A and C

When comparing cases A and C there does not appear to be such a big difference in terms of absorption of tacit knowledge. Tacit knowledge was shown to be absorbed in both case A and case C as table 21 below shows. However, the processes of the absorption of tacit knowledge differed. The client relationship case A at KPMG provided a picture of a client relationship in which both non-specific and client-specific knowledge was absorbed. Non-specific knowledge was identified to be most relevant at the lower level of the audit team as the trainees improved their auditing skills in client contacts. Client-specific knowledge, on the other hand, was absorbed in more indirect way as the long duration of the client relationship provided experience in knowing the client's habits. By knowing the difficulties with the client, KPMG was able to handle the potentially difficult situations, like getting access to IT projects.

Client relationship case A was characterised by client's arm's length approach to its auditors, but the long-term nature of client relationship offered an opportunity for making observations about the client. Making observations about the client is an important way of absorbing tacit knowledge in client relationships and building understanding of client's preferences without explicit communication between the client and the BSF. This implies that the long-term nature of client relationship may be utilised by paying attention to client's activities, instead of a face to face communication. By making observations about the client people at KPMG learned during that client relationship about tacit aspects of client's preferences (types of proposals client prefers), motives (Japanese culture) and way of acting (client's approach to projects). They also learned how to overcome these tacit obstacles of cooperation and were able to increase co-operation with the client over time as in the case of IT project. When compared to case C, knowledge processes in case A took place more within KPMG than at client interface and KPMG auditors needed to pay more attention on making observations about the client than in Case C, where issues were discussed and brought into the table.

Case C showed that instead of making observations about the client, people from KPMG and the client's organisation exchanged ideas in a co-operative manner (both KPMG and the client participated into knowledge creation and exchange) and

knowledge absorption was more direct in nature. The client in Case C was willing to share their views about tacit aspects of their activities in these discussion and get involved with knowledge development processes together with KPMG people.

Table 21 Comparison of cases A and C in terms of tacitness of knowledge

Case	Explicit knowledge	Tacit knowledge
Case A	 financial data industry-specific knowledge auditing files 	 Japanese culture auditing skills how to overcome client's arm's length attitude? client's approach to projects types of proposals client prefers
Case C	information about the client's industry and business	 the management of change processes people management (how people respond to certain issues) client's strategy what the client perceive to be the problem? how do the client deal with these problems?

Due to such nature of client relationship in case C, KPMG was able to align the client's processes and KPMG's own processes; and develop new ways of operating with the client. This changed KPMG's role in client's internal control of its foreign subsidiaries and KPMG's headquarters authority to client's foreign auditing arrangements. A KPMG engagement partner describes this: 'We saw that the client changed the organisation. They moved from centralised world-wide operation to decentralised operations. Basically they are trying to move responsibility and authority to the national organisations in the countries where they are active. We suggested to the client (and they accepted our proposal) that in return to these changes KPMG should do quite the opposite. When the client firm relinquishes authority to the national headquarters, then probably KPMG should centralise more. That allows the client to get second flow of information that would at least give the client some comfort in terms of the quality of the work done at the national level. This does not have to have implications for the KPMG structure in its audit but it does have implications for the way the various KPMG offices work together and their procedures.' This example shows how the free exchange of knowledge between the client and the BSF facilitates the alignment of client's processes and BSF's processes, and deepens the partnership. The alignment of client's processes and

BSF's processes typically lead to knowledge development as new ways of operating together is developed together with the client.

Part of tacit knowledge absorbed in cases A and C was related to skills, like auditing or management skills that are acquired by "learning on the job". Such skills may be difficult to articulate and the learning processes require that the activities have impact on overall understanding of need for such action. A KPMG partner describes this: 'E.g., the junior staff learns social skills like that there is no way of avoiding conflicts. Out of potential ten conflicts there may be eight that you can avoid, two you have to face. They learn that although you may not like somebody you have to work with him anyway and it is up to you to find the solution on how you can work with somebody that you do not particularly like. They learn how to manage their social life vs. their business life, time constraints and stress.'

The tacit knowledge about the client is acquired partly at the lower level of hierarchy when working as trainee or senior and transferred to higher levels, where its importance is increasing, by going through ranks and by learning from client assignments also at the higher level. Within the team the tacit knowledge is transferred to trainees by letting them participate into the process with the senior or just by making observations. The experience and knowledge that senior has acquired earlier about the client will be transferred to the trainees by taking them with the senior to client meetings. Also by observing the behaviour of seniors and by making mistakes, a younger member of the team learns about the tacit aspects of providing services to particular clients. When promoting through ranks, the contacts with the client and the strategic importance of client-specific tacit knowledge increase.

Another part of tacit knowledge is context-specific and circumstantial. In many cases tacit knowledge was identified to be knowledge about client's context. It facilitates the co-operation with the client and supports the customer relationship management. Tacit knowledge is often client-specific and 'soft' data when compared to codified knowledge as hard data like numbers and written text. Tacit knowledge is embodied in people due to the difficulties in codification. This suggests that tacit knowledge may be transferred by utilising face to face contacts and participating into work, unlike the transfer of codified knowledge may be more adapt to be transferred by for instance information technology. In both cases tacit knowledge is

valuable and useful for managing client relationships and providing services in customised manner.

The next chapter will give a description of knowledge absorption at Tieto Group case. The investigated case at Tieto Group represents an entirely different way of providing services. Compact software service will provide an illustration of a product-oriented way of delivering services in a customer environment that is characterised by distant transactions. In fact, the main idea behind Compact software service is to establish an efficient service delivery by decreasing the customer involvement that may cause the increased workflow uncertainty and the associated costs in service delivery. Packaging the service by codifying the required knowledge into the software system will characterise knowledge processes in Compact case.

KNOWLEDGE ABSORPTION FROM CUSTOMERS AT TIETO GROUP

7.1 INTRODUCTION

Tieto Group's corporate management has used Pegasus, the winged horse, as a metaphor for describing the strategic business areas and the associated business divisions of Tieto Group (Tieto Group Annual Report, 1995). In figure 24 Tieto Group's different services are divided into vertical industry-specific services, the legs, and horizontal industry-wide services, the wings. Tieto Group stands firmly with its four legs, banking and insurance, trade and services, industry and energy and public administration divisions that generated 59 % of net sales in 1995. Tieto Group's four legs are characterised by long-term client relationships with large clients that provide the basis for sustainable competitive advantage. But, how does Tieto Group fly with its wings, the processing and software services that generated 41 % of net sales in 1995? By associating flying with a metaphor for reaching new highs and levels of activities by learning, the learning processes by Tieto Group's wings will be analysed.

Tieto Group's organisation aims at getting the best from the both worlds: being market-oriented on the one hand (the legs) and developing expertise in particular field on the other hand (the wings). How does this organisation design implicate the differences in client relationships? Industry-specific services are delivered for large clients based on long-term client relationships and market specialisation by four divisions. Industry wide services like software services and processing services are grouped into two divisions and these services focus on providing services to wide variety of different types of clients.

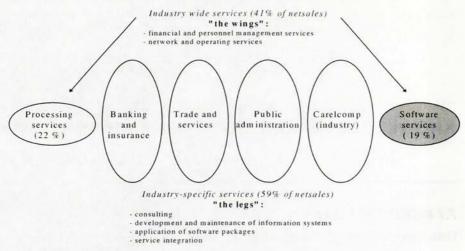


Figure 24 Strategic business areas of Tieto Group (Source: Tieto Group Annual Report, 1995.)

Looking at Tieto Group from the point of view of knowledge management suggests two distinct strategies. Customisation and focus on client-specific needs in industry-specific services aims at developing and utilising client-specific knowledge for enhancing long-term client relationships. The industry wide services, on the other hand, focus on the particular type of services, developing non-specific knowledge in these activities and utilising the absorbed and developed non-specific knowledge in wide variety of customer contacts.

The way Tieto Group is organised reflects the sectional differences in client relationships and support the associated strategies. Industry-specific services are typically configured the way that the clients have a co-productive role in the service delivery. This configuration of client contacts provides an opportunity for the absorption of client-specific knowledge from their highly interactive and durable client relationships. This proves to be important for customising the service in terms of utilising the absorbed client-specific knowledge within the same client relationships.

The industry wide services, on the other hand, are functionally oriented and focus on expertise in their area of service and efficiency in service delivery. The learning processes may be internally-oriented and focused on the absorption of non-specific knowledge due to the diverse, short-term and distant customer contacts. Such customer relationships provide incentive for the absorption of non-specific

knowledge that may be widely utilised in diverse client relationships. The utilisation of knowledge in such way requires internal codification of knowledge in order to transfer it without direct interaction with the customers. Knowledge leverage may be appropriate in a client environment where client contacts are distant due for instance to the nature of service or due to the BSF's intentional aim of reconfiguring its customer contacts e.g., for improving cost efficiency. This case study will analyse a service delivery reconfiguration that aims at providing services to mass market by utilising the product-oriented approach.

Tieto Group case will illustrate the learning implications of market exchange client relationships. These types of client relationships are characterised by minimum customer involvement in service delivery and short-term nature of client relationships. The case of Compact financial management software service will be analysed from the point of view of learning. Compact service is a financial management software service for small and middle-sized firms. It is developed and provided by Unic, one of the subsidiaries of TT Tieto in software services division (shaded in figure 24). Tieto Group merged with Unic in 1995 strengthening Tieto Group's expertise in financial and personnel management software systems.

Unic is one of the largest and oldest software houses in Northern Europe and it is known to be innovative in its activities. As Unic's business development manager describes Unic: 'Openness, new ways of doing business and urge to look for new approaches in business have been important at Unic. We believe that to sustain the profitability and to improve it requires, in addition to the good products, new ways of thinking.' This case may turn out to be interesting, because it highlights the learning implications of faceless client contacts due to the need for developing highly efficient operations.

Section 7.2 will start to present case study results about knowledge absorption in market exchange relationship by presenting the context of Compact service. Compact services will be positioned within the other services of Unic and the nature of Compact service will be described. Compact service customer contacts will be shown to resemble market exchange customer relationships by identifying Compact team's intentional goal of keeping the client at arm's length. Such an approach to client contacts have implications for the opportunity for knowledge absorption in

terms of focus on the absorption of non-specific knowledge that may be leveraged and utilised in new client contacts. Section 7.3 will identify knowledge processes in Compact service and take a look at the critical role of Compact team in Compact service. In section 7.4 examples of knowledge absorption and leverage will be shown in the cases of (1) the development of Wintime service on the basis of Compact service and (2) the development of new Compact versions. The analysis of knowledge absorption will be elaborated by focusing on the case of customer support and the tacit aspects of knowledge and learning in Compact service. The summary and concluding remarks will follow in section 7.5.

7.2 CLIENT RELATIONSHIP CASE D - COMPACT SOFTWARE SERVICE

7.2.1 Context of Compact service

Unic

Unic provides Compact software service. There are about 4000 employees working at Tieto Group, of which more than 400 professionals work for Unic. Tieto Group's turnover is more than 400 million US dollars and Unic contributes to the Tieto Group's overall turnover by generating sales of 40 million US dollars. Figure 25 shows the organisational chart of Tieto Group. Unic is part of software service division. Unic's organisation is divided into three customer service areas. Unic provides services in the areas of (1) financial management, (2) personnel management and (3) customer support and training. Compact team that developed and delivers Compact service at Unic is organisationally located in financial management services sector at the small and medium size firm service group.

Compact software package is a financial management software system for small or middle-sized firms and associations. Compact team provides Compact software service. Compact team has rather autonomous position at Unic regarding Compact service. Compact team leader describes the team: 'During the development phase there were more people involved than now. The core team includes now one person who is responsible for marketing and sales, one who is product manager and one who takes care the customer support. These are the main areas of expertise and they form interwoven processes, marketing and sales process, management process

and logistics process. This team does everything else but sends invoices. Unic does that.' This statement shows that the team has had the opportunity for *focusing* on the actual service development and delivery. Compact team is freed from administrative work that and might have taken resources out of the actual project, Compact service development and delivery.

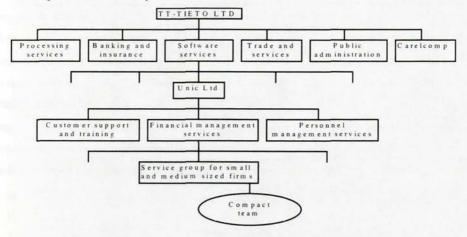


Figure 25 The organisational chart of Tieto Group and the organisational location of Compact team

Positioning Compact service

The Compact software development was initiated when it was noticed at Unic that most of their software services are provided for large clients, even if the small firm sector might offer great potential in terms of sales volume. The analysis of potential customer base at Unic showed that there may be enough market for non-customised service for small and medium sized firms. Compact team leader describes the market search efforts at Unic: 'We have ordered external research report from research institutions and conducted market research projects about our customer base and about the market segment we are aiming at. The external market research service firm did the first market research. By that research project we wanted to get more information about the market potential and the positioning of the potential distribution channels.'

Before the establishment of Compact software service, most of the Unic's software packages were typically customised, complex and expensive business management software systems for large or middle sized firms, like for instance

Intime and Meritt. However, the analysis of potential customer base indicated that small firms could offer enormous potential in terms of sales volume if Unic was able to provide them a suitable software package. As the business development manager at Unic describes the start of Compact service: 'In 1994, we started at Unic to look at how our products are positioned and we noticed that most of our products are highly customised and aimed for large firms. We did not have any software programs for small sized firms. Someone asked who are these small firms and potential clients. First of all, they are firms that need to do accounting, small firms, associations, sport clubs and ordinary people that need a system for accounting for some reason. We decided to find out the potential in that market and estimated that there are around 500 000 potential users in Finland. There appeared to be huge potential, but we did not have anything to offer them.' Figure 26 illustrates how Unic's software services are positioned in terms of size of target customers and the degree of customisation of service.

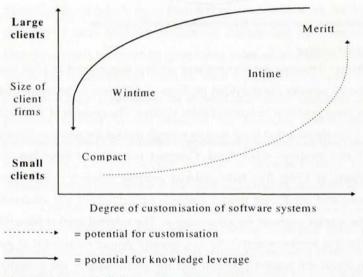


Figure 26 Market model for business management software services

Figure 26 indicates that the larger the client firms, the greater the potential for providing extra services for the client. The arrow with dotted line illustrates the idea that customised services, like consulting and system maintenance services provide increasing opportunity for additional services and bonding. These type of services

provide added value for the client and increased income per client for the BSF. However, the number of potential clients and thus the transaction volume increases as the size of the client firm decreases. In order to manage a large number of service deliveries and leverage knowledge efficiently, there is pressure for decreasing the customisation of services. The arrow with solid line describes this.

7.2.2 Compact project

Figure 27 will describe the development of Compact software service. Compact was developed in the beginning of 1994 after scanning the potential software product for small and middle-sized firms. Within couple of months Compact was developed to be ready for its introduction in autumn 1994. Compact team leader describes how Finnish Compact was developed: 'Making such market potential profitable requires high volume and new ways (to Unic) of providing services to these customers. How to do this? Should we build the system by ourselves or is it possible to find such system somewhere in the world so that we can build a Finnish version out of it? Pretty quickly it became obvious for us that we should not try to reinvent the wheel. Typically, in our industry every firm builds its own version from the beginning and there are very few real partnerships in this field. Well, we tried to find one and came up with the Swedish firm XOR in Malmö that had a suitable program for us. The program was called Compact and the Swedish firm had developed it since 1991. We negotiated about developing Finnish version of Compact in 1994 and end up with the deal that XOR develops the technological solutions and Unic brings in its expertise in business management. This was very successful division of labour. Technically Compact was ready, but we needed to fix it to Finnish context. For instance, the bank connections differ in Finland and Sweden.'

So far three new versions of Compact software (versions 2.0, 3.0 and 3.1) and a new salary module for Compact have been developed. In addition to the development of Compact software, new financial management software, Wintime, was developed on the basis of Compact experience. In the following case description the development of new versions will be associated with the knowledge leverage to Compact users (existing or new) and development of new services on the basis of Compact service with knowledge leverage to new clients. Before that the principles of Compact software service will be described in more detail.

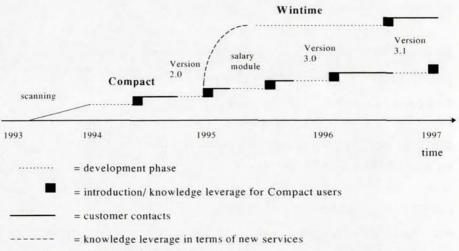


Figure 27 Chronological description of Compact project

7.2.3 Compact service as product-oriented approach to service delivery

The explicit goals and specifications were identified for Compact service from the beginning. Table 22 summarises the aims of Compact service. The Compact development and marketing were based on the idea that software business may or should develop into the same direction as hardware business. As Compact team leader describes the ideas that lead to the development of Compact service: 'When we started to think about how to develop Compact service, we had discussions about the trends in hardware business and we were thinking would it be possible to do the same in services. Think for instance the development of the markets of calculators and computers. It used to be a big thing to buy a calculator or a computer. People spent a lot of time for selecting the item and the purchase was perceived as an important decision. Nowadays, it not a big deal anymore to buy one and you can buy them anywhere or they are attached to different things like, for instance watches. Why should it be different in financial management services that is tightly regulated by legislation and common practise in accounting?'

Table 22 The aims of Compact service

Issue Aims		
Software system	 the best available in market affordable to small firms "compact" 	
Team	each member of the team plays any role in the team	
Distribution	 high volume and low cost new channels with minimised customer contact in selling (e.g., Internet) no personal selling 15 minutes max. selling time 	
Delivery	max. one day anywhere	
Ways of operating	 no traditional (in business services) ways of operating telephone support and advise 	
Role of customer	 minimised customer contact independent use of Compact software 	
Marketing	strong marketing, introduction and distribution channels	
Organisation	 small, lean and efficient organisation without hierarchy and bureaucracy actually, no organisation 	
Others	 the first software program without manual (the pressure from clients forced Compact team to develop the manual later.) no introduction leaflets demo diskette functions as an introduction leaflet (demo diskette may be used without charge for 30 days and this program allows also the potential buyer to practise the use of Compact software with the "dummy-firm") "demo center" 	

Compact service is aimed at diminishing customer involvement and interaction for increasing the efficiency of service delivery with large volume and minimising the cost of service. The starting point for developing Compact service was the idea that Compact should represent a new way of selling business management software services for the customers that were not served by Unic before. This had some implications on how to develop, sell and provide after service for the customers. Developing and selling such software package requires a completely different approach to customer contacts than what was used to at Unic.

The Unic's business development manager highlights the traditional approach in service business: "Typically with the big clients, the process of acquiring our service is a very long and costly before and after the sale. Offers and lunches are typical before the actual act that is again followed by many complicated stages. It takes a long time and typically we are able to handle around 10 such processes yearly per sales manager. The real

The cost of the software package needs to be driven down if the small firms are to be interested to such service offering. Also the nature of service delivery needs to be changed if a large volume of transactions are to be dealt with. This suggests that the traditional service concept needs to get closer to *product-oriented approach*, in which the customer contact is more distant than in typical service delivery.

The Unic's strong corporate image makes it easy to Compact team to execute such transactional customer contact reconfigurations in selling Compact services. According to Compact team leader, the strong corporate image facilitates selling business management software services in such an unorthodox manner: 'Even if Compact is rather standardised software system, it is very important for the clients from which firm they buy their business management software system. There are competitors for Compact, like Data Mike etc., but there are not any strong organisations behind these rival products. Our organisation is one of the oldest and best-known software houses in Finland and it brings security for the clients.'

7.2.4 The profile of Compact user

Compact team has tried to analyse their client base. Compact team leader tells about the problems of analysing the client base: 'We have tried to analyse and identify the profile of the common Compact user. The analysis has shown that there is not any average Compact user. The practise has shown us that the world does not function as we anticipated or thought. We were thinking that Compact customer would be a small firm or an association. But in fact our first customers were middle-sized firms, not the small firms. Only after 10 000 demo diskettes were out there, "third generation" demo diskette users that were small firms started to contact us. All those demo diskettes formed a sort of network and we encouraged the first users to give their diskettes after use to the next users. It took some time and in the beginning the clients were middle sized firms, but little by little as the demo diskette network grew, also we gained increasingly more clients from the small sized firms.'

The discussion about typical Compact users revealed that Compact customer's profile is very close to market exchange relationship. Those client

profit from those client relationships come from regular maintenance and updating activities that are part of the deal. Small firms do not have such needs and they cannot afford it. We were thinking that if we go to the small firm market it requires a completely new ways of doing things.'

relationships were characterised to be short-term and non-interactive. This is the case with Compact customers. Compact service is based on the idea of minimised and faceless customer contacts. Also the customer relationships are in principle short-term even if it is the case that Compact users are prone to update their Compact software package by buying a new version⁴⁹. However, selling new versions are regarded as new transactions when compared to traditional way of providing yearly maintenance services to long-term clients. As Compact team leader highlights the way new versions of Compact is brought into market: 'Traditionally, when you buy a business management software, you pay every year 20 % maintenance payment of the sum the client pays for the software system. However, we decided to take a different approach with Compact. When you buy Compact you buy the whole packet including support, but every year we develop a new version of Compact that the client may buy by 30 % of the original price. The new version is an updated version that includes some additional features and modules. But it is not obligatory to buy a new version every year. Selling business management software services as retail products is regarded as odd. The downstream marketing channels and the customers regard buying business management software as something that requires special expertise in accounting etc.'

7.2.5 Success of Compact service

Compact software system has been successful⁵⁰ even if it currently may not compete with the income stream from long-term large clients at Unic. As Compact team leader mentioned: 'From the income point of view, these products (Compact and Wintime) can not compete with the long-term client deals for maintaining the

The Compact team leader: 'Even if the process of changing the supplier is not so difficult anymore, the clients feel that changing the supplier and thus the technical system is difficult and thus remain loyal. The barrier of changing the software supplier is diminishing all the time due to the user-friendliness of the Windows environment. If you know how to use some Windows applications, you can use them all. This will probably weaken the customer loyalty. This also has some implications for our customer support. Less and less we need to provide technical support for our clients. Increasingly we need to provide support services in professional areas like accounting.'

Seeping in mind that the introduction of new products and services is not easy, it is interesting to identify what makes Compact service successful. The Compact team leader: 'Naturally, there are lot of well thought and planned actions, but we should not underestimate the relevance of good luck and humour in making successful business. E.g., when we were developing Finnish Compact, we thought that the Compact users are typically people that keep their invoices, agreements and other business documents in a shoe box. Well, why not to pack Compact in a shoe box? And that is what we did. We packed Compact software diskette, manual and the quick guide into a shoe box. It required a lot of courage to introduce this rather funny and unique way of packaging software system to the corporate management. Making new things is often difficult.'

customised software programmes. Most of the income comes from these client relationships in Unic. The long-term clients pay 20 % a year from the original price of the software system for yearly the maintenance of the system. Unic has around 5000 long-term clients that pay for these yearly maintenance payments. However, if we look at the new business the picture may change. I believe that the software business will increasingly develop into this direction, meaning that software systems will be increasingly sold as products without a big service component.'

The Compact team leader specifies: 'Compact service is not yet a money-maker. The client base needs to grow into thousands of clients in order to become very profitable. New versions will thus become the source of money in Compact services. We should notice that we are still in the starting phase, even if the break-even has been passed already. In the beginning we had problems within our organisation at Unic, because Compact was sold to the client firms that would normally pay 10 times more for the business management software programme.'

The success of Compact service had some unexpected consequences, because the position of some of the Unic's older services was damaged by Compact. Even if Compact was targeted for small firms, also some larger firms started to show interest on Compact. Compact team leader comments on this "cannibalisation" problem: 'The success of Compact created some internal discussion due to the increased share of Compact services also for larger firms. Finally we concluded that there is enough potential for both type of services. If we look at the new business at Unic, I believe that Compact services are at the top in terms of profitability of activities. As a new service, Compact, has been successful. So far we have been doing only one new version of Compact and that brings in a lot of money. Developing a new version does not cost that much, but it brings in a lot of money, since 70 % of Compact users buy the new version.' So the profitability of Compact will be improved all the time. And the indirect effects are also important. Wintime as a spin-off from Compact service has shown how important Compact service was from the point of view of learning. Wintime is developed on the basis of the experience from Compact service.

7.3 THE CRITICAL ROLE OF COMPACT TEAM

A central feature in the development and delivery of Compact service is that it is carried out entirely by a small team. How was such a small team able to introduce a new service so rapidly? What are the contributing factors that made Compact successful in such a short period of time? These questions will be looked at by presenting the comments from team members for identifying what are the factors that have influenced the team and stretched it to good performance.

The human inclination to prefer certainty and the business drive for innovations may often be contradictory in business activities. As the Compact team leader points out: 'Many times it might have been easier for the Compact team to follow the well known and the usual path and not to try to create or do something new. Teams that try to do something new need to have strong self-confidence and self-esteem. Very few organisations encourage people to do new things, even if a lot of lip service is paid to the need for being innovative.' Innovations and new business approaches are always uncertain in some respect. Compact team leader provokes some thinking by pointing to these contradictions that the Compact team had to face: 'The common denominator in an organisation is that you need to be tough and certain about yourself and your activities. However, when you start to do something new that is characterised by uncertainty, you end up creating an alien like Compact team. And in addition to that, we also have fun. That makes us even stranger in the eyes of the rest of the organisation. What is this? Those guys are active and they even seem to have fun.'

7.3.1 Team building

In order to develop a new approach and a new software service, an enthusiastic and devoted group of people, the Compact team, was needed to implement the project. The way Compact team was built was identified as an important factor. First, all the members of the team were voluntary and willing to take the chance. Second, the candidates were informed about the basic principles that the team would adopt in its operations. Finally, right from the beginning the team started to work along those lines and develop common goals.

The Compact team leader describes the team building: 'It took only couple of months to develop the Finnish Compact. First of all, the deadline was more than

tight. Nobody believed that it is possible to develop the Finnish version in couple of months, but we wanted to introduce the new product in a special occasion. One of the basic issues in implementation was team building. I announced internally that all the people that want to be involved with developing a new and incredible product are welcome. We shall establish a team that offers positions for players, not for managers. Let's see what we are able to do. Pretty quickly those few that were really ready to take the challenge emerged. It was quite a surprise how few there were, because typically people talk in organisations that 'I am always doing the same work', but when there was a chance to do something new, only a few were ready for it.'

Those few people that were willing to participate the project were found quickly and the motivation was high. Compact team leader describes other issues related to team building: 'The second thing that we did with the team is that we built a "dream heaven". Members of the team were able to say what they expect from the project and what they are willing to give for this project. All the issues were documented and surprisingly the values were close to each other. Probably because people that chose to participate this project had similar goals. On the other hand, before we did this, the team had a chance to get to know Compact and we had five pages problems associated with the development of Finnish Compact. The problems were brought into the table and everybody in the team expressed their views on how to solve these problems. After a session we did not have any problems left. It may sound ridiculous, but it worked.'

Team building seems to have been successful, since the members of the team clearly showed enthusiasm. One member of the team describes the atmosphere at Compact team: 'We have all volunteered to become members of this team and we all wanted to become part of Compact team. We have been very enthusiastic about working in Compact service and the atmosphere among us has been great. This is one of the major reasons why working in Compact team has been so nice. This is a small team without any strict hierarchy. We do have our fields of expertise, but we do all the tasks related to Compact. Even if there has been too few people in Compact team in terms of the volume of activities, the work has been so nice that we have stretched ourselves to whatever the requirements. It has been nice to work with

this product, customers and particularly the Compact team. It would not have been possible without such an incredible atmosphere. Being such a small group made Compact team very flexible and fast moving. For instance, we have organised "brain storming" sessions outside our firm with very short notice when there has been need for new ideas etc..'

Compact team leader identifies the profile of ideal team: 'To get the team involved genuinely to this project improved the efficiency in a spectacular way. Team needs to be like SAS commando troop that include specialists from all walks of life. The point is that every one has his speciality, but all the members of the team have 80 % knowledge of the other member's speciality.' This suggests that it is important to share each other's knowledge in the team. How to facilitate the sharing of knowledge within the team?

7.3.2 Management of Compact team

Managing teams may be more about working with the team and creating enthusiasm for the common cause than telling how to reach the goals and control the work of the team. Compact team leader points that managing team is more about letting the team perform than controlling the team: 'The word "management" does not echo in a similar way anymore after managing Compact team for one and half year. Management in a team is more about trusting the power of the team and letting the team to perform. You will get as much as you will give. The need for control has decreased substantially and still the efficiency is higher in Compact team than in many other teams of our organisation.'

Also the changing nature of customer contacts have provided chance for focusing more on internal issues and team. Faceless customer contacts turn the focus into the team. As Compact team leader points out this focus has improved his skills as a manager: 'Because we are no longer working with specific clients, the focus of our operations is on internal issues of the team. In more traditional client relationships, a large part of managers' activities focused on influencing the client. The lack of these activities in Compact service has given more time for working with the team and developing the team. I believe that after having this experience I am better manager than I used to be. In Compact service there is no need for acting as a front figure. As persons, we are anonymous for our clients.'

The way the teamwork is organised physically also has implications for the managerial roles. Compact team leader describes the changes: 'The whole Compact team works in the same room and all the activities are carried out from this room. Three years ago I, as a manager, could never have thought to sit and work in the same room with my subordinates instead of having a nice manager's office. Loosing the official signs of status and intimacy made it very difficult in the beginning. You could not shut your door and withdraw into your manager's office. The only privilege that I had was the "thinking chair". I used that chair for relaxing and focusing on "brain work". On the other hand, pretty quickly it became obvious that in a professional organisation like ours where people are prudent, there is not so much need for intimacy that is created by walls.'

7.3.3 Knowledge processes within Compact team

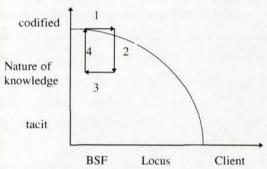
Knowledge processes in case D

Figure 28 describes knowledge processes in Compact case. Section 7.2 described the nature of (1) Compact service and identified it to be characterised by the transfer of codified knowledge in transactional and product-oriented manner. Knowledge transfer in service delivery in such manner places demands for other knowledge processes. The following discussion will first analyse shortly the characteristics of (3) knowledge sharing within the Compact team in this section and then focus on (2) knowledge absorption in customer support and (4) codification as the processes of creating new Compact versions in section 7.4.

Knowledge sharing within Compact team

Knowledge sharing is important for developing skills and knowledge (the suggested 80 % of the other team member's knowledge) that is need in efficient team to operate. Compact team member (customer support) describes how working in a team, in which there is not any strict division of tasks (both vertically and horizontally), automatically develops such skills: 'You need to know about any field and all the activities that are related to Compact service, but still there is always someone that is expert in specific field. So, you know that if there is a problem in some area that you are not so familiar with you can turn to someone else in that team. On the other hand if someone is, for instance, on holiday, you need to be able

to replace any team member and you learn a lot about Compact service during those replacement periods.'



- 1 = Compact software service
- 2 = knowledge absorption in customer support
- 3 = knowledge sharing within

Compact team

- 4 = development of new versions
- = BSF/client boundary

Figure 28 Locus of knowledge processes in case D

Also the team needs to be pretty small in order to have such effects. Compact team leader describes knowledge transfer and sharing within Compact team: 'We acknowledged from the beginning that the team needs to remain small enough that when somebody speaks "aloud" everybody in the team is able to hear it so that the information is shared constantly without any problems. It became obvious when the core team from Compact team separated and started to develop Wintime that we have a problem with sharing the information between the teams. Sharing information with loud voice was replaced by some other means of sharing information and at the end of the day information was not shared anymore. Now Compact team is sitting around the table facing each other so that when the messages to any one of the team are told "aloud", they are also received by every member of the team. No separate communication is needed within the team.'

Being involved with knowledge sharing indicates the membership in the team. Team leader identifies that his main managerial challenge is to get people sharing knowledge freely so that they may become active and contributing members of the

team: 'My challenge is to get new people become part of the team as soon as possible, that is, absorb the tacit issues of the team working. People will not become alike, they share the feelings and thus become same-minded. The way the members of Compact team handle selling process, max. 15 minutes per client, is a clear evidence of learning in the team. The client is being "tackled" in the same way. This is the outcome of working in the same team. The way the selling process is being handled is similar with all the members of the team. The team members have kind of learned to "tackle" the client. We all have Compact mark all over us. This is because we act as an efficient team.

Innovative and new services may require the right balance between knowledge absorption and codification. As the Compact team leader pointed out: 'In team building it is important that there are members that can manage different knowledge processes, codification, transfer, absorption and sharing. Especially, when the team is developing something new, it needs to go through the whole knowledge cycle. The tacit level in the process of getting Compact to markets is related to Compact team. We understand what is happening, but all the Compact activities are separated from the other activities at Unic. Without codification it is difficult for others to understand what we are doing. The others are thinking that they seem to have fun in a nice environment, but what are they doing?'

How to proceed in a more stable phase when the need for the development of Compact service diminishes? Business development manager describes the current status of Compact service and provides an example about knowledge sharing within Unic: 'Compact service is approaching a stabile phase, in which there is not that much need for development anymore. We transfer people from Compact team to Winteam in order to benefit from their valuable Compact experience. For instance, Wintime does not have currently material administration module and we utilise people from Compact team that are familiar with material administration from Compact. In addition to those things, we added manual and tutorial into Wintime. Particularly, we learned that Compact users required manual and developed one also for Wintime. Both in Compact and Wintime we try to teach the client do most of the things independently from us. We try to minimise our involvement with the

client. We encourage the customers to test our software with their own material in our Democenter and play with the trial firm that is provided by the demo CD, etc.'

7.4 LEARNING IN COMPACT SERVICE

This section will look at the issues of knowledge absorption and learning in customer contacts. The client's distant role in Compact software service may have implications for the opportunity of knowledge absorption. Compact team has tried to circumvent this by conducting market research in order to know their customer base better. A Compact team member describes these market research efforts: 'One of the members of the Compact team conducted a market research after one year of starting the Compact service. That market research focused on our customer base, how the Compact users regard Compact service; and what are our competing firms and products. This research was conducted by a survey. A questionnaire was sent to our existing customers. There were a lot of issues that surprised us. Part of our perception of customer values and expectations were incorrect. Some of the issues we could not have even imagined. Particularly, the issues related to customer support were surprising for us. For instance, the customer support was first established by the hot line that was not free for the customers. At the end of the day we had to give up the idea of getting paid directly from the customer support. We needed to charge the price of customer support when the Compact package was sold to the customer.'

Even if such efforts were seen as valuable by Compact team manager, he still regards feedback from customer support as the most important source of knowledge. Compact team leader identifies that the customer contacts in the telephone contacts are the most important source of knowledge: 'The most important channel for learning from our clients is the customer support telephone line. The high volume brings us a good picture about the customers' problems. Particularly, the needs for developing software system will be well absorbed by our skilful customer support personnel. The ideas of new features in new Compact versions come from clients. We do analyse the customer feedback to our customer support desk. There are always some favourite problems and questions that are asked by 100 customers. The problematic issues pop out from the data.' The

following discussion will focus on knowledge absorption from direct customer contacts and take a look at knowledge leverage by illustrating different options with two cases.

As proposed in chapter four, the client environment that is characterised by market exchange relationships is expected to offer opportunity for knowledge leverage. Knowledge may be leveraged (1) to the new customers by developing new software services based on the experience from Compact service or (2) to the old Compact users as in the case of developing new versions of Compacts. The first case will look at how knowledge from Compact service is utilised in the case of development of new financial management software service, Wintime. The second case will be analysed in more detail and focus on the role of customer support in knowledge absorption.

7.4.1 Learning in Compact service - Wintime development based on the experience from Compact service

As proposed earlier, knowledge may be leveraged (1) by developing new services on the basis of Compact service or knowledge may be leveraged (2) from customer contacts to Compact users by providing new versions. The development process of Wintime may be used as an example of *knowledge leverage in terms of developing new services*.

Wintime software system is an improved version of Compact for larger firms. The principles of developing and marketing Wintime are the same as those of Compact service. Wintime team leader describes Wintime: 'It is aimed for middle sized firms, but what has happened? We have made the first analysis based on the 14 clients that have made deal with us after the launch of Wintime few moths ago. The analysis shows that there are huge differences between the clients in terms of size of the client. The sale process with Wintime is 50 % shorter than the traditional sale process in this field. In Wintime service we provide "Wintime start" as a training programme for Wintime. It is a five day training programme for a client and a client may send five employees to participate this course. During the start programme we take make the client environment ready for starting to use Wintime. This is done at client's site. The customer support happens still by hot line as with Compact.'

There are many similar features in Wintime service that have been adapted from Compact service as table 23 shows. For instance, Wintime package includes training and after sales support as integral part of the deal. Winteam leader tells some examples where "Compact experience" has been utilised in Wintime development: 'We have learned a lot from Compact process that we have utilised and applied in developing Wintime start packet. "Democenter"51 was developed on the basis of Compact experience. We have place were we demonstrate our software and it is available for our customers. In marketing Wintime we use demo CD that is refined on the basis of Compact demo diskette. So we apply the same no leaflet principle, even if we had to produce A 4 introduction of Wintime for a certain project. In fact, our sales people demanded this, not the customers. Also the way of operating with our Swedish partner, XOR, is the same in Wintime development project. The core team that developed Compact at Unic also became the core team in Wintime development. The Swedish partner provides the technical expertise and we provide the financial management expertise for Wintime development. Also we tried to avoid the mistakes that we made in the introduction of Compact when introducing Wintime to market as new service. We used more time in designing the way Wintime was introduced. And we also spent more resources for internal marketing.'

Unic's business development manager identified main differences between Compact and Wintime service: 'Wintime as a service differs from Compact, because we intend to develop it into self-sufficient service that is provided by the normal business units. There is no intention for leaving it to be run just by one team. After the introduction, its sales and client contacts will be transferred to other business units, but without forgetting the business principles like 50% shorter selling process than with other software services and the clear implementation package that is

Winteam leader: 'In a "Demo centre" a client may test Wintime with his own material and thus find out that Wintime is a good product. We use the "Demo centre" for marketing and bonding and also for cutting costs by giving joint training sessions. Because the implementation of Wintime is not so easy as Compact, we have packed the starting process into one package. Wintime start packet is a five day training programme. Training packet is meant for 3 -5 people from the client firm. The training includes the introduction of how to use Wintime and financial management course. Wintime start packet is an elemental part of Wintime and it is always included when you buy Wintime. It is not even discussed whether or not one can buy Wintime without the training programme. The Wintime start packet is crucial, since we aim at the diminished customer interaction after the training.'

integral to Wintime service. Business units will be responsible for the sales of Wintime service and project management. Winteam will be responsible for Wintime development.'

Still the basic principle of providing the Wintime service is the same as with Compact service. It is based on product-oriented approach, in which customer involvement and interaction are minimised. Wintime team leader describes the nature of customer contact in Wintime service: 'There cannot be only one way of dealing with the client. The way we handle the service delivery depends on the nature of business, the customer's expectations etc. There is no need for hugging the client who does not expect, want or give value to it. Wintime software service was an application of these ideas into a little bit bigger clients. Now it seems that Wintime is working very well and that we have chosen a right approach based on the Compact experience. We have loosened up some of the principles, but still the basic approach is the same. First of all, the Wintime service is a package and we do not do any customisation. We have not been able to choose such a strict approach as we had in Compact service due to the changed nature of context. Wintime is for larger firms than Compact software. Wintime tries to be in the middle of both words, customised large software services and Compact services. Opposite to Compact service, the clients have names in Wintime service.'

Table 23 The development of Wintime on the basis of learning in Compact software service

Similar features applied to Wintime development Differences developed to be sold also training by other units customer support target group demos · clients have names start packet the way of operating with the Swedish partners short selling process product-oriented approach minimised customer involvement no customisation more effort on designing the introduction of Wintime

7.4.2 Learning in Compact service - The development of new versions

Learning is realised in improvement. In the case of Compact, the service package is being improved once a year. This implies constant learning in the Compact service delivery. The development of new Compact versions also illustrates the role of codification in market exchange client relationship. In order to utilise the absorbed from customer contacts it needs to be packed again into the software system. The idea of enabling customers in their activities by providing them knowledge embodied in software systems in codified form is interesting, because it points to the need for internally-oriented knowledge processes. Compact case illustrates how a BSF may "package" its services so that the customers are able to utilise this knowledge from distance. This "approach: we do the thinking and you do the rest" requires that a BSF develops introduction and start packages for the customers (providing codes of how to use Compact software), packages the absorbed knowledge into software system and redesigns the business processes of selling and maintaining the service systems.

It should however be noted that there may be some inherent constraints in developing Compact services. Compact team member (customer support) describes the constraints for developing new versions. The original idea and the nature of Compact service poses some constraint for the development of Compact services: 'Regardless of all the wishes and comments from the customers we should bare in our minds that Compact service should always remain "compact". Compact software may not grow bigger than one regular diskette. It should remain small, easy and beautiful. That is a problem in product development. The customers want always some new features, particularly in material management, where a lot of new good ideas come from our customers. But if we follow all the wishes from our customers, Compact would not have anymore the same characteristics that make it "compact" and thus available to all small firms. It is not only Compact software that would grow into 30 diskettes. Everything else around Compact would also change. It would not be anymore an easy process to start using Compact and the environment, sales and customer support would also have to be changed. We should

not forget the big picture and keep in mind what is Compact service developed for. Compact is a small and beautiful service.'

Looking at how new versions are developed will highlight where and how the Compact team gets the ideas or knowledge for improving Compact and point to the role of customer feedback as a source for learning and improvement. It is not only about knowledge from client feedback, but there may also be learning processes involved in developing the new versions⁵². However, the role of customer as a source of knowledge and opportunity for learning processes will be focused. Compact team leader points out: 'Having developed one new version of Compact, we can see that some technical changes has been induced by these customer problems. For instance, in accounting module, if you wanted to get the yearly result of the operations you needed to do it manually. Typically, all the sophisticated Compact users gave negative feedback about that feature in Compact. Now in the new Compact version this problem is corrected and you will get the result of the operations automatically. I shall give another example. When we developed the personnel salary management module for Compact, there appeared a certain problem every month at the same time when the salaries were paid. The customer support was fully loaded and we noticed immediately that this problem needs to be fixed in the new version so that our customer support may function again. The biggest pressure on our customer support was in the beginning when we introduced Compact. The new version facilitated the situation in our customer support clearly. All the biggest problems were being taken care of 3. There are no catastrophes any more.'

⁵² Compact team leader describes this: 'As a learning process, responding to hundreds of orders of new Compact versions is huge. What it means operationally? And how to create a new version? It is a surprisingly big process. Basically, whether or not there are 2 or 3 zeros less after each figure in the balance sheet does not diminish the complexity of accounting systems that we provide. The functions and activities are the same. That is why the large volume of selling software systems in our business requires a new approach. We cannot sell thousands of software programmes a year the way we used to do it. That is by having individual and tailored client contacts.'

⁵⁰ Compact team leader about the efficiency of operations: 'There have been very few open cases in relation to the number of Compact users. There are about 5 open cases all the time. The open case is a case in which the client's problem is so difficult that it may not be solved by a simple phone call. The problem is so difficult that the client sends us the analysis. The analysis is in Compact software system and the client can send it directly to us. In some cases we are able to solve the problem immediately or the client may copy its information base and send it to us.'

Two examples may be given that illustrates what type of knowledge is absorbed and in what way Compact software service is developed on the basis of customer feedback. These examples are (1) the development of separate accounting module and (2) the development of new salary administration module into Compact.

Compact team leader describes how the Compact software was developed in terms of creating a separate accounting module as an example of direct customer opportunity: 'There are clear customer impacts that have influenced the development of Compact system. For instance, the original Compact software included accounting module always. This was the starting point in Sweden. Accounting module is always the part of Compact. In Finland there emerged clear pressures from the customers for developing Compact so that accounting module would not be obligatory. Our distribution channels started to tell us that the typical small Compact user firm does not need accounting. They are interested in managing the money flows in and out of the firm. The small firms utilise accounting firms for taking care of accounting. When we trained our retailers, this problem was quite obvious. When our customer base grew bigger, the customers told us that accounting module is useless. Particularly, the new customers that returned the demo diskette told us that they would prefer Compact without accounting module. We even tried to sell Compact so that we reduced the price of accounting module. That was not sufficient. The customers wanted to have Compact without accounting module."

Compact team leader adds about the development of separate accounting module: The barriers for making accounting as separate module were high in many directions. XOR in Sweden was not that happy about developing a new separate module into Compact, because technically it was not an easy job. We needed to work hard for making our Swedish partner to understand how important it is to develop this separate module. At the end of the day our Swedish partner also introduced this new Compact with separate accounting module to Swedish markets. Our role in the process was to act as an impulse and "primus motor". We had to convince people at XOR that this change was needed. The lesson from this incident was the understanding that the feedback from the customer is for real and that it should be

taken seriously. We learned to take the customers' role as our best co-developer and source of ideas more seriously. '

Compact team member (customer support) gave another example about the customers' role as an opportunity for action and learning in Compact service: 'In the beginning our customers started to demand and ask salary administration software that is compatible with Compact software. We started to look at what are the possibilities to develop such module into Compact software. We identified two possibilities. First, to develop one by ourselves, but we decided to skip that option because of the lack of time and resources. The second option was to buy and utilise existing software programme. At the end of the day we found a suitable salary administration programme and made it look and feel like Compact. Salary administration was not my field of expertise and I had to learn a lot during that process. Immediately I attended some internal training courses in order to improve my understanding of salary administration. We have had Compact salary administration available for one year. Now we have developed a new version of that programme. The ideas and issues for improving salary administration programme came in the first place from customers. That is the natural part of service development. User friendliness and new features have been introduced on the one hand to make Compact easier to sell to new customers and on the other hand to respond to the feedback from existing customers. For instance, the display of Compact salary administration has been renewed, because a large number of customers have claimed that it is difficult to move and use the programme in the old display. The new display is much simpler and more beautiful.'

These examples illustrated proposition 3 d that indicated non-specific knowledge to be the main aim of knowledge absorption in market exchange relationships. In the case of Compact service it does not make any difference from which client contact knowledge comes from as long as it may be leveraged to the other Compact users in the new version. Also proposition 3 d was illustrated by pointing to the need of codification in market exchange relationships. Knowledge absorption from customer contacts is focused on non-specific knowledge that in the process of new version development will be codified by (1) identifying common problems or desired features, (2) finding an explicit and technical solution for the

problem and (3) packaging the solution into the Compact software for selling new versions. This process is mainly due to the nature of Compact service, product-orientation, which induces Compact team to focus on knowledge that may be leveraged in all customer relationships in terms of providing new versions. Next, the customer support will be analysed and perceived as a natural extension of Compact service and a consistent way of consulting in a customer environment that is characterised by low interaction and distant customer contacts.

7.4.3 Learning in customer support

What is the role of uncodified or tacit knowledge in customer support and how uncodified or tacit knowledge is being acquired? This question will be looked at by analysing different skills that are needed in customer support. The following examples will illustrate proposition 1 that suggested that the nature of service influences the focus and locus of knowledge processes. The following examples will illustrate how (1) customer contacts induce processes that develop tacit knowledge and thus improve the customer support and (2) how tacit knowledge improve one's skill in customer support and, thus, deepens and complements the explicit knowledge in service delivery. (3) Also providing consulting and advice service in such a demanding way may induce some new skills. Three critical skills in customer support may be identified: (1) ability to ask critical questions, (2) communication skills and (3) application skills. What are the factors that provide incentive for learning in customer contacts in the case of Compact service and what makes market exchange client environment demanding?

Customers as an opportunity for learning and source of knowledge

Any business relationship involves learning from the client. The transactive nature of customer contact in Compact service may diminish the opportunity for knowledge absorption, in which client is a direct source of knowledge. This case study has focused on the demanding nature of market exchange client relationships and the induced new skills in customer support. Instead of being a source of knowledge, client may also offer other opportunities for knowledge acquisition.

The transactive nature of client relationships may also induce new types of skills and search for knowledge about the customers. The Compact case will provide additional insight into the question of the learning implications of demanding customers and the issue of customer feedback. The basic assumption is that the more demanding the client environment, the more incentive and pressure for learning. What makes customer relationships demanding in the case of Compact service? Two general reasons may be identified: (1) the large number of diverse problems and (2) the relative incompetence of the customers. Both of these reasons are counterintuitive, because one would expect that complex and specific issues instead of high variety of relatively simple issues to be demanding and that it is customer's competence instead of incompetence that makes customer contacts demanding. Compact case shows, however that in transactive client relationships it is not competent customers being demanding and providing opportunities for innovations and learning. It is often the relative incompetence of the customers that pushes the BSF's employees to learn new skills.

Compact team leader describes the demanding nature of Compact users: 'We do have demanding clients. Even if we are operating in a market area of small clients, the clients' activities in this area are the same as with the larger clients. The product itself does not make it any easier for us. We need expertise in accounting and legal matters. The clients' have basically two types of problems: technical and financial management problems. Small firms have particularly problems with the issues of financial management. Large firms have professionals that take care of those problems. The demanding nature of the business is not due to one or two demanding clients, but the large volume of diverse problems.'

Compact team member (customer support) made another remark about the demanding nature of service: 'Sometimes there are problems so that the customer does not understand the nature of customer support and his or her role in customer support. Often the individual customer is not able to make distinction between different software programmes and different activities. Very often the customer may have used a different software system for accounting and wants to transfer that information to Compact. Compact software provides technical capability for that and we advise our customers how to do that, but we do not do the actual customisation. You really will get all kind of questions and often questions that are completely out of your domain that is primarily Compact software and financial management. You learn a certain attitude that you do not have to know everything.

But at the same time you also appreciate the diversity of issues that you face in customer support. You are forced to broaden your knowledge about many different issues. The customers are not demanding due to being very competent in those issues. On the contrary, the customers are demanding due to being incompetent and due to the broad range of issues dealt with in customer support.'

An interesting point related to customer feedback may be that the basic assumption of being close to the client offers immediate feedback about the client's problems may not be correct. Compact case material will provide an additional viewpoint into the nature of feedback from customers. The transactive nature of customer relationships may make the customer feedback more honest and demanding than feedback from co-productive and long-term client relationships. The anonymous nature of relationships makes it easier to give feedback. Also, the criticisms in co-productive relationships is partly self-criticism and, thus, naturally softer than criticism in transactive relationships. Compact team leader's comment support these conclusions: 'The real difference is the lack of personal contact with the client. On the one hand, the impersonal client relationship may make it easier for the client to give critical feedback and comments of Compact. On the other hand, it is also easy for us. We know that we may correct the mistake or make improvements in the next version. The starting point is that feedback is important for us. It is good that clients give comments and we take it seriously. I believe that the "tackle" nature of our customer contacts make the feedback from the client more honest and real than if we had a close relationship with our clients. Our customer do not know who we are and we have not done things together with our clients like wining, dining and going to sauna. The distance between the clients and us make it easier for the client to give feedback in an honest way. Sometimes it even feels bad too get such direct negative feedback, but it is good for us, because it is true and relevant and we may learn from it. In a long-term client relationships the feedback is often indirect, if any is even given because of the personal contacts. The feedback is hard, but good so that we may develop our service. It is also for us easier to be honest with our clients.' So it may be the case that the ease of giving feedback and the honesty of that feedback is the third factor that makes the market exchange relationships demanding.

Customer support by telephone as source of knowledge

The customer support desk is the main client contact point in getting feedback about Compact and customer problems. Compact team leader describes the role of customer support desk: 'Our customer support desk is prepared for helping in professional issues related, for instance, to accounting. It is not the traditional technical help desk. Still around 30 % of the questions are about technical problems. The customer support personnel learns a lot in these client contacts by having to find answers to the problems out of one's competence. Customer support desk is our main consulting arm. We do not have personnel to send to solve clients' problems. Customer support desk services are included to the Compact package and they are free. The client pays for the whole package once when he buys Compact system.'

Customer support by telephone is rather demanding way of consulting firms in their business management problems, but it is consistent with the idea of Compact service being cost efficient and focused on particular market segment. Compact team member (customer support) gives a general description of customer support and elaborates the peculiar nature of such service: 'There is very little face to face interaction with the customers. Most of the customer support is conducted by telephone contacts. It is kind of long-distance consulting. We do not provide any customisation in Compact service. We focus on problem solving in our customer support. It is about applying different Compact modules and features in solving client's problems. When we think about learning in customer contacts it is seldom that I actually get information or knowledge directly from the customer. The customer acts mainly as an opportunity for us to search knowledge that may be used for solving client's problems. The customers hardly ever come with solutions. Most of the problems that the customers have are technical and they are often related to the environment of Compact programme, like for instance, how to set up the printer. Even unnecessarily, we have had to learn a lot about these indirectly related issues. It is easier for us to learn these issues than have our customers pushed around with their problems. It also improves the service we provide for our customers so that they may come to us with problems other than directly related to Compact software or financial management. Everything in Compact service is small and beautiful and in similar manner also customer support needs to be simple and available from one

desk.' This statement suggests that the major role that customers have in learning processes is offering an opportunity for learning. In that sense customers' role is rather indirect and anonymous. Non-specific knowledge that may be used over and over again when codified and packed into software package or in supporting customers in general is knowledge that is worth the absorption.

Also the way customer feedback is being analysed support the view that non-specific and thus average knowledge in terms of number of customers having same problems is focused. Compact leader about the way customer feedback is being analysed: 'There is a constant analysis of customer feedback. Little by little these customer contacts will produce the list of ideas for the next version. There is not any sophisticated analysis techniques utilised in analysing the customer feedback. We write the customer problems down and make a list of those problems. We focus on the most often emerged problems. We have documented 100 the most asked questions from our customers. We weight the volume of questions in deciding which problems are important and relevant. Our people in customer support service have developed skills in acknowledging what are the important issues. We focus on mass markets and mass problems. By focusing on mass problems we hope to increase the number of our customers. We want to stay away from individual and unique problems that are relevant for customised services. We have a mass product-orientation and we focus on the most common problems of our customers. '

However, there may also be some incidents that customers have actually been a direct source of knowledge. Even if this knowledge may be client-specific, the application skills of the customer support person and the faceless nature of client contacts offers opportunity for leveraging this knowledge. Compact team member (customer support) gave an example about knowledge absorption from customers: 'Sometimes the new ways of applying Compact that a client suggests are very clever and I think: 'Wow! I have not even thought about that. This will be useful for me and I am able to advise my customers about that issue next time.' You are most delighted to notice that some clients are able to apply by themselves⁵⁴. They are not so dramatic

⁵⁴ Compact team member gave an example about knowledge absorption from client: 'For instance, one of our customers asked us is it possible to use Compact software in wholesale business and develop sales statistics related to secondary client. We said that it is not possible. The client asked is it possible to apply Compact in reverse way so that secondary client becomes primary client and sales statistics may be developed. First 1

events, but eventually they are very important in applying Compact software and supporting the customers. These cases and this type of learning makes the life in sales easier and facilitates customer support as well. Even if they may seem like minor issues, they are very important when applying Compact software programme. You may develop solutions also by yourself, but a huge amount of solutions is coming from customers in terms of questions and opportunities.'

The following examples illustrate the skill development in Compact service that is characterised by the lack of direct contact with the customer. The absorbed knowledge and the skill development that client contacts have induced are often tacit in nature. This implies that in the case of market exchange relationships customers' role in learning processes is not to be a source of tacit knowledge, but as an opportunity for a customer support person to look for and to develop solutions for the customer's problems. In that sense, it is not that much co-production with the client that offer opportunity for learning as in more interactive or longer-term client relationships, but customers provide an opportunity for deepening one's skills in providing Compact service.

Ability to ask critical questions

Particularly, the ability to ask critical questions turned out to be a central skill needed in customer support. Compact team member (customer support) tells about the problems of providing service without direct customer contact: 'Obviously it is much more difficult to give advise for the customer if there is not direct face to face contact with the customer. You have to learn to ask right questions. When the customer support task starts the customer identifies his or her problem based on his or her perception. In order to understand what is the real problem and in order to get started with customer support the customer support person needs to be able to ask critical questions for guiding the customer towards right actions. Otherwise it is impossible to help the customer. Without the understanding of critical questions and steps that needs to be taken in solving client's problems it is very difficult to guide the client. Questioning technique is a central skill in customer support by telephone,

thought that it would not be possible, but after I took a closer look at the issue I found out that indeed by reversing the clients, Compact software is able to develop sales statistics about the secondary clients. This is a good example of learning from customers that I may use next time when someone asks about similar issue. There are a lot of cases like this and you remember them when a client ask you about similar issues. Then you are able to tell the client about the similar cases and apply it to the client's needs.'

because the customer is not able to tell what is the real problem. The client does not really know why Compact software does not work or what is the real issue. Some of the issues are simple that may be identified by answering one question. More complex issues require a number of questions that guide us to the real problem. I need to know the critical points when trying to identify the client's problem. I have learned to "smell" the critical points and potential problems from the small hints that the client gives me.' This example shows that tacit knowledge is often described by using metaphors for knowing something tacitly like "smelling". This points to the idea that it is difficult to articulate exactly how and what is being known. The "hunches" are personal and context-specific and the ability to "smell" develops along increased experience.

However, there may be factors that facilitate the process of developing tacit knowledge. What are the prerequisites for being able to learn from customer contacts and how to develop the skill of answering critical questions? Prior knowledge seems to facilitate the absorption of tacit knowledge. Compact team member highlights the issue: 'Being able to ask right and critical questions requires deep understanding of Compact software product and the potential problem situations. When you face the same problem a number of times you develop a skill to identify the problem and to reach the solutions with decreasing number of questions. The first time you face the problem it may be the case that 10 questions are required in identifying and solving the client's problem. After a number of cases you are able to do the same with 2 or 3 questions. We also try to document these most common problems and their solutions, but too many problem cases have not been documented. We constantly write down the common problems and occasionally combine them in 100 most common questions and answers related to Compact. The issues I write down the most are the problems and solutions that have required more work, getting help from other people in our organisation and have not been obvious straight from the beginning. There are also some problems that can not be solved in telephone. In those cases the client sends his or her data to us and we check the problem here. It may be a technical problem in database, but it may turn out to be a small problem that may have been solved by right questions. Not anybody can give customer support by telephone, even if one knows the application

well. The critical skill is the ability to ask questions and guide the customer towards solutions.'

Communication skills

Compact team member (customer support) mentioned also that the communication skills are required in customer support process: 'It may be the case that I have not been able to ask right questions, because the customer was talking about something completely different than the actual problem or the client has not been able to give right answers. This means that it is also very important to be able to manage the communication process with the client. Understanding the concepts that the customers use, even if often not correct, is an important part of communication with the client. Based on the experience with customer support I have been able to broaden the understanding of what customers mean by different terms and concepts. There is an incredible amount of terms for the same issue. Different customers perceive terms differently and I have to understand what they mean by the terms that they use. Nowadays, after customer support experience the terms that used to have meaning for me have a number of different meanings depending who is using that term. You have to be able to listen and "smell" through the way that term is used, what the customer means by that term. Customers typically use wrong terms or even terms that they have invented by themselves, but still I have to be able to understand what is meant by the customer in terms of Compact software. The reason for this is that Compact users are typically small firms and they lack often expertise either in financial management or computer skills."

Application skills

The ability to apply Compact software in different customer contexts turned out to be a critical skill in customer support. This point illustrates that Compact service needs to be applied within the range of Compact software in different contexts. Compact team member (customer support) tells about *application skills* needed in customer support: 'Compact is a service package that is applicable to different types of clients different needs. Depending on the client context, Compact software may be used in many ways. I need to understand the differences in client context in order to be able to apply Compact software in client's problems. Accounting is dull and highly regulated area, in which all the firms needs to follow the same procedure. The rest of the modules in Compact, however, may be applied in different industries. For

instance, service firms do different things than manufacturing firms. Service firms do not have inventory and they may focus on working hours etc. Also different products (e.g., caterpillars vs. buttons) have big influence on the way business is controlled and Compact applications look also very different. This implies that even if there are certain terms for certain activities in Compact software, they may be applied differently in different contexts. It is very important to be able to apply Compact software in different customer contacts and kind of invent to use Compact software programme "wrong" in order to get the right outcome that the client needs.' This statement indicates that customer support needs to learn about context-specific issues, but Compact service is never customised to specific client needs in way that for instance new features would be added into Compact, just for one particular client. This implies that knowledge from customer support is mainly non-specific.

The application skills do not only facilitate the customer support, but they also contribute to other activities related to Compact service. Compact team member about the influence of application skills in Compact development: 'The application skills that I have gained in customer support have also been important in supporting sales and developing Compact software⁵⁵. It is important to be able to apply

Compact team member (customer support) gives an example of how the absorbed knowledge in application skills contributed to Compact development processes: 'An important issue that I have learned in Compact service is that when you have an idea about new or additional feature that might be useful in Compact software, you have to have solution for how to add that feature into Compact software before suggesting that to Compact team. I am proud that I have been able to influence the development of Compact software, for instance, in the case of contract invoice. A large number of customers have asked that could it be possible to take care of invoice at the same time when a contract is made. The production people had already decided that it should be a complete new module and there is no need for such developments. The problem with our production people is that they are used to large software systems and it is difficult for them to adapt into smaller software programmes. For the production people only the term contract invoice indicated a need for huge different programme. I did not agree with them and kept on developing the solution for the problem. I was sure that there must be a simple solution for the problem. First I discussed with Compact team about the problem, but they also regarded that there is not any simple enough solution for that problem. The whole idea was neglected and ignored pretty quickly. I was so disappointed, but I did not give up, even if that idea may sound like a big additional feature or module. I suggested to the Compact development people that we could solve the problem by simply making a small trick into another module. The production people would not have accepted that proposal if the idea was not so simple and easy to implement. At the end of the day that solution was regarded it as a marvellous idea and it was added to Compact software. This idea utilised the existing modules, but simply added an simple feature into one of the modules. This new feature was added into the new Compact version. Now the Compact user may take care of invoice just by marking with a cross."

Compact software in different contexts and to understand the way our organisation operates when developing Compact⁵⁶.'

7.4.4 Compact service and tacit knowledge

The previous examples have shown that relevant and useful knowledge is often tacit in nature. Tacit knowledge typically evolves due to the opportunities that the customers offer. How to utilise that knowledge in an organisation and leverage it? There are basically two ways of transferring it: (1) by codifying tacit knowledge and facilitating its transfer and (2) by sharing tacit knowledge in action (learning by doing). The following examples will show that two types of uncodified or tacit knowledge may be identified: (1) knowledge that is difficult to articulate and (2) knowledge that is so circumstantial that the codification efforts are too vast in comparison to the benefits from codification. Both of these types of knowledge are valuable in customer contacts.

Compact team member about codification of uncodified or tacit knowledge: 'Nobody in Compact team has really analysed the customer base in terms of different contextual needs. We have not documented the contextual differences and needs, even if may have been useful in terms of potential transfer of people. It may be the case that "the wheel needs to be invented again" when the new people arrive into the team. On the other hand it is impossible to develop complete documentation of the Compact applications and it requires a lot of time and effort.'

The Compact team leader has a particular way of describing tacit aspects of providing Compact service: 'I always say we need "texas" here. Some people ask me seriously: 'What Texas got to do with Compact?' Nothing, of course, "texas" is the metaphor for tacit part of doing things with good feeling. You either get it or not, but

Compact team member highlights the issue of how to overcome the cultural differences between Compact team and rest of the organisation and how to get ideas accepted: 'Before I suggest the idea about Compact development to other parts of the organisation, I have to invent and test the idea that allowed to create the new feature just by doing some coding. The deep understanding of Compact software and the actual development of solutions before making any suggestions improves the chances for getting new ideas accepted. Suggestions without practical solutions will meet neglect and dead end. With good preparation the proposals will be successful. In many cases I have focused on the existing features of Compact software and I aimed at utilising the basic principles of the programme. If many of the operations are based on the marking with a cross, why not this one too? In Compact software it needs to a simple solution along with the basic principles of Compact service. To find simple solutions for Compact problems is crucial. If the solution becomes too complicated, it will not serve anymore the customers or us and it is not the right solution. Learning how to simplify is crucial for providing good service to our customers. This is relevant both for the customer support and Compact development.'

you cannot explain it. For instance, it was quite an exercise to develop a description of business processes in Compact. We were thinking that what if the Compact team explodes and disappears. Nobody knows what we are doing here. For an outsider it just looks that those guys are having fun and the shoeboxes come and go. So we developed the description of Compact business processes in order to make sure that if none of us were present the goods may still be delivered. And the funny thing is that there is no "texas" in that business process description.'

The last statements imply that *codification* and articulation is usually *imperfect*. Something is lost when tacit knowledge is transformed into codified knowledge. This is because codification creates structure and differentiation between issues and phenomena. This may require that sometimes artificial boundaries between issues are created and uneasy or difficult issues that do not fit into the developed categories are neglected. Simplification, even if often a sign of more developed and refined state of affairs, is the natural outcome of codification process in which part of the original knowledge is lost.

7.5 SUMMARY AND CONCLUDING REMARKS

7.5.1 Summary of knowledge absorption at Tieto Group case D

Table 24 summarises the discussion about knowledge absorption in customer relationships in the client relationship case D. Knowledge absorption focused on non-specific knowledge that may be leveraged and utilised widely. The case of new versions provided illustration how the absorbed non-specific knowledge may be leveraged by packaging the knowledge into Compact software (codification) and selling new versions to Compact users. The main idea behind Compact service is that it should be and remain small and affordable to the large number of small firms and associations. This aim requires that cost efficiency dominates and changes the traditional client relationship into distant and faceless customer contacts. Compact team acquires knowledge about its customer base by conducting market research and by analysing customer feedback in customer support desk. The focus is on getting the general picture about the average customer and identifying most common problems and questions that customers have.

As any human activity produces tacit knowledge, so does Compact service. In the case of Compact service tacit aspects of knowledge may be identified in skill development required in customer support. Indeed, it is tacit knowledge that deepens and improves the skills and makes the customer support efficient by improving customer support person's ability to guide the customer into identifying and solving the problems. It should be noted that in most of the cases it is the customers that offer opportunities for developing these skills.

Table 24 Knowledge absorption and learning in case D

1	Non-specific explicit knowledge	Non-specific tacit knowledge
Case D	market research knowledge embodied in new versions of Compact software 100 most asked questions	 critical skills in customer support (ability to ask critical questions, communication skills and application skills) organisational routines and culture (the case of adding new feature into Compact software) team-working skills ("texas" in Compact team and how to "tackle" the customer efficiently)

7.5.2 Conclusions

The role of new approaches in business development

Even if the main goal of the Tieto Group case was to look at the learning implications of market exchange client relationships, Compact case proves to be more than that. Compact case shows how the outlier activities in terms of dominant corporate culture may offer interesting "windows" for learning. Doing new things offers an opportunity for learning. This case showed how new or different activities, like configuring the customer contacts in a new way may be a source of learning. New approaches were also identified to be crucial for sustaining the competitive advantage of a firm. As Unic's business development manager points out: 'Learning processes within the organisation have been at least as big a challenge for the business development as marketing the products. Most of our competitors are focused on developing products and adding new features in products. We think that

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it is not the clue. We focus on different and new ways of doing business⁵⁷ and adding value to the client. It is partly better service, but also the efficiency of activities, so that we are ahead of our competitors.'

How to make new ideas successful? First of all, tolerance and support for new ideas from top management is needed even if the implementation may require unconventional ways of working. New ideas and projects need tolerance and support from top management in order to develop into successful business. In this case Compact team has had the freedom to develop Compact service in an independent way as one of the team members witnesses: 'We have had a great freedom and independence in developing and providing Compact service at Unic. The connections at Unic have worked well and we have had support and help from other people at Unic. Unic has, for instance, taken care of administrative routines related to the sales of Compact so that we did not have to tease ourselves with administrative bureaucracy. We focused on developing and providing Compact service.'

Compact team leader identifies some internal problems related to productoriented approach to service delivery: 'The biggest problem when working within
this organisation is that our approach is not the dominant approach in our
organisation. It is difficult for the other people to see what we are doing. After the
merger with Tieto Group there has been pressures for spreading the Compact sells
all over the organisation. The other units that sell software services at Tieto Group
want to sell Compact. The problem is that Tieto Group's units may not be
appropriate channels for Compact, because they are used to deal with clients in a
different manner. Then again I have to ask myself: 'Am I now the one that wants to
block the progress?' Compact team manager adds about the problems of selling such
service in a firm of which corporate culture and routines support a different way of
selling services: 'The risk is that when other units at Tieto Group sell Compact, it will

Business development manager gave an example: 'E.g., currently our support desk (for the Unic's software applications) is focused on technical support, but more and more the support activities will be aiming at providing support for how to apply and utilise these software programmes for solving client's real problems like, for instance, how the change in EU legislation will affect the client's activities. In the future the people in our support desk will be the most important people of our organisation and they need the strongest professional expertise in our organisation. They will be accountants, lawyers, tax specialists and other professionals, not that much IT technology specialists.'

be sold with the traditional methods and the main point in the Compact selling process will be forgotten. It may take only 15 minutes to sell a Compact system. Otherwise it is not profitable anymore. We aim at increasing the independent role of the client. The client should do as much by himself as possible during the whole process.' This means that the nature of service needs to be understood and lot of internal marketing is required for making the service implementation also outside the original team that developed Compact service.

Compact team leader emphasises the importance of internal marketing in solving these problems: 'We noticed from Compact that we need to pay more attention to internal marketing. Internal marketing is at least as important as marketing to customers. We introduce the central concepts and models first for our people before going out. In Compact case it happened that Compact was unknown at Unic and our people had difficulties in understanding why we sell Compact services the way we sell them. And it is not enough to tell this message once. We need to tell this message to our people many time so that they understand what we are doing and know the principles of our activities. Even if we have already introduced Wintime to market, we still go on with internal marketing. And still some of the issues that have been told to people months ago are still unclear for them. Changing people's attitude and common beliefs that they are used to is a longterm process and it requires constant and almost as hard effort as external marketing. One of the differences between Compact and Wintime is that there is an intention to get our business units to sell Wintime. The challenge is that business units sell also other Unic's services.' The last statement implied that internal marketing has a crucial role in establishing new practises and making sure that the other units are able to sell Compact in consistent way. When Compact service will be leveraged by the other parts of organisation⁵⁸, lessons from Compact may facilitate the process and improve the outcome. The problem with new services that differ from the common approach in an organisation is that their application usually requires unlearning processes. The implementation team thus needs to communicate

Unic's business development manager: 'There is a clear pressure for first creating the critical mass of customers like Compact users and forcing them afterwards into more co-operative and longer term client relationships, in which more services are provided and contracts secure the income stream from large amount of clients.'

to the other parts of organisation for the need to *unlearn some common business* approaches and old routines in making such service delivery successful.

There may also be some more general lessons from market exchange client environment that have not even been identified yet. Business development manager points out the potential lessons from market exchange client environment: 'I do believe that short-term and arm's length customer relationships do provide views into something unknown and potential that nobody has analysed seriously in our business. How long can we enter this territory? We even had this extreme idea that we start to distribute Compact software for free and try to establish an industry norm. By providing new versions we may be able to provide Compact services to a substantially larger customer base. There may really be a large number of new things that has not been looked at yet. Also the clients are used to certain patterns and ways of providing services and there may be some mystical about financial management services so that new ways of providing services are unexplored.'

Summary and case comparisons

This chapter aimed at describing the context of Compact service and analysing learning implications of providing service in such customer environment. The Tieto Group case provided access to analysing the peculiar client relationships (for the BSFs), market exchange client relationships, from the point of view of learning. Compact case focused on the learning opportunities in customer support. This case showed that (1) the client as an opportunity for knowledge acquisition or as a source of knowledge pushes Compact team to learn, (2) a major part of knowledge from customer support were non-specific and had tacit elements and (3) learning in customer support facilitated Compact sales and development of other new services like Wintime. Knowledge absorption in Compact case was focused on non-specific knowledge and contributed to knowledge leverage as proposed in the theoretical framework in chapter. It seems to be the case that market exchange client relationship environment requires more focus on codification than other client relationships due to the lack of customer contacts as proposition 3 d suggested.

As a complementary case to KPMG cases, Compact case plays an important role in providing insights into the unconventional client relationships in service business. Product-oriented approach in Compact service focuses on minimising customer involvement in service delivery. The activities at Compact team are internally oriented and the customer has a transactive role, in which the buyer and sellers are competitors in economic terms (customers are "tackled") and not value creators in co-productive sense. This has implications for how to provide service offerings from the knowledge management point of view and transfer knowledge between customers and a BSF. Knowledge needs to be packed into a software system for making the service delivery possible without customer interaction. The role of codification increases due to the problems of knowledge transfer in diminished customer contacts. Next, the issues of specificity and tacitness of knowledge will be elaborated further by making comparisons between Tieto Group case D and other comparable KPMG cases A and B.

Specificity of knowledge: Comparisons of client relationship cases A and D

Client relationship cases A and D were both characterised by transactive nature of client relationships. In case A, client had an arm's length approach its relationship with KPMG and due to the cultural differences relationship was complicated. Case D, on the other hand, presented a client relationships environment, in which Compact team at Tieto Group intentionally aimed at keeping its customers at distant and managing a large number of customer contacts and sales. The examples presented in chapters six and seven showed that there are clear differences in terms of specificity of absorbed knowledge in these client relationships. This is shown in table 25.

In case D, the Compact team at Tieto Group did not have any intention or incentive to absorb client-specific knowledge in the first place from client contacts due to the need for leveraging non-specific knowledge to mass markets. Compact team aimed at absorbing non-specific knowledge from customer contacts in customer support that may be used in terms of leveraging that knowledge to the Compact users that buy the improved version of Compact or use the customers support services in the case D. Case A, on the other hand, showed that regardless of client's preference for distant and transactive relationship with its auditor in Europe, auditors at KPMG were motivated and able to absorb client-specific knowledge due to the long-term nature of client relationship.

Table 25 Comparison of cases A and D in terms of specificity of knowledge

Case	Non-specific knowledge	Client-specific knowledge
Case A	Explicit:	Explicit: • auditing files Tacit: • how to overcome client's arm's length attitude? • client's approach to projects • types of proposals client prefers • Japanese culture
Case D	Explicit: market research knowledge embodied in new versions of Compact software 100 most asked questions Tacit: critical skills in customer support organisational routines and culture team-working skills	

Tacitness of knowledge: Comparisons of client relationship cases B and D

Any activity provides opportunity for acquiring or developing tacit knowledge. Even in case D that was characterised by distant and short-term customer contacts, tacit knowledge was absorbed from those customer contacts as shown in table 26. The comparison of cases B and D reveals that there are some differences in the absorption of tacit knowledge. In case D knowledge absorption was more focused on inside the Compact team. The absorption of tacit knowledge occurred in customer support that provided opportunity for developed tacit skills about providing advice by telephone. Some of tacit knowledge was related to person's ability to manage communication process that facilitated guiding the customer towards solutions and some of tacit knowledge was related to knowledge about different client contexts that is an important component in application skills.

In case B tacit knowledge was absorbed in client interface. The case of benchmarking illustrates the point. A KPMG project manager describes knowledge processes in the case of benchmarking: 'You need both tacit and codified knowledge and they are linked. Benchmarking may be a nice example. It is very easy to benchmark the organisation by using codified knowledge. But then the question is why is competitor or another organisation better in some processes. Then tacit knowledge is very important to be able to interpret the difference that has been identified by the bench marking. The codified information does not tell you the whole story. You also need tacit knowledge to be able to interpret it correctly and to understand why those differences exist.'

Table 26 Comparison of cases B and D in terms of tacitness of knowledge

Case	Explicit knowledge	Tacit knowledge
Case B	 knowledge about client's business benchmarking data 	 new insights and new ideas for other projects skills in organising workshops attention to the soft side of skills power structure in the client company how to manage particular client how to handle the general manager
Case D	 market research knowledge embodied in new versions of Compact software 100 most asked questions 	 critical skills in customer support organisational routines and culture team-working skills

It is typically difficult or too time-consuming to codify uncodified or tacit knowledge. As Compact team member (customer support) describes the problems of codification: 'Most of the issues that come across in customer contacts are not documented. In fact it might be difficult to write it down in that sense that it would make any sense to others or that it might be useful to others. Even if you describe in very detailed manner a specific case, it may be the case that some one else may not find it useful or may not be able to apply that case in other context. For sure there would be problems in documenting that knowledge. I also believe that it would truly be difficult to apply that knowledge to other context, even if documented, if that knowledge is just based on written text.'

The statement above indicates that the most efficient way to acquire uncodified or tacit knowledge may be learning by doing. In this case it means being exposed to customer problems and solving those problems by applying prior knowledge about Compact software and financial management in different contexts. This implies that codification and articulation is usually imperfect as Boisot (1995)

pointed out. When uncodified or tacit knowledge is transformed into codified knowledge by creating structure and differentiation between issues and phenomena, part of original knowledge may be lost.



COMPETING ON KNOWLEDGE FROM CUSTOMERS: SUMMARY, CONCLUSIONS AND MANAGERIAL IMPLICATIONS

8.1 SUMMARY

Strategic management theories examine the nature of competition and identify the sources of competitive advantage. Based on the identified sources of competitive advantage, strategies or strategic approaches for business success have been proposed. The competitive positioning theory suggests that by analysing the business environment carefully a firm is able to conduct a generic strategy for positioning a firm favourably in an industry. The operational efficiency and the adaptation to the changes in firm's business environment are crucial factors in this approach. The resource-based theory of the firm, on the other hand, suggests that firms should compete in dynamic way by acquiring, developing and deploying firm-specific resources and competencies. The most successful firms that compete in this way may be able to change "the rules of the game" in an industry by introducing innovations of all sort and thus gain competitive advantage by offering the best and the most suitable products and services to the customers. Firm's innovativeness and ability to customise its products and services to the markets are crucial factors in such competition. These complementary approaches in strategic management suggest that successful firms should either focus on consistent positioning in the market and operational efficiency in production and product differentiation or focus on creating innovations and having the best or the most suitable product or service offering in the market. Both of these approaches are viable strategies for creating superior value to the customers that demand the lowest cost products and services or that view the uniqueness of a product or a service as the main value component in their value creation processes.

This research analysed what is the role of knowledge in managing client relationships. The business service context was focused due to the peculiar nature of customer contacts that may provide interesting insights into the research problem. Literature in strategic management on knowledge has, in general, focused on firm's internal knowledge processes that provide new products, make the operations more efficient and improves the decision making. Also innovation studies have analysed the creation of new knowledge in innovation processes. Interestingly, it was innovation studies (von Hippel, 1976) that showed in the first place that it is strikingly often users and customers that actually create new knowledge and innovations to be commercialised by the firms. Whether the findings from innovation studies also hold in more general terms turned out to be an interesting research track. It should be noted that the term "new" knowledge has not been used in the same manner in this research as in innovation studies that refer to innovations that are really new to the society. In this research, knowledge has been identified as new if it is new to the BSF. This means that the developed or absorbed knowledge does not even have to be new for the higher lever managers of the firm, as long as it is new for the individuals that utilise the absorbed knowledge. Thus, in most cases the knowledge absorption from clients is characterised by learning upon clients, in which the outcome of learning is closer to the outcome of training and the absorbed knowledge is mainly new at the individual level.

The nature of knowledge has been acknowledged in strategy literature to be an important factor when analysing knowledge transfer (Boisot et al., 1997) and knowledge creation (Nonaka, 1994). Tacit or uncodified knowledge has been argued to have an important role in understanding how knowledge may be utilised and transferred to the target group and the value aspects of knowledge in general. Tacit knowledge has also been emphasised to be an important factor and an outcome of firm's internal knowledge creation processes (Nonaka, 1994). Contrary to the view that tacit knowledge as such may be valuable knowledge for the firm, it has also been argued that firm's should focus on producing explicit knowledge by means of articulation or codification (see, e.g. Sanchez, 1997). This study shows that there is a

point in that argument, at least partly. Knowledge needs to be codified for facilitating its transfer and utilisation in distant and mass-market customer relationships. Still, it should be noted that tacit or uncodified knowledge has an important role in codification and articulation processes as explicit knowledge is produced. In more interactive client relationships tacit knowledge may even be utilised as such. Particularly, tacit knowledge plays an important role in client partnerships as the client's processes and the BSF's processes are aligned.

This research showed that the customer contacts may be utilised from the point of view of resource-based strategy. The firm's ability to absorb and utilise knowledge from customers in service delivery is an essential feature in this type of competition. The customer contacts are a critical source of knowledge for a BSF and the management of customer interfaces should be viewed from the point of view of knowledge absorption and utilisation. This requires that the firm knows the customer well and is able to provide solutions that are the most fitting to the customers. The customer's value creation processes need to be understood and supported by appropriate services. The utilisation and the application of knowledge in the client contacts will be essential in providing competent and customised solutions for customers' problems and fulfilling the customer's needs (preferably even latent needs should be identified and supported).

This research emphasised that it is essential in managing customer relationships to recognise the important role of tacit knowledge in knowledge absorption and utilisation. Tacit knowledge was regarded as important and relevant knowledge that needs to be absorbed from client contacts. This research showed that tacit knowledge was absorbed in client contacts that (1) provided opportunity for making observations of client's activities and preferences over time (case A); and (2) were based on close interaction with the client like co-operation in service production (case B) and the alignment of client's and BSF's processes (case C). The partnership case provided a most striking example of how tacit knowledge may be absorbed and utilised in client relationships. The client informed KPMG's partner in open discussions about their plans to change their management structure and processes. This type of uncodified knowledge turned out to be most relevant and important in developing the client relationship into the deeper client partnership. By

utilising knowledge about client's intent, KPMG was able to align client's processes and KPMG's processes to support the client's activities and produce value to the client in a way that no ordinary auditing service can match. Even the investigated distant and arm's length customer contacts provided opportunity for the absorption of uncodified or tacit knowledge, for instance through telephone contacts (case D). Compact case showed that particularly tacit knowledge in terms of communication and application skills were typically gained and improved by being in contact with the customers in the customer support. Tacit knowledge from customer support facilitated product development and was often associated with personal and context-specific "hunches" that developed along increased experience in customer support.

The research aimed at analysing client relationships as a source of knowledge that builds the knowledge base of a BSF. However, at the end of the day, the research revealed that client relationships prove to be more than a source of knowledge. The client relationships are the context of knowledge transfer and transformation that determines the opportunity and the incentive for knowledge absorption due to the way knowledge may be further utilised in client relationships. Basically, the more interactive the client relationship, the more knowledge transfer and transformation may take place in the client interface allowing the utilisation of tacit knowledge. Also the longer-term client relationships provide better opportunity for the absorption and the utilisation of tacit knowledge due to the opportunity for making observations about clients' preferences and the way of acting. However, certain types of client contacts suggest a critical role for articulation and codification. In order to provide services in non-interactive mass-market customer relationships efficient codification of knowledge is required.

8.2 Conclusions on the propositions about knowledge absorption in client relationships

The overall research question in this study was what are the determinants of knowledge absorption from customers? The overall research question and the main propositions are presented in table 27. The analysis of knowledge absorption in client relationships was built upon the theories of strategic management, service management and customer relationship marketing. Chapter two took a look at the determinants of

competitive advantage of a firm and proposed that the type of competition that a firm is facing in its business environment (dynamic vs. static), determines whether it is better for the firm to compete by having an internal or external focus. Firms facing dynamic competition should focus on creating new knowledge and innovations in order to be able to dominate markets by the best product offerings. Firms, of which business environment is characterised by static competition, may benefit from fast adaptation to external changes and operational efficiency that sustain the competitive advantage of a firm.

Table 27 Research question and propositions

Research Question: What are the determinants of knowledge absorption from customer relationships?

Proposition 1. The nature of service has an impact on the opportunity for knowledge absorption in client relationships. The standardised services offer less opportunity for the absorption of tacit knowledge, because there are typically fewer interactions with the client in service delivery. Codification of knowledge is needed for facilitating and making the extension efficient. The more complex services offer better opportunity for the absorption and utilisation of tacit due to the increased need for interaction in service delivery.

Proposition 2. The context of knowledge transfer and transformation determines the opportunity for knowledge absorption and the need for codification in different types of client relationships.

Proposition 3. The opportunity and the incentive for knowledge absorption in client relationships differ due to the differences in the interaction-intensity and the duration of client relationships.

Apart from these general strategic approaches to competition it was argued that for some firms it might be essential to compete by focusing on managing client relationships. Firms that either provide services or of which a large part of product offering consists of services should focus on utilising the peculiar nature of customer relationships in services that allows firms to build long-lasting customer relationships. A typical service delivery (simultaneous service production and service consumption) requires close interaction between service provider and the customer, in which the exchange of knowledge and experiences build and strengthen the client relationships. In customer relationship management, it is essential for the firms to learn to understand the customer's value creation processes

in order to be able to provide superior services to the existing clients and strengthening the client relationships further. This research focused on the role of knowledge absorption and utilisation at customer interface and analysed how the customer relationships differ in terms of knowledge absorption opportunity. It was proposed that knowledge absorption in client relationships develops the knowledge base of the business service firm and provides opportunity for (1) utilising the absorbed knowledge in the long-term client relationships (knowledge utilisation within the same client relationship) and (2) utilising the absorbed knowledge in new client relationships (knowledge leverage).

Chapters three and four analysed the overall research question in more detail by looking at (1) what type of knowledge is absorbed in customer relationships? (chapter three) and (2) how customer context influences knowledge absorption? (chapter four). Chapter three focused on analysing the nature of knowledge and knowledge transfer in client contacts. By extending Boisot's (1995) C-space, this study produced a framework of knowledge conversion and transfer in client relationships. By using this framework at the level of single client relationship, two main processes were argued to take place. (1) Knowledge is *transferred* (a) to the client or (b) within the BSF and (2) knowledge is *transformed* (a) by codification from tacit or uncodified knowledge to codified knowledge and (b) by absorption from customer contacts from codified knowledge to tacit or uncodified knowledge. This idea was later utilised in chapter four that took a closer look at the context of client relationships and developed propositions about the implications of client relationships for knowledge absorption.

Chapter four produced the typology of client relationships for analysing knowledge absorption opportunity in different types of client relationships. This typology of client relationships was used for structuring the analysis of customer context. Two critical dimensions were utilised in analysing the implications of customer context on knowledge absorption: the duration and the interaction-intensity of client relationships. These two dimensions provide a rationale for analysing knowledge conversion and transfer in different types of client relationships. Four different types of client relationships were proposed to offer different opportunities in knowledge absorption: loyal, co-makership, client

partnership and market exchange relationship. A proposition about the knowledge absorption opportunity in each client relationship was derived. The corollaries to proposition 3 that specify in more detail the implications of the type of client relationship for knowledge absorption are presented in table 28.

Table 28 Research questions and corollaries to proposition 3

Research Questions: (1) What type of knowledge is absorbed in customer relationships? and (2) How customer context influences knowledge absorption?

Proposition 3 a. The loyal client relationship offers an opportunity to the absorption of tacit knowledge by making observations in the long-term client relationship. There is also a strong incentive to absorb client-specific knowledge that may be utilised within the same client relationship.

Proposition 3 b. The short-term nature of co-makership induces a BSF to focus on non-specific knowledge that may be leveraged to new client relationships. The absorption of tacit knowledge from diverse client contacts contribute to the building of problem solving methods, tools and databases that facilitate problem solving in new client contexts.

Proposition 3 c. The extensive and long-term interaction in client partnership offers an opportunity for the development of new knowledge together with the client and an opportunity for the absorption of tacit client-specific knowledge that may be utilised within the client partnership.

Proposition 3d. The market exchange relationships provide incentive for the absorption of non-specific knowledge that may be further utilised in service delivery to a large number of customers. The absorption of tacit knowledge is difficult; and knowledge that is utilised in service delivery needs to be highly codified in market exchange relationships.

Chapters six and seven presented the case studies on knowledge absorption in client relationships and described the client interactions from the point of view of knowledge absorption. Empirical research was conducted at KPMG and at Tieto Group. It should be noted that the client side was not interviewed in this research. There are mainly two reasons for interviewing only the managers and employees of the case study firms. First, the research focused on knowledge absorption from the point of view of a BSF and the main aim was to find out what kind of knowledge is absorbed from client contacts and what is the incentive for knowledge absorption according to their perception. Second, KPMG appreciated that clients were not involved into the research process.

There are pros and cons in this approach. On the one hand, the managers were probably more honest and discussed more openly about their client relationships as they knew that the customers would not be able to review their opinions about the interactions in client relationships. On the other hand, this approach may also create some biases to the analysis. The client interviews would have provided a more complete picture of client context and the nature of client relationships. The client interviews would have helped in analysing more closely the characteristics of the client relationships and might have revealed essential issues that determine the nature of client relationships. The client interviews would have also been helpful for checking the reliability of interviews in case study firms. They might also have revealed some inefficiency in knowledge absorption. For instance, the client might have noticed that the case study firm does not pay enough attention to a particular problem that might have been solved by more intense knowledge absorption from client contacts.

Chapter six presented the cases at KPMG that illustrated knowledge absorption in co-productive or long-term client relationships. Chapter seven presented the case study at Tieto Group, in which the focus was on analysing knowledge absorption in distant and transactive customer contacts. The overall result of the cases is that the customer relationships are an important source of knowledge for the BSFs and knowledge is absorbed from client contacts in tacit form. All the cases support this result. The main propositions also suggested that the context of knowledge transfer has an impact on knowledge absorption. This seems to hold according to this study, since the presented cases showed clear differences in knowledge absorption opportunity due to the contextual differences in client contacts. In this sense the literal replication may be claimed for the main propositions. However, this research was mainly theory building in nature and focused on developing rich theoretical frameworks about knowledge absorption in client relationships. In that sense the client relationship cases were used mainly for filling the theoretical categories for developing and extending frameworks, like the typology of client relationships.

The key integrative framework in figure 29 shows how the context of client relationships was identified to affect knowledge absorption in client relationship

cases. The research showed that depending on the duration of client relationships, the BSF's incentive for knowledge absorption differs between non-specific or client-specific knowledge and the opportunity for the utilisation of knowledge differs in short-term (knowledge leverage) and long-term client relationships (utilisation of knowledge within the same client relationships). Also, the interaction-intensity and the duration of client relationship influence the opportunity for absorption and utilisation of tacit knowledge, and the need for codification of knowledge.

Figure 29 illustrates the proposed implications of the type of services (proposition 1) and the type of client relationship (proposition 2 and 3) for knowledge absorption. Figure 29 suggests that the standardised services or distant and transactive client relationships (Case D) require focus on the absorption of nonspecific knowledge and the codification of knowledge for facilitating extension in such circumstances. For instance, Compact case at Tieto Group illustrated knowledge absorption and utilisation in the case of standardised services. The standardised services like Compact software service may be provided by arm's length approach to customer contacts due to the efficient codification of knowledge. Customer contacts may be managed efficiently in such way, so that there are no needless interactions with the customers. However, more complex services require co-productive approach in service delivery. KPMG cases (Cases A, B and C) illustrated such services. Knowledge conversion and transfer take place more at client interface in complex services that are difficult to provide in codified form; and may thus require focus on utilisation of tacit knowledge in client interface for facilitating co-production in client relationships.

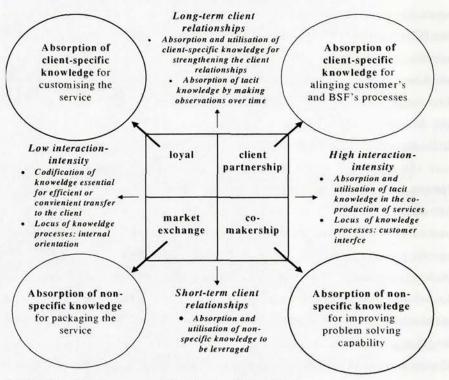


Figure 29 Client relationships as a context of knowledge absorption and utilisation

Knowledge absorption from loyal client relationship

Case A illustrated proposition 3 a and showed that the loyal client relationship offers an opportunity for the absorption of client-specific knowledge due to the long-term nature of client relationship. It is essential to learn to understand client's procedures and the way of acting by making observations. Particularly, if the client has a different cultural background like in this case, it is important for the BSF to be able to adapt to the client's requirements and the code of behaviour. The absorption and utilisation of client-specific knowledge facilitates the fulfilment of such needs and requirements. It turned out to be the case that sometimes the BSF may have better understanding of a client's history than the client's employees have. The absorbed knowledge was shown to have an important role in managing loyal client relationships. For instance, client's arm's length attitude in case A, was shown to induce the absorption of tacit knowledge in term's of overcoming the client's attitude, and to develop the client relationship into more co-operative direction.

Tacit knowledge about the client, like understanding Japanese culture, was utilised in those attempts. To be able to provide services to the loyal client over and over again enhance the client relationship and provide simultaneously an opportunity for building the knowledge base further by developing client data bases and by establishing experienced account teams.

Knowledge absorption from co-makership

The case B illustrated proposition 3 b and showed that in co-makership, a BSF focuses on the absorption of non-specific knowledge due to the non-recurring nature of assignments. As co-makerships are based on solving client's problems on a nonrecurring basis, a BSF can not utilise the earlier knowledge about client, but it needs to rely on knowledge and experience about similar clients, industries and generic solutions to clients' problems. It thus appears to be essential in co-makerships, to be able to absorb generic and non-specific knowledge from client contacts and to create problem solving methods and procedures. The close interaction with the client and a constant transformation of knowledge between tacit and codified knowledge in comakerships provides opportunity for the absorption of tacit knowledge. Client's problems are solved by creating codified evidence and solutions, by making interpretations about the solutions and by facilitating the implementation with the help of tacit knowledge and experience from similar situations. The problem solving methods may facilitate and guide these processes. KPMG developed BPR network for this purpose. By gathering knowledge from diverse BPR assignments, BPR network developed methods and tools like presentation templates, databases for benchmarking, and educated management consultants for BPR projects. The absorbed knowledge from co-production may be leveraged in this way by utilising the improved problem solving capability, and the accumulated experience and benchmarking data from the similar client engagements.

Knowledge absorption from client partnership

Case C illustrated proposition 3 c and showed that the client partnership may offer substantial opportunity for the knowledge development together with the client and the opportunity for the absorption of client-specific knowledge. The close interaction with the client, and the client's willingness to share knowledge with the BSF, allows the BSF to absorb tacit knowledge from the client contacts. Knowledge conversion

and transfer take place in the client interface and the aim of the client partnership is to create and utilise knowledge in that particular client relationship. The central features of the client partnership investigated in this research were (1) trust and cooperative attitude between the client and the BSF, (2) the clear attempt to align the client's and the BSF's processes and (3) the anxiety for joint challenges. The implications for knowledge absorption are clear. First, the apparent trust in client partnership allowed the free exchange of knowledge between the partners. The exchange of knowledge took place mainly in informal discussions. Second, most of the knowledge from client contacts that was valued at KPMG was tacit in nature. For instance, the client informed KPMG confidentially about their strategies and future plans for changing their processes. Client was willing to discuss the implications of such changes for KPMG's services and at the end of the day KPMG was able to change its own processes for supporting the changes in client's processes. During these processes KPMG deepened its knowledge about client's value creation processes. Third, the joint challenges took the BSF to the areas that may be outside the competence of the BSF. Participation into such activities stretched the auditors at KPMG to broaden their expertise and the enlarged scope of activities led into the areas where the BSF did not have expertise in the first place, but had to develop knowledge about new issues. These developments in client relationship improved the BSF's ability to support client's value creation processes so that the partnering between the client and the BSF eventually provided context where knowledge and solutions are developed to different kind of problems together with the client.

Knowledge absorption from market exchange relationships

Proposition 3 d suggested that the context of market exchange relationships provides incentive for the absorption of non-specific knowledge that may be further utilised in service delivery to faceless customers. This proposition was illustrated by the case study at Tieto group. Compact case showed that providing software services at arm's length in market exchange relationships might be successful if managed accordingly. In this case the customers were small firms that did not afford any expensive financial management software services or did not even have any use, or did not appreciate, too massive software systems or services. In a similar way as in other cases it is crucial that a firm understands how value is created to the customers

in market exchange relationships and provides appropriate services to the customers in a consistent way. The compact users created value for themselves by running different kinds of small businesses, in which they needed inexpensive, user friendly and "compact" software system for managing inventories and accounting. In order to provide "compact" and inexpensive software service to the customers, Tieto Group needed to minimise the costly interactions between the customers and Tieto Group and codify and package knowledge for its efficient transfer and utilisation. Knowledge was packaged by simplifying and storing the relevant knowledge about financial management tools and procedures into a software programme. Case D showed that codification of knowledge was focused due the limited client contacts and the need for efficient knowledge leverage. The software service was constantly improved and developed by introducing new versions of Compact. The knowledge for improving the software programme was mostly acquired from customer contacts in telephone support. Knowledge that was absorbed from customer contacts was mainly tacit in nature like in the other cases. Tacit knowledge or uncodified knowledge from customer contacts were used in service development as the skills of telephone support personnel (communication skills and application skills) improved in the customer contacts.

Table 29 gives an overview of key results of the study and indicates that the BSF's incentive for knowledge absorption differs in long-term and short-term client relationships. There is high incentive in short-term client relationships for the absorption and the utilisation of non-specific knowledge that may be leveraged in new client relationships. Long-term client relationships, on the other hand, like the loyal relationship and the client partnership provide opportunities for utilising the client-specific knowledge in those client relationships due to the repeat engagements. Table 29 suggests also that the way absorbed knowledge needs to be processed differ in different types of client relationships. The interactive client relationships, like client partnership and co-makership, provide basis for the absorption of tacit knowledge from co-productive client contacts for refining the capabilities and developing new knowledge. The long-term client relationships, like for instance the loyal client relationship, provide basis for the absorption of tacit knowledge by making observations over time. The transactive and short-term client

relationships like the market exchange relationships require extensive codification of knowledge, so that it may be transferred to the customers in convenient or efficient way. Four major patterns of knowledge absorption were suggested by this study: (1) absorption of non-specific knowledge for packaging the service (Market exchange relationship), (2) absorption of non-specific knowledge for developing problem solving capability (Co-makership), (3) absorption of client-specific knowledge for customising the service (Loyal client relationship) and (4) absorption of client-specific knowledge for improving the alignment of the customer's and the BSF's processes (Client partnership). These key results should be taken into account when analysing knowledge management in customer relationships.

Table 29 Key results

- In short-term client relationships BSFs have strong incentive to absorb generic
 and non-specific knowledge that may be utilised and leveraged in new client
 relationships.
- In long-term client relationships BSFs have strong incentive to absorb clientspecific knowledge that may be used for improving the service for the existing client and enhancing these client relationships.
- Tacit or uncodified knowledge from the client contacts is absorbed by
 - · being in interaction with the clients
 - · making observations about the clients.
- Tacit or uncodified knowledge is relevant and important knowledge that provides basis for:
 - · skill development in all the client relationships,
 - process alignment in client partnership, in which the absorbed knowledge from the client may be utilised in supporting the client's processes,
 - customisation in loyal client relationships, in which the absorbed knowledge about the client may be utilised in repeat engagements,
 - codification in co-makership, in which the absorbed knowledge may be used for developing problem solving methods, tools and databases and
 - codification in market exchange relationships, in which knowledge may be sold in highly codified form to the customers without direct interactions with the customers.
- The absorbed tacit knowledge may also be utilised as such in long-term or interactive client relationships for adapting to the clients requirements and changes in client's processes

8.3 IMPLICATIONS FOR KNOWLEDGE MANAGEMENT IN CLIENT RELATIONSHIPS

Knowledge management in client relationships

Knowledge management in customer relationships is an area in strategic quote management, where there is relatively little work done, despite the potential importance of the topic. Quite some fundamental research is required, before our understanding of knowledge management in customer relationships has improved, so that strict managerial guidelines may be developed.

Some general patterns in the management of knowledge in different types of client relationships may be already identified on the basis of current research. It appears to be essential that the management of knowledge in different client contacts is consistent so that right type of knowledge is absorbed and processed in the right way. This implies that firms have to face difficult questions that need to be solved before starting to develop the management of knowledge in customer relationships. What kind of client relationships the firm wants to have and nurture? Are there some peculiar features in the firm's business that force the firm to have particular type of customer relationships? Is it possible to take advantage of these peculiar features and change the nature of client relationships? What kinds of contacts are there between a client's processes and a firm's processes? Typology of client relationships may be utilised by analysing the client relationships and plotting them at the level of client base. This may be helpful in identifying how the firm's client relationships are positioned and whether the client contacts and the firm's activities are managed consistently. After finding answers to these questions it is possible to start to analyse the opportunities and the requirements of the management of knowledge in customer relationships.

The cases showed that there are differences in the way the clients and the BSF adapt in client relationships. These differences are useful to acknowledge due to their implications for knowledge management in client relationships. The comakership and the loyal client relationship cases gave an impression that it is mainly the BSF that needs to adapt to the client's requirements. Particularly, in loyal client relationship it was the BSF that adapted to the cultural differences between firms and the client was not willing to adapt in any way. Also in co-makership case the

BSF adapted more to the client's requirements for solving its problems than in market exchange relationships or in client partnership. In the market exchange relationship the BSF dominated the service delivery and gave a very narrow role for the customers. The BSF's service covered software package and telephone support to its customers. The rest of the activities were left to the customer. In that case it was clearly the customers that adapted in that service. In client partnership both the client and the BSF adapt in the service delivery for finding new value creation opportunities in client partnership.

The differences in adaptation requirements have implications for the management of knowledge in customer relationships. The more a firm needs to adapt in service delivery to the customer's requirements, the more a firm may benefit from proactive preparation to the customer contacts and ready-made formulas or client-specific knowledge that may be applied and utilised in solving customer's problems. Based on the nature of customer relationships (presented in chapter four) and the way clients and firms adapt in client relationships, three main patterns of knowledge management in client relationships may be identified with the help of figure 30: (1) process alignment in client partnerships by knowledge exchange and development, (2) proactive adaptation to the client's requirements and problems by knowledge conversion (a) between the transactions or (b) during the assignment and (3) service delivery in arm's length customer relationships by packaging of knowledge.

The process alignment by knowledge exchange and joint development

The process alignment by knowledge exchange and joint development may take place in client relationships, in which the BSF and the client are eager to find new ways of increasing the value creation in a client relationship. This requires that there is trust between the firms and right attitude for finding new ways of cooperation that align the client's and the BSF's processes further. By sharing knowledge in client relationship about the essence of client's value creation processes, partners may be able to identify some activities in client's business processes that may be supported better by the BSF. The main requirement is that the client finds the BSF competent in general and a suitable partner for providing a total service solution that supports broadly the client's processes. The constant interaction

between the client and the BSF offers an opportunity to share tacit knowledge between the firms and it is important that the BSF gives value for such knowledge. That kind of knowledge may be used for identifying client's activities that are currently carried out, but which do not create value for the client. These activities may either be moved to the BSF or taken care jointly if such arrangements create more value in the client relationship.

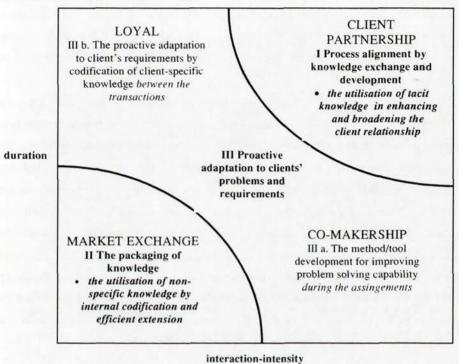


Figure 30 Knowledge management in client relationships

Proactive adaptation to client's problems and requirements

Loyal client relationship. In long-term client relationships, a client uses repeatedly the same service provider, for instance, because a BSF is able to provide convenient and customised services to the client. A BSF may manage the service delivery to the loyal client by being proactively ready to provide customised services efficiently to the client. It may be essential in loyal client relationship to focus on absorbing client-specific knowledge in every client contacts and to codify the absorbed knowledge

between the assignments to be utilised during the next service delivery. A BSF needs to develop systems that are able to gather tacit knowledge from the client and codify it into a client database and other means of storing client-specific data. The knowledge exchange between the client and the BSF is, thus, extended between assignments and the loyal client benefits from sequential transactions with the same supplier due to the BSF's previous knowledge about the client. The key to knowledge management in loyal client relationship may be the BSF's ability to absorb client-specific knowledge in client contacts and to make it available during the next assignment in order to provide efficient and customised solutions to the client's problems.

Co-makership. The utilisation of problem solving methods and tools are essential for solving the client's problem during the assignment, in which there is no prior knowledge about the client. The establishment of organisational networks that facilitate the internal knowledge acquisition and sharing may be useful in building problem solving methods and tools. A BSF needs to create skills for identifying and bringing structure for solving the problem together with the client. Establishing networks that codify, scan and share knowledge from customers may be essential for developing methods and tools that improve the identification of client's problem and provide solution models to be applied on the basis of absorbed knowledge during the client assignment. Utilising the experience from similar cases and the development of methods for solving client's problems may thus be a key to knowledge management in co-makerships.

The packaging of knowledge

Packaging knowledge is a right way to approach knowledge management, when the solution to the client's problems may be codified and transferred efficiently to the client. A BSF may provide services "from distant" and enable customers in their activities by transferring knowledge in a codified form as the Tieto Group case illustrated. The codification process (identification, analysis and application for creating codified knowledge) in which knowledge is being packed into physical artefact like software system, is essential in leveraging knowledge efficiently in a client environment, where customer contacts are minimal and short-term in nature. A BSF may "package" its services so that the customers are able to utilise knowledge from

distance. This "approach: we do the thinking and you do the rest" requires that a BSF packages the absorbed knowledge into, for instance software programme, develops introduction and start packages for the customers and reconfigures client contacts for selling the services efficiently. Even if it is possible to shift all the direct customer contacts to the agents, a BSF should try to have some direct contacts with the customers in order to get important feedback for improving the service constantly. Market research and other surveys will probably not provide tacit knowledge needed in service development.

The cases suggest that the management of knowledge in client relationships may be used (1) for reconfiguring the client contacts, like for instance in the Compact case, (2) building databases and tools for facilitating adaptation like in loyal and comakership cases or (3) for process alignment between the client and the BSF, like in the case of KPMG client partnership. This means that by managing knowledge processes a firm is able to (1) provide services in a consistent way (KPMG loyal and co-makership cases) and (2) differentiate its customer relationships (KPMG client partnership and Tieto Group case). This may be viable way to approach the requirements of client relationship management. However, these managerial implications need to be approached with caution. Bearing in mind that the case studies were conducted at business service context, further theoretical research and empirical research (replications) are needed for the wider generalisation of case study results.

8.4 RESEARCH AGENDA

Further research is needed for analysing the role and the importance of knowledge absorption from customer contacts in different competitive environments. Further research is also required for clarifying in more detail the likely conceptual shortcomings related to the wider application of knowledge absorption framework for analysing firm's activities. In order to increase our understanding of knowledge management as a source of competitive advantage, the research on the implications of knowledge management for competitive processes in business environment in general may turn out to be fruitful. Next, some research questions for further

research will be posed for putting forward knowledge management perspectives in strategic management research.

Most of the research on knowledge in strategic management has focused on firm's internal knowledge creation and sharing and provided valuable insight into knowledge creation (e.g., Bartlett & Ghoshal, 1993; Grant, 1996; von Krough & Slocum, 1994 and Nonaka, 1994). These studies have investigated how firms create new knowledge and improve knowledge leverage by managing corporate level knowledge processes. Innovation studies have also elaborated how the development of prior knowledge improves the firm's absorptive capacity (Cohen et al., 1990). However, focusing on diverse customer contacts as an input for the intracorporate knowledge sharing and creation may provide interesting insights into firm's role in linking knowledge from a number of diverse client contacts and transferring knowledge between them. The following questions may be of interest:

- How to facilitate scanning and integration of relevant knowledge from different types of customer contacts?
- How to experiment with new types of client contacts from the point of view of knowledge creation?
- How to manage codification activities in balance with the requirements of different client relationships (transactive vs. co-productive) at corporate level?

A firm is constantly exchanging knowledge with its environment by being in contact with its customers and by participating into joint ventures with other firms. The knowledge creation in business environment that takes place out of the boundaries of a firm deserves attention in terms of learning opportunity. Business activities outside the boundaries of a firm have received attention also from the point of view of learning (e.g., Hamel, 1991, Hedlund, 1994). The fine-grained analysis of differences in co-operative arrangements with clients or rival firms in terms of knowledge absorption and creation processes may turn out to be interesting:

 How knowledge sharing and creation differ in vertical and horizontal cooperative relations with the business environment?

- Are there any differences between the knowledge created in partnerships with competitors and the knowledge created in client partnerships in terms of specificity of knowledge and universal newness of knowledge?
- How to manage knowledge sharing and creation in different types of cooperative arrangements that take place outside the boundaries of the firm?
- How the co-operative arrangements in vertical and horizontal relations influence the competition on knowledge in general?

Further research on these issues would increase our understanding of the strategic role of knowledge for the business success and the importance of knowledge management in client relationships, from the point of view of strategic management. Taking the knowledge perspective to interaction between the business environment and the firm may provide new and important insights into strategic phenomena, like for instance the management of interfaces, organisational learning, and competence-based competition as the sources of competitive advantage. However, research on knowledge management in many different contexts will probably also reveal the limitations of applying concepts like knowledge as a resource and knowledge absorption from customers. Further research is needed for indicating the appropriate contexts where a knowledge absorption framework may be utilised and for clarifying in more detail the likely conceptual shortcomings related to the wider application of a knowledge absorption framework for analysing firm's activities.

In the context of knowledge-intensive business services, the framework of knowledge absorption proved to be a useful tool for analysing knowledge absorption in different types of client relationships. By analysing the absorption of knowledge and by developing frameworks for understanding the absorption of tacit knowledge in customer context, this research contributed to the existing theory of strategic management by

 providing new insights into the absorption of knowledge and the firm/customer interactions by integrating more specific theories like service management with general theories of strategic management,

- developing integrated frameworks for analysing strategic aspects of knowledge absorption from customers,
- extending Boisot's (1983, 1995) Culture Space by adding BSF/client boundary into the framework and by identifying the locus of knowledge processes in different types of client relationships and
- providing new insights and empirical evidence in the research on knowledge management by analysing the role of tacit knowledge in managing client relationships.

In order to increase our understanding of knowledge management in customer relationships as a source of competitive advantage, customer's critical role as a source of knowledge and customer relationships as a context of knowledge utilisation should be taken into account when doing further research on knowledge management. This study has put forward some basic propositions about knowledge absorption from customers and developed new frameworks for analysing knowledge absorption from customers. These findings indicate that the firms that master knowledge absorption, development and utilisation in their customer relationships have competitive advantage in competition, in which firm's understanding of customers' value creation processes and firm's ability to support the customers' processes determine the business success.

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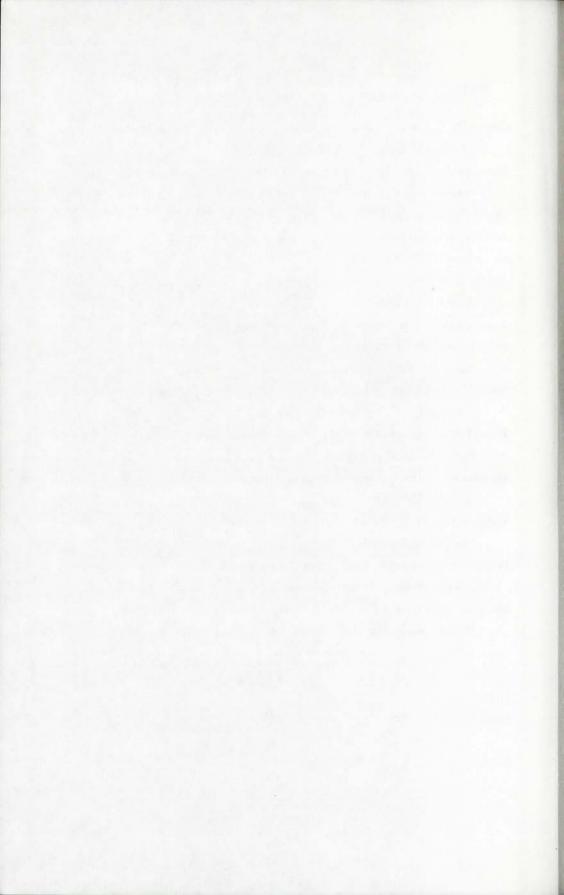
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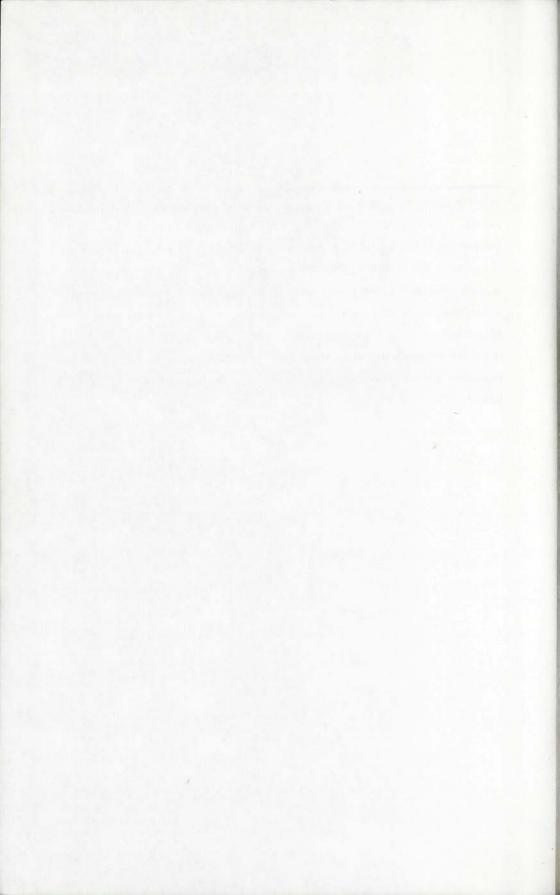
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CURRICULUM VITAE

Petteri Sivula (Finland, Hamina, 25 June 1965) studied economics at the University of Helsinki from 1987 till 1992. He did his postgraduate studies in the field of management and he holds MSc in innovation and technology management from the University of Sussex (SPRU). From 1993 onwards Petteri Sivula held a position as research associate in the department of strategic management and business environment at Rotterdam School of Management, Erasmus University Rotterdam. His research and teaching focused on the strategic aspects of managing service firms, of which this thesis is the result. The Academy of Finland and the Finnish Cultural Foundation granted scholarships for his doctoral studies at Erasmus University Rotterdam.



Stellingen

behorende bij het proefscrift

COMPETING ON KNOWLEDGE FROM CUSTOMERS:

STRATEGIC PERSPECTIVE ON MANAGING KNOWLEDGE-INTENSIVE BUSINESS SERVICE FIRMS

Petteri Sivula

ERASMUS UNIVERSITEIT ROTTERDAM

12 DECEMBER 1997

Science is progressed by the codification process, in which contextspecific uncodified or tacit knowledge (empirical insights) is transformed into universal explicit and codified knowledge (theories).

II

Art, on the other hand, explores the world the other way around and creates tacit knowledge by providing unique insights and experiences.

III

Looking at the theory from a new perspective (unique insights) may offer more profound impact on scientific development than the empirical testing of theories in social sciences (see as examples: Edith Petrose, The Theory of the Growth of the Firm, 1959 and Michael E. Porter, Competitive Strategy, 1980).

IV

Strategic management as an inquiry into the roots of the competitive advantage of a firm provides understanding of the interplay between the external and the internal factors of competition. The external and the internal factors of competition may, however, be interdependent and the utilisation of external factors for developing internal factors, like knowledge, may offer superior strategic approaches in dynamic competition.

V

Knowing the customers' value creation processes and searching for the appropriate products and services to the existing customers, may be a more viable strategy to most firms than looking for customers who will buy the cheapest or the most unique products and services.

VI

Tacit knowledge is both important and productive knowledge that forms the core of the firm due to its role in creating new knowledge and due to its facilitating role in communication within the firm ancin firm's customer relationships.

The role of tacit knowledge in knowledge conversion and transfer processes needs to be recognised in designing organisational structures and information technology systems. Building information technology systems without paying attention to knowledge conversion and transfer processes, and the associated organisational solutions, may provide insufficient and partial approach to knowledge management.

VIII

The organisations aiming at improving knowledge sharing, may pay too much attention to the technical capability of transmitting huge number of bits, instead of focusing on interaction within the firm that creates tacit knowledge and makes the communication efficient. Shared experiences make the communication processes efficient by allowing people to compress the normally required 100,00 bits (e.g., explanation) into 1 bit (e.g., gesture) that will trigger the use of shared knowledge (see Nicholas Negroponte, Being Digital, 1995).

IX

The Finnish quest for consensus may steer research into the refinement of theories in the dominant paradigm, where as the Dutch tolerance in terms of "pilarisation" supports the co-existence of paradigms and may drive theory building that is based on the competition between paradigms.

X

The Dutch doctoral education confides more in the utilisation and transfer of tacit knowledge than the Finnish doctoral education by relying less on PhD students collecting "study weeks" on formal courses and by focusing more on providing professors' constant supervision, support and active participation in research process.

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