

Master's Thesis

LAPPEENRANTA UNIVERSITY OF TECHNOLOGY  
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**“Why share in uncertain conditions?” Factors of individual level knowledge sharing in offshoring cases**

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## **ABSTRACT:**

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The objective of this Master’s Thesis was to research factors influencing and enhancing individual level knowledge sharing in offshore projects which often involve uncertainty of the knowledge provider’s own future. The purpose was to understand why individuals are willing to share their knowledge under these kinds of circumstances. In addition the goal was to identify obstacles to interpersonal knowledge sharing in order to understand how to mitigate their influence.

The research was conducted as a qualitative multiple case study in a global IT company, and the data was gathered using semi-structured personal theme interviews within two different offshore projects. In order to gain a wider perspective on the matter, some management representatives were interviewed as well. Data was analysed with the inductive content analysis method.

Results of the study indicate that individuals are willing to share their knowledge despite of uncertainty if they are motivated, if they are provided with opportunities to do so, and if they have skills, competence and experience to share their knowledge. A strong knowledge sharing culture in the organization or team also works as a strong incentive for individual level knowledge sharing. The findings suggest that even under uncertain conditions it is possible to encourage people to share their knowledge if uncertainty can be decreased to a bearable level, a robust and personal connection and relationship between the knowledge provider and acquirer can be created and suitable opportunities for knowledge sharing are provided. In addition, based on the results the support and commitment of management and HR in addition to favourable environmental circumstances play an essential role in building a bridge between the knowledge provider and acquirer in order to create a virtual environment and space for knowledge sharing: Ba.

## TIIVISTELMÄ:

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Tämän pro gradu –tutkielman tavoitteena oli selvittää henkilöiden väliseen tiedonjakoon vaikuttavia ja sitä edistäviä tekijöitä offshore–projekteissa, joihin usein liittyy epävarmuus tiedonjakajan töiden jatkuvuudesta, sekä ymmärtää miksi henkilöt jatkavat tietojaan tällaisissa olosuhteissa. Lisäksi tarkoitus oli kartoittaa henkilöiden välisen tiedonsiirron esteitä, jotta niihin voitaisiin projektien aikana asianmukaisesti reagoida ja niiden vaikutuksia voitaisiin vähentää.

Tutkimus toteutettiin laadullisena monitapaustutkimuksena kansainvälisessä IT-yrityksessä. Tutkimusdata kerättiin henkilökohtaisilla puolistrukturoiduilla teema-haastatteluilla ja haastateltavat olivat pääosin kahdesta eri offshore -projektista. Laajemman näkökulman saamiseksi myös johdon edustajia haastateltiin asiaan liittyen. Tutkimusdata analysoitiin käyttäen induktiivista sisällön analyysiä.

Tutkimuksen tuloksen perusteella henkilöt ovat valmiita jakamaan tietojaan kokeestaan epävarmuudesta huolimatta, mikäli he ovat siihen motivoituneita, heille tarjotaan siihen mahdollisuus ja heillä on tiedon jakamiseen tarvittavat kyvyt ja kokemus. Organisaatiossa ja tiimissä jo oleva tiedon jakamisen kulttuuri vaikuttaa myös positiivisesti henkilöiden halukkuuteen jakaa omaa tietoaan. Tiedon jakoa henkilöiden välillä edistää lisäksi tiedon jakajan ja vastaanottajan henkilökohtainen suhde sekä se, että epävarmuutta saadaan vähennettyä kohtalaiselle tasolle. Johdon ja henkilöstöhallinnon vahva tuki ja sitoutuminen, sekä tiedonjakamista varten luodut otolliset olosuhteet, ovat olennainen osa tiedon jakajan ja vastaanottajan linkittämistä ja tiedon jakamiseen tarvittavan tilan, Ba:n, luomista.

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“All our dreams can come true, if we have the courage to pursue them.”

Walt Disney

I fully agree with these words of Walt Disney. I think everyone should have dreams to cherish and work towards, and I also know that dreams really can come true. I know, because I have now achieved one of my dreams: my Master's Thesis is now ready and done. At the same time, one of the most interesting journeys of my life is approaching the end. Writing this Master's Thesis has been a unique learning experience which has pushed me out of my comfort zone several times during the journey. However, at the same time it has offered me huge opportunities to learn, to stretch my limits and to grow and enjoy; in other words it has definitely been worth it.

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Vantaa, 14.11.2014

Anu Koskenkari

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## 1 INTRODUCTION

These days, companies struggle with endless demands of efficiency and constant profit improvement. Goods and services need to be produced and delivered quicker and with less cost as companies strive to gain sustainable competitive advantage over their competitors. The global environment and digital revolution, including highly developed IT technology and infrastructures, have offered companies one way to reach this efficiency: the possibility to utilize labour globally, offshore. Companies transfer service operations to foreign countries via offshoring in order to take advantage of high-skilled but relatively cheap labour. The main drivers for and benefits of offshoring are for example the reduction of costs, new revenue possibilities and gaining operational flexibility. (Harrison & McMillan, 2006; Zimmermann & Ravishankar, 2011.)

Offshoring has received a lot of media attention lately. While in the 1970s and 1980s offshoring impacted merely low-skilled workers, offshoring in the twenty-first century is something totally different. In a time of digitalization and falling costs in telecommunication technology, almost any job – white and/or blue collar – can be offshored. Because these days companies are able to transfer work almost wherever wages and labour costs are lower, the new wave of offshores can even be seen as a direct form of arbitrage in international labour markets. (Levy, 2005.)

As knowledge is a critical resource of a company, knowledge sharing and knowledge transfer are essential parts of offshoring. According to Ipe (2003) knowledge sharing makes information available for other counterparties within an organization. The key to success in offshoring is effective and successful knowledge sharing and transfer from one individual to another. An individual's motivation, their opportunities to share knowledge and their abilities like skills and competences are vital for individual level knowledge sharing in organizations. Furthermore the nature and value of knowledge and cultural working environment are important as well. Knowledge sharing in an offshore situation where uncertainty is often present is not necessarily easy: in addition to challenges related to the moti-

vational factors of counterparties, other challenges related to knowledge, like causal ambiguity, lack of absorptive capacity of recipients and arduous relationships between the knowledge source and recipient, have been encountered. (Zimmermann & Ravishankar, 2011; Siemsen et al., 2008; Ipe, 2003; Szulanski, 1996.)

In fields and cases where the knowledge to be shared and transferred is very complex, context related, un-codified and tacit, offshoring may be very challenging. Ability related factors like the technical level of knowledge, competence and experience are usually much deeper in onshore countries than in the offshore location, which creates even more challenges in the process. The knowledge sharing and transfer situation becomes even more intense and difficult if the employees in the offshore unit have low absorptive capacity and high attrition. Certain conditions like spatial and cultural distance, status differences and differences in national and organisational circumstances, as well as the fact that employees in onshore countries may lose their jobs to offshoring or are forced to take lower paid ones, can constrain onshore employees' ability and motivation for knowledge sharing and transfer. (Farrell, 2005; Zimmermann & Ravishankar, 2014.)

Social capital can be considered to be an integrative framework for understanding the creation and sharing of knowledge in organizations. Nahapiet and Ghoshal (1998) see that the base for the organizational advantage is a deeply social one, and that the organizational advantage is created via successful usage of companies' social and intellectual capital – like knowledge. Intellectual capital has its roots deep in social relations and their complex structure. Social capital enables the development of intellectual capital via affecting the necessary conditions for exchange and combination to occur. (Ibid.)

What then makes people willing to share their knowledge when feeling insecure in an offshore context? The topic is current and hot. Organizations are increasingly trying to create and set up knowledge management practices and governance mechanisms in order to be more effective in using the knowledge they have in the organization (Ipe, 2003).

A great example of a field facing the above mentioned situations and challenges is Information Technology (IT). This is also the field in which this study was conducted. The study was done in one global IT company, and two offshore cases with different starting points were selected for the research.

### **1.1 Structure of the study**

Chapter one introduces the subject and theoretical background of the study and presents the objectives and research questions. It also establishes the theoretical framework.

The key concepts of the study are defined and related previous literature is reviewed in chapters two and three. Chapter two defines the individual level knowledge sharing concept to answer sub-question one. Chapter three defines the critical factors of individual level knowledge sharing.

Chapter four describes the cases, empirical research design, research methods and data collection; chapter five introduces the findings of the study; and in chapter six the cases are evaluated together. The result, discussion and conclusions, as well as the managerial implications, are presented in chapter seven. The limitations and possible directions for future research are also outlined in that chapter.

### **1.2 Theoretical background of the study**

The theoretical background of the study is presented in this sub-chapter, and the next sub-chapter introduces the theoretical framework and research questions.

#### **Offshoring**

Offshoring has received attention in the media and in academic discussions. Some scholars (e.g. Farrell, 2005) argue that offshoring creates wealth in both onshoring and developing offshoring countries and leads to an overall increase of employment in the home country, while other scholars such as Levy (2005) argue that offshoring does create prosperity, though not necessarily in the countries and

for the employees involved but rather for shareholders. Whatever the truth is, offshoring has already for some time been a concrete way for companies to reach a more effective way of operating by transferring work mainly to low-cost locations. Transfer of work is possible by sourcing work to an entire external company – this is usually called outsourcing, or offshore outsourcing. Alternatively work can be transferred to a multinational company's fully owned subsidiary located in a low-cost country, which is often called offshoring (Stack and Dowling, 2005). According to Wiener (2006) offshore services can also be offered either by joint ventures, affiliates or strategic alliances (captive offshore outsourcing).

When multinational companies (MNC) offshore, it has an impact on individuals and working life in both the onshore and offshore countries (Zimmermann & Ravishankar, 2011). Because it has become possible to offshore also high skill work and services to developing countries, it has become a rule rather than an exception that IT companies now increasingly use offshoring. When work is transferred to another country, the most discussed risk at the onshore country level is job losses. At the employee level offshoring often causes insecurity and concerns about losing one's own job or decrease in salary. (Levy, 2005.)

### **Knowledge based view of the firm**

Even if knowledge has long been recognized as an essential factor in organizations, only in the last decades has it been considered the main source of companies' competitive advantage and the key to their longer term sustainability and success (Nonaka, 2007). Technology-driven perspectives and information technology have ruled the field of knowledge management, but there has been a growing interest in the role of individuals and the so-called people perspective (Stenmark, 2001; Earl, 2001). Also empirical evidence points to the fact that people and people-related factors are critical to knowledge processes in organizations. (Ipe, 2003.)

Scholars and practitioners constantly stress the importance of knowledge as an essential organizational resource and the importance of managing it. The knowledge-based view of the firm actually considers knowledge the most valuable

resource for the company and for its capability, performance and ability to build success (e.g. Nonaka, 2007; Spender, 1996, Kogut & Zander, 1992). Knowledge is viewed as organizations' intellectual capital with increasing importance in building companies' competitive advantage. For such a capital to exist, individuals in the organizations need to make knowledge available for others; in other words knowledge needs to be shared. (van den Hooff & Huysman, 2009.) Sharing knowledge might even be considered as one of the key factors when talking about knowledge management. The value of knowledge increases when it is shared, and knowledge creation only happens when knowledge is shared among employees (Nonaka & von Krogh, 2009; Nonaka, 2007; Quinn et al., 1996).

### **The nature of knowledge**

The nature of knowledge has been described in many different ways. Prior literature reveals that it has been difficult to define knowledge or knowledge sharing in a general way and researchers have not been able to find possible distinctions between information and knowledge. For example, Nonaka (1994, p. 15) argues that knowledge is based on information and justified by one's belief while information is just the "flow of message". Other academics argue that all information can be considered knowledge, but knowledge is something additional to information. For example Kogut & Zander (1992) divide knowledge into information and know-how and Alavi & Leidner (2001) see knowledge as possibly new, valuable, unique or precise personalized information in the minds of individuals connected to for example facts, processes, conclusions and interpretations. However, some researchers use the terms information and knowledge as synonyms, highlighting that making a distinction between these terms in knowledge sharing research does not bring much extra benefit (Wang & Noe, 2010). In academic discussion, knowledge is often distinguished into two types: explicit and tacit. Explicit knowledge is a systematic and formal kind of knowledge which can be found in books, databases, and computer programmes. Tacit knowledge in turn is defined as extremely personal and difficult to put into words. (Nonaka, 2007; Small & Sage, 2006.)

### **Knowledge sharing**

Knowledge sharing is defined as an action where knowledge is made available to others within an organization (Ipe, 2003). According to Wang and Noe (2010) knowledge sharing among employees and inside and across teams enables an organization to utilize its knowledge based resources. Knowledge sharing terminology used in prior research is not always consistent either. In prior research “knowledge transfer” (e.g. Argote & Ingram, 2000) and “knowledge sharing” (e.g. Ipe, 2003) are the most frequently used terms when discussing knowledge movement between individuals or within an organization. However, in their article Wang & Noe (2010) make a distinction between these concepts. They argue that knowledge sharing is different from knowledge transfer and knowledge exchange. Knowledge sharing refers to providing or receiving task-related information and know-how in order to cooperate and help others to solve problems or implement processes and policies. Knowledge sharing can take place when communicating face-to-face or in writing with other individuals, or when for example documenting and capturing knowledge for others. (Ibid.) Knowledge transfer, therefore, has been more considered knowledge movement between different units and organizations rather than between individuals (Wang & Noe, 2010; Szulanski, 1996). In this study knowledge sharing and transfer are used as synonyms.

Knowledge sharing can happen at the macro level (organizational level like unit or department) or at the micro level (individual level). Researcher Nicolas J. Foss uses Coleman’s (1990) diagram to illustrate the division between the micro and macro level in his publications (e.g. Foss et al., 2010; Foss, 2007).

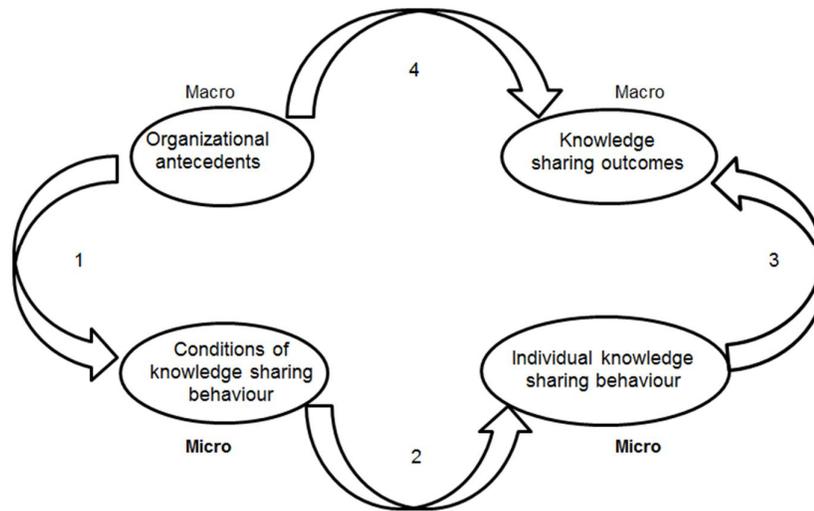


Figure 1: Level of knowledge sharing analysis, adapting Foss et al., 2010

Coleman's diagram clarifies the macro level phenomenon (arrow 4) by explaining it via the micro level, as illustrated by arrows 1, 2 and 3. The arrows indicate the causality between the phenomena. In figure 1 above, the macro level knowledge sharing outcome in the upper right hand corner is impacted by actions of individuals engaging in knowledge sharing behaviour, for example sharing. Thus, these actions are the consequence of individual level conditions which are influenced by organizational level factors like culture or routines. (Minbaeva et al., 2012; Foss et al., 2010.)

According to Foss et al. (2010) knowledge sharing studies have more concentrated on processes, constructs and phenomena defined at the macro level, whereas the micro level has not been researched to the same extent. This study focuses on micro level knowledge sharing.

### **Knowledge governance approach**

The "knowledge governance approach" (KGA) is regarded as a multidisciplinary approach which merges several fields like knowledge management, human resource management, organizational theory and strategic management. The base assumption of KGA is that different knowledge processes like knowledge sharing

can be influenced and directed via deploying different kinds of governance mechanisms. Steering and influencing can happen especially with mechanisms that management is able to influence such as organizational structure, reward and information systems, and common and unified processes. For the organization the essence of knowledge governance is to maximize the benefit of creating, transferring and sharing knowledge. (Foss, 2007.)

### Conditions for knowledge sharing

Individual level knowledge sharing is an essential part of knowledge sharing and utilization in the organization overall, and thus deeper understanding of individual level knowledge sharing is needed. To understand how and why individuals decide to share knowledge, their motivation behind this decision must be understood (Endres et al., 2007). Various factors have an impact on individual level knowledge sharing. However, according to the literature the main factors affecting knowledge sharing between individuals in an organization are: 1) the nature of the knowledge, 2) the motivation to share, 3) opportunities to share and 4) the culture of the work environment. These factors are presented in the conceptual framework in figure 2 below (Ipe, 2003, p. 352).

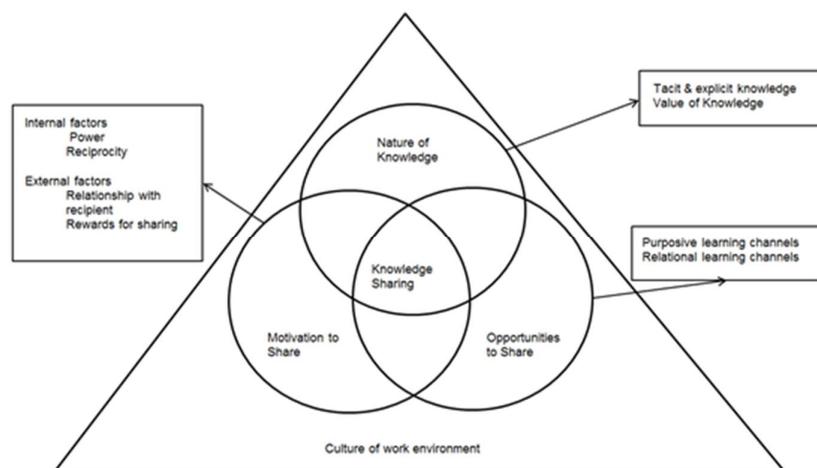


Figure 2: Adapted from Ipe, 2003, p. 352. Factors influencing knowledge sharing between individuals in organizations

However, some scholars recognize also ability in addition to individual motivation and opportunity as one of the most important drivers for actual knowledge sharing

behaviour. This framework is called the MOA framework. (E.g. Siemsen et al., 2008; Argote et al., 2003; Szulanski, 1996.) The MOA framework is a method of studying micro level knowledge management (Argote et al., 2003). In addition, existing literature proposes that knowledge sharing behaviour is driven by interaction between motivation, opportunity and ability. None of them alone is enough to make knowledge sharing happen. (e.g. Siemsen et al., 2008.)

The knowledge owner's willingness to share knowledge also has an important role; according to Davenport and Prusak (1998), if the knowledge owner is unwilling to share knowledge, the whole knowledge transfer will fail. Unwillingness to share knowledge might harm the organization's operations and success, and may therefore be seen as unethical (Lin, 2007a).

In addition to motivation, opportunity and ability-related factors and cultural and organizational issues also have an impact on individuals' knowledge sharing. Cultural differences, such as different power distances and different languages, as well as the organizational atmosphere and climate are seen as further factors affecting individual level knowledge sharing. (Rivera-Vazquez et al., 2009; Tohidinia & Mosakhani, 2009; Foss et al., 2009; Hofstede, 1980.)

### **Theories explaining knowledge sharing**

In prior research, several different theories have been utilized to explain the base of knowledge sharing. According to Wang & Noe (2010) the theoretical foundation of knowledge sharing research has often leaned on social exchange theory (SET), the theory of reasoned actions (TRA) and social capital and network theory. Nahapiet and Ghoshal (1998) divide social capital into three different dimensions: 1) structural, 2) cognitive and 3) relational dimensions. The structural dimension relates to an appropriate organization, network configurations and network ties. It deals with the general pattern of relationships present in organizations. It illustrates the impersonal configuration of linkages between people or units and the extent to which people in an organization are connected with one another. It impacts on the development of intellectual capital mostly by affecting the ways in which parties are able to access each other for exchanging knowledge and partici-

pating in knowledge activities. The cognitive dimension – shared language and codes and shared narratives – enables shared cognition which in turn facilitates the creation of intellectual capital via impacting on combination capability. The relational dimension includes the element of trust, norms, obligation and identification and deals with the nature of the connections between individuals in an organization. It impacts on the conditions for exchange and combination in several ways, like access to individuals for exchange, expectation of the value gained through exchange and combination, and motivation of individuals to engage in knowledge creation. (Chang & Chuang, 2011; Nahapiet & Ghoshal, 1998.)

According to van den Hooff and Huysman (2009), social capital impacts knowledge via enabling access to it, via mutual trust among participants and via common abilities that enable common understanding. Aspects of structural, relational and cognitive dimensions have been shown to be related to knowledge sharing (Chang & Chuang, 2011) and also according to Zimmermann and Ravishankar (2014) social capital affects knowledge transfer via all of its dimensions.

The purpose of this study is to gain understanding of knowledge sharing at the micro level, in other words between individuals in organizations, and to focus on factors that influence individual level knowledge sharing. Offshoring as the context of the study brings the uncertainty factor into the study frame. In such situations social capital and its dimensions have a role in understanding the knowledge sharing motivation of individuals and the ways for organizations to encourage individuals to share knowledge.

This sub-chapter presented the theoretical background of the study. The objectives and research questions of the study are introduced in next sub-chapter.

### **1.3 Objectives and research questions**

Companies have discovered that offshoring is becoming more or less essential for them and their operations, but a successful offshoring project is far from easy to follow through (Rottman, 2008).

Successful offshoring projects and smooth knowledge sharing are factors which – already now and definitely in the future – make the difference between companies and their levels of success. The objective of this thesis is to research the factors impacting and enhancing individual level knowledge sharing in offshore projects. The purpose is to understand what makes an individual willing to share his/her knowledge with colleagues in offshore countries, while – simultaneously – knowing that by doing it his/her own job may be threatened. The aim is also to recognize obstacles to individual level knowledge sharing, in order to gain an understanding of how to mitigate the impact of these obstacles.

Through analysis of the research results, the objective is to discover practices companies could apply in their offshoring cases and projects in order to improve the quality of knowledge sharing. It would be equally interesting to find out if there are certain issues which companies should definitely avoid in their offshoring projects related to knowledge sharing.

Based on this, the main research question is:

*What makes individuals willing to share knowledge within an organization under uncertain conditions?*

This main question is approached with the following sub-questions:

*What is individual level knowledge sharing?*

*What are the factors enhancing individual level knowledge sharing?*

*What are the obstacles to individual level knowledge sharing?*

The sub-questions are presented as a frame in figure 3 below.

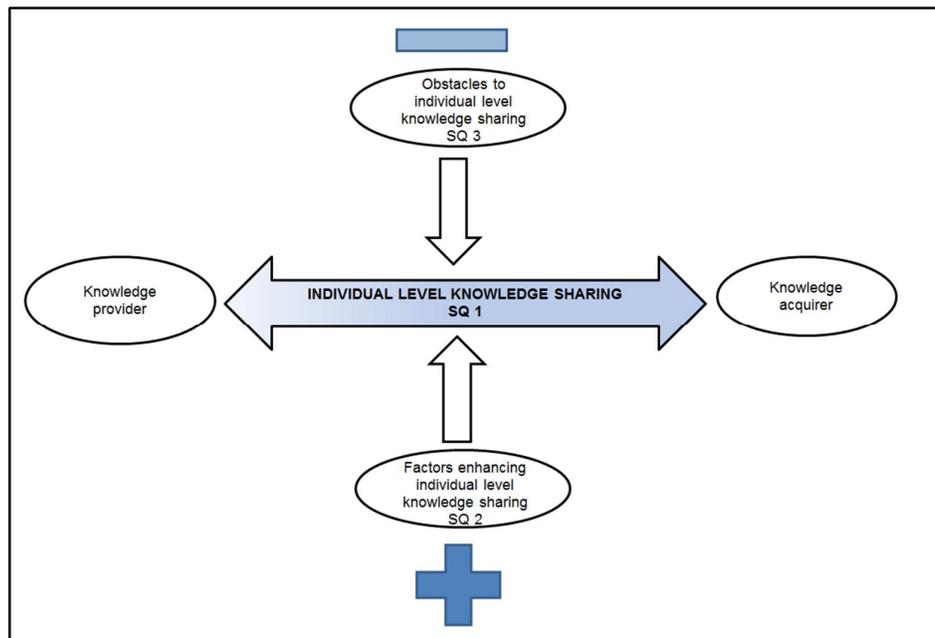


Figure 3: The research sub-questions of the study

In order to gain a deeper understanding of the factors enhancing individual level knowledge sharing and obstacles to it, these subjects were studied in two separate offshoring projects in one global IT company. The study was conducted as a qualitative multiple case study, and the data was analysed with the inductive content analysis method. The data was collected from 17 informants by using individual semi-structured interviews done either face-to-face or by phone. In order to gain a wider perspective on the matter, representative of management were interviewed as well.

The methodology of the study is described in more detail in chapter four, where the cases, research design, research methods and data collection are looked at more closely.

#### 1.4 Theoretical framework and limitations

As mentioned earlier, the aim is to study individual level knowledge sharing factors in uncertain conditions. Offshoring creates uncertainty among individuals who

need to transfer their job to a colleague in an offshore country. What makes people willing to share their knowledge in a situation like that?

The theoretical framework for this study is presented in figure 4 and has been built by combining the central factors of individual level knowledge sharing covered by prior research with the management role and knowledge governance approach. The framework was chosen because motivation and several different essential knowledge sharing concepts like trust, reciprocity and relationships between knowledge provider and acquirer fall under the chosen framework and have a central role in knowledge sharing in the research context. In addition when speaking about sharing knowledge between individuals, the opportunity to do so, as well as individuals' ability to share knowledge, are essential in the process. One needs to have proper competence, skills, confidence or even self-efficacy in order to be able to share knowledge. The nature of knowledge has an importance in knowledge sharing as well. Not to mention culture – including the national and the organizational culture – which creates the environment for knowledge sharing together with knowledge governance mechanisms like management and HR practices as part of the knowledge governance approach (KGA).

The frame can also be linked to the social capital theory's three dimensions because the opportunity to share reflects the structural dimension (e.g. organizational structure), ability corresponds to the cognitive dimension (e.g. shared language and codes) and motivation can be connected to the relational dimension (e.g. norms and trust). Factors enhancing and impacting on individual level knowledge sharing in an uncertain context has not yet been widely researched; however, the need to understand these factors is urgent in the current business environment. Therefore this study is topical at the moment.

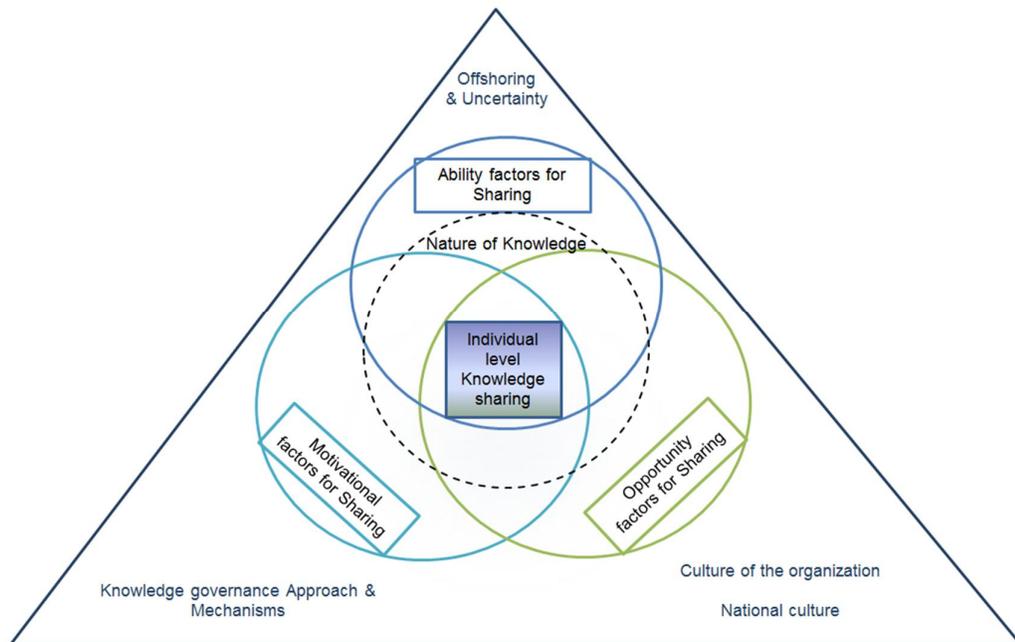


Figure 4: Framework of the study; built on Ipe's (2003, p. 352) Factors influencing knowledge sharing between individuals in the organization

As mentioned earlier, the scope of the study is to research individual level knowledge sharing in two offshore cases in a global IT company where knowledge sharing and job transfer is taking place inside the company from an onshore unit to an offshore unit. Organizational level knowledge sharing and other sourcing forms like outsourcing to an external company or joint venture co-operations are excluded from this study. The study focuses on offshoring cases from Finland as onshore country and India as offshore country. Other on-/offshoring countries are excluded from the study.

## 2 KNOWLEDGE AND INTERPERSONAL KNOWLEDGE SHARING

This chapter presents knowledge and individual level knowledge sharing and provides information related to sub-question one.

## **2.1 Knowledge in an organization**

According to Davenport and Prusak (1998), knowledge in organizations is tightly attached to the individuals who possess it, and it tends also to be unclear and vague. Furthermore the terms and terminology when discussing knowledge in the literature is not always consistent. The terms knowledge and information are often used as synonyms and interchangeably. However, some academic authors like Nonaka and Takeuchi (1995) and Davenport and Prusak (1998) distinguish these terms from each other, while others like Kogut and Zander (1992) and Alavi and Leidner (2001) use them more as synonyms. According to Nonaka and Takeuchi (1995), knowledge is “a dynamic human process of justifying personal belief towards the truth” (p.58). These authors define information as a “flow of messages” (p.58), and state knowledge creation happens when this flow of messages meets and interrelates with commitments and beliefs of its holders. (Ipe, 2003.)

According to De Long and Fahey (2000), knowledge can be divided into individual, group and organizational levels. Lam (2000) states that knowledge can exist at the individual level, or among members of the organization, in which case it is called collective knowledge. In his article Hecker (2012) writes about the nature of collective knowledge and concentrates on three different types of collective knowledge, which all are interdependent. Collective knowledge can be seen as shared, when knowledge is located with individuals within the organization, as complementary, when knowledge is located between the individuals in the organization or as knowledge embedded in collective artifacts, where knowledge is in an explicit form in documents and databases. Based on Hecker (2012), simultaneous usage of these different kinds of collective knowledge types enables efficient working at the different levels of organizations and in the organization overall.

## **2.2 Individual knowledge in an organization**

As stated above, knowledge is embedded in several levels of the organization and the individual level is only one of them. Even if the individual level is only one of the levels in the organization where knowledge resides, it does however enable

the management of knowledge, its creation and dissemination at every other level of the organization (Ipe, 2003).

The interaction between individuals at various levels in an organization creates knowledge. Nonaka and Takeuchi (1995) were among the first academics to identify the role of individuals in knowledge creation in their work "The Knowledge Creating Company". Nonaka and Takeuchi stated that knowledge of organizations is created by individuals, and if individual knowledge is not shared with other levels of the organization, the impact of it on the organization's efficiency and effectiveness is limited. (Ipe, 2003.) At the individual level there are three types of knowledge that are significant in value creation within an organization. The types are 1) know-how which contains tacit and subjective knowledge based on experience, 2) know-what containing objective task-related knowledge and 3) dispositional knowledge defined as personal knowledge that includes creativity, abilities and talents. These types have been identified by Løwendahl, Revang, and Fosstenløkken (2001).

At the core of the people perspective of knowledge management is the idea that individuals in organizations have knowledge that has to move to different levels of groups in the organization and to the whole organization. This enables using the knowledge to advance the goals of the organization. (Spender & Grant, 1996; Nonaka, 1994.) However, knowledge to be shared is not unambiguous, but related to knowledge providers' and acquirers' situation, culture and context. Even tacit knowledge would have been made explicit by turning it into routines or documents, the understanding of which might differ at different levels of the organization depending on individuals' location in the organization and consequently their different situation, culture and context. (Bechky, 2002.)

### **2.3 Interpersonal knowledge sharing**

Knowledge sharing is an essential part of and tightly connected to building knowledge-based competitive advantage (Argote & Ingram, 2000; Kogut & Zander, 1992). Bartol and Srivastava (2002) view knowledge sharing as individuals

sharing organizationally essential ideas, proposals, ideas, information and expertise with one another. Hence, sharing can be viewed as voluntary action where knowledge is brought available to others in the organization and which happens between two or more individuals. Knowledge sharing includes both sending and receiving knowledge. Lin (2007b) sees interpersonal knowledge sharing as individuals' actions towards his/her colleagues to help them to perform tasks in a better, more efficient and quicker way. In this process the knowledge provider transforms his or her knowledge into a form that can be understood, absorbed and used by others. In other words, after sharing, knowledge becomes jointly owned by the provider and the acquirer. (Foss et al., 2009; Ipe, 2003.)

Knowledge shared by individuals can be explicit or tacit in nature. Prosperous circumstances are also important for individual level knowledge sharing, and the concept of Ba has been connected to knowledge creation and knowledge sharing. According to Nonaka and Konno (1998), the concept of Ba was first introduced by the Japanese philosopher Kitaro Nishida and further developed by Shimizu. However, Nonaka and Konno have adapted it in order to elaborate their knowledge creation model. Ba can roughly be translated into the English word "place" and understood as a shared space for evolving relationships. Ba can be seen as mental (for example ideas, shared experiences), virtual (for example video meeting, e-mail) or physical (for example office) space, or a combination of these. (Ibid.)

Knowledge sharing is an important part of Nonaka's and Takeuchi's spiralling SECI model, which explains the knowledge creation phases. Figure 5 illustrates the process of individual knowledge sharing and Ba, and the phases of SECI and their connections to individual knowledge sharing. The SECI model consists of four phases: 1) socialization, where tacit knowledge is shared between individuals in close physical contact e.g. face-to-face; 2) externalization, where tacit knowledge is transferred into such a form that it can be understood by others, and the individual commits to the team and integrates themselves into it; 3) combination, where explicit knowledge is in a way integrated into a more compound set of explicit knowledge and the new combined data is shared between colleagues; and 4) internalization of the new created knowledge, which turns the new explicit

knowledge into the organization's tacit knowledge. Training, practice and learning-by-doing are methods for individuals to access teams or organizational knowledge. (Nonaka & Konno, 1998.)

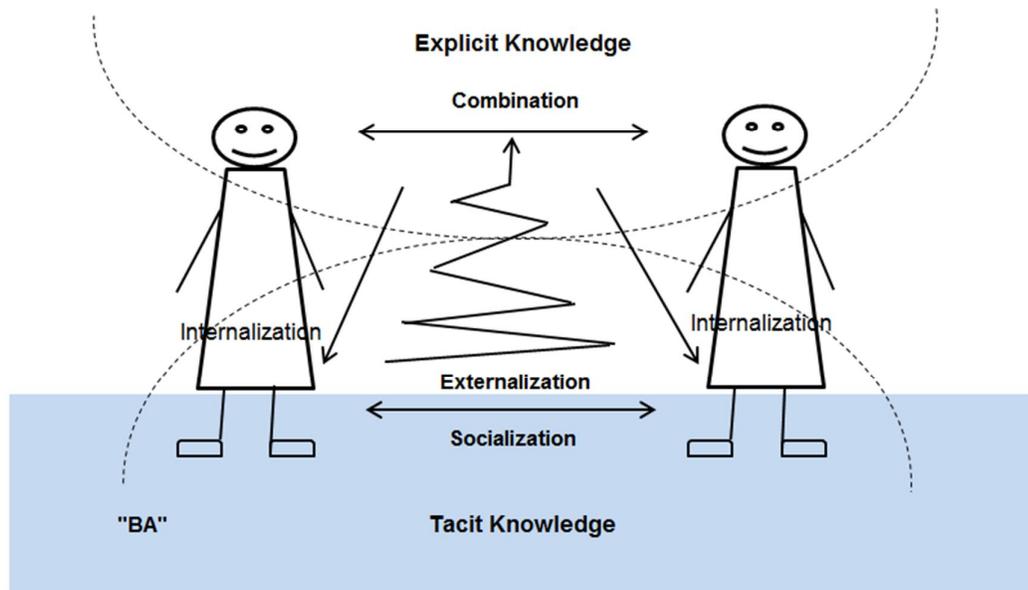


Figure 5: Ba and knowledge sharing. Adapted from Nonaka & Konno (1998, p. 44.)

In their research Bartol and Srivastava (2002) propose four main mechanisms of individual knowledge sharing. Their proposed mechanisms mirror the codification and personalization strategies introduced by Hansen et al. (1999). The first mechanism is based on the utilization of a database. It enables individuals to record their knowledge – like the information they have, their ideas, proposals and experiences – into it. Codified knowledge becomes usable for other colleagues. The second mechanism is knowledge sharing in formal interaction with other team members or colleagues across the units or the organization. Team or department meetings are one example of this kind of formal interaction between individuals where knowledge can be shared. The third mechanism is knowledge sharing in informal interactions. In these, knowledge is shared in unofficial situations like so-called corridor discussions or in a situation where an expert shares his/her knowledge when someone approaches them for help. The fourth mechanism is

related to communities of practices (COP) which is an informal, unstructured system, where people are connected via the same interest and they can share their knowledge related to it. (Bartol & Srivastava, 2002.) According to Weiss (1999) the willingness of an individual to share knowledge can be affected by several different factors like the amount of the time required for sharing it, the sensitivity of the knowledge and the type and quality of the relationship between the knowledge acquirer and knowledge providers.

In this study knowledge is considered to include any information, ideas, competence, expertise and experience related to the tasks the knowledge provider performs.

### **3 CRITICAL FACTORS OF INDIVIDUAL LEVEL KNOWLEDGE SHARING**

This chapter presents in more detail the critical factors of individual level knowledge sharing following the theoretical framework presented in chapter one.

#### **3.1 Motivation to share**

Motivation is the key factor for individual knowledge sharing, and widely speaking it can be viewed as an individual's willingness to act and defined as an individual's internal ambition to share knowledge with his or her co-workers. (Siemsen et al., 2008). Stenmark (2001) states that individuals need strong personal motivation in order to share their knowledge, and individuals are worried about the personal profit and loss resulting from doing so.

##### **3.1.1 Extrinsic and intrinsic motivation**

An individual's motivation can be divided into extrinsic or intrinsic. An individual's extrinsic motivation is typically based on their assumption that the knowledge they possess has an exchange value and that it is possible to gain something positive or be rewarded by engaging in knowledge sharing actions. For example monetary or non-monetary rewards or favourable career advancement and promotions can

be viewed as extrinsic motivational factors. The profitability of individual level knowledge sharing is evaluated based on assumed costs and benefits of sharing, and the decision to engage into it is made accordingly. Extrinsic motivation can enhance the transfer of explicit knowledge because it is measurable in nature. Thus it often fails to support tacit knowledge sharing due to the nature of its intangibility. (Lam & Lambermont-Ford, 2010; Lin, 2007b.) However, according to Osterloh & Frey (2000), when acting based on intrinsic motivation, an individual engages in an action due to the action itself. In this case the activity is valued for itself, not based on an external reward, and satisfaction is received from the experience. They go on to state that intrinsic motivation facilitates tacit knowledge transfer under such conditions in which extrinsic motivation fails. Lindenberg (2001) has divided intrinsic motivation into normative and hedonic. Normative intrinsic motivation is derived from an individual's sense of compliance with social and personal norms, in other words acting appropriately and right. Willingness to act based on normative intrinsic motivation depends on how important compliance in a given context is and the possible external reaction to non-compliance. Hedonic intrinsic motivation is rooted in a commitment to self-determination, competence improving and pleasant actions gained via social and physical welfare and improvement of the individual's conditions. (Lindenberg, 2001; Lam & Lambermont-Ford, 2010.)

In addition to intrinsic and extrinsic motivation, different kinds of individual motivational factors for knowledge sharing have been identified and divided in several ways. One way is to divide them into external and internal motivational factors. According to Ipe (2003) different kind of rewards for sharing and interpersonal relationships are counted as external factors, whereas principles of reciprocity of sharing and perceived power connected to knowledge sharing are included in internal factors.

### **3.1.2 Rewards for sharing**

Possible perceived rewards and benefits or penalties related to knowledge sharing have an impact on the process of individual level knowledge sharing. The perceived benefit has a positive influence on knowledge sharing, whereas the impact

of cost is negative. (Wang & Noe, 2010; Ipe, 2003.) Monetary rewarding does not necessarily increase knowledge sharing as tangible rewards might not be considered to be enough to support knowledge sharing (e.g. McDermott & O'Dell, 2001). Incentives can even have a detrimental effect on knowledge sharing if they do not help individuals reach their own goals as well (e.g. O'Dell & Grayson, 1998). In order to have a positive effect on knowledge sharing, the monetary reward should be significant (Lam & Lambermont-Ford, 2010).

### **3.1.3 Interpersonal relationships**

Relationships in the work place seem to be an important mediator for individual level knowledge sharing in the organization. Strong social connections enhance knowledge sharing between individuals, and opportunities for employees to create social relationships should be encouraged by the organization to enhance knowledge sharing (Burgess, 2005). Individual knowledge sharing can also be impacted by the individual's identification, a process where individuals can identify themselves as part of a group and derive part of their self-image from their membership of the group. In this case individuals tend to share the attitudes of the group and act in a way which benefits the group. (Nahapiet & Ghoshal, 1998.)

### **3.1.4 Knowledge as power**

If individuals in the organization feel that they are appreciated based on the knowledge they possess, knowledge becomes power. In this case they are not so willing to share it with colleagues, as they are afraid of losing their unique value and position in the organization. (Gupta & Govindarajan, 2000; Weiss, 1999.) According to Ipe (2003), Blackler, Crump and McDonald (1998) agree with the point of view that knowledge can be seen as a source of power in organizations. They also propose that because knowledge is always sited in a certain context, it is obvious that the power dynamic and culture of the context have an impact on the ways how knowledge is used and comprehended.

### **3.1.5 Reciprocity**

Reciprocity can be seen as related to the give-and-take process of knowledge and can enhance knowledge sharing if individuals see that the added value and benefit received by them is dependent on the amount they share their own knowledge with others. In order for reciprocity to act as a motivator for individual level knowledge sharing, individuals need to be able to expect and trust that the costs and benefits related to their knowledge sharing are balanced and fair, even if the ultimate outcome might not be certain (Schulz, 2001; Nahapiet & Ghoshal, 1998). Reciprocity can be seen as connected with obligation and expectation, which according to Nahapiet and Ghoshal (1998) represent a duty to commit to certain activity in the future. If an individual feels that the knowledge they possess is more valuable than the knowledge of their colleague, knowledge sharing will not happen based on reciprocity (Empson, 2001). Fear of exploitation can be viewed as the negative flip side of reciprocity. Empson (2001) states that the term reflects the utmost anxiety that individuals experience when they are requested to give away valuable knowledge with very little or no value in return. In addition, she argues that fear of exploitation is nothing but a rational response to knowledge asymmetries.

### **3.1.6 Joint production motivation**

In their article Lindenberg and Foss (2011) introduce the concept of joint production motivation which includes the human capability to actively involve oneself in collaborative activities, and which is based on the view that the motivation to include oneself in such joint effort is complexly related to cognitions about tasks, common goals and interdependences. They define joint production as “any productive activity that involves heterogeneous but complementary resources and a high degree of task and outcome interdependence”, and their concept also suggests that “human beings are especially equipped with coordinated cognitive and motivational faculties that are geared towards participating in joint production” (Lindenberg & Foss, 2011, p. 502). Lindenberg and Foss (2011) also state that members of an organization identify the joint effort and view themselves as part of

it, each one with their own responsibilities and roles including an understanding about applicable tasks, timing, interdependences and difficulties for fluent coordination in terms of joint goals. Members of an organization sharing joint production motivation also mutually foresee goal-related actions from others and involve themselves in problem-solving and helping actions to be taken. They are also willing to use incentives or support others in order to make them do their part, and punish them if they do not. In unclear situations they also pursue ways to work towards group goals instead of waiting for instructions. Because joint production is a special kind of motivation which is activated under the right kind of cultural and social circumstances and is tightly connected to the organization's collaborative nature, it provides a significant motivational base for a company and its management. Joint production motivation also reduces the need for control mechanisms because it decreases opportunism and moral hazards. (Lindenberg & Foss, 2011; Podsakoff & MacKenzie, 1997.)

### **3.1.7 Trust and norms**

Trust has an important role in knowledge sharing and a high level of trust makes individuals more willing to engage themselves in knowledge sharing. Motivation and willingness to share and use knowledge is dependent on the amount of trust felt towards co-workers. (Holste & Fields, 2010; Nahapiet & Ghoshal, 1998). Circumstances matter as well, and Boisot (1995) highlights the significance of interpersonal trust in contexts of uncertainty and high ambiguity: “[W]hen the message is uncodified, trust has to reside in the quality of the personal relationship that binds the parties through shared values and expectations rather than the intrinsic plausibility of the message” (Boisot, 1995, 153. Ref. Nahapiet & Ghoshal, 1998). Trust and cooperation have reciprocal interaction, trust makes cooperation smoother and lubricates it, and cooperation increases trust. In time, this two-way interaction can lead to the development of common cooperative norms. Cooperation norms, in turn, build a solid foundation for creation of intellectual capital and can have a significant impact on the knowledge sharing process by enabling access to counterparties for sharing knowledge as well as ensuring the motivation to engage in such sharing action (Nahapiet & Ghoshal, 1998; Putnam, 1993).

### **Lack of motivation**

In his study in 1996 Szulanski recognized the lack of motivation as one of the key obstacles to knowledge sharing. Also fear of losing one's importance and superiority earned by knowledge, the feeling that sharing is not sufficiently rewarded or a lack of other needed resources such as time can diminish an individual's motivation to share knowledge. (Ibid.) According to Burgess (2005) the fear of punishment can have a negative impact on individual knowledge sharing, and based on prior literature (e.g. Orlikowski, 1993) it has been observed that individuals are not likely to share their knowledge in situations where trust, openness and psychological safety is missing. Also Orlikowski (1993) observed that if an individual fears that knowledge they have shared in a groupware system will be used against them, reluctance to knowledge sharing increases.

### **3.2 Opportunity to share**

In order for knowledge sharing to happen, the opportunity to do so is essential. The opportunity to share knowledge can widely be viewed as circumstantial or environmental mechanisms to do so. Siemsen et al. (2008, 433) define an employee's opportunity to share "as the combination of direct and, at least in short run, uncontrollable factors surrounding the employee and the task environment that inhibit or enable her sharing of knowledge with her coworker." In addition Nahapiet & Ghoshal (1998) argues that the structural dimension of social capital influences knowledge sharing via affecting the ways individuals are able to access each other for sharing knowledge and the way to participate in knowledge sharing. Furthermore, opportunities to share knowledge in an organization can be either formal or informal in nature, thus interaction between individuals can also be formal or informal (Ipe, 2003).

#### **3.2.1 Formal channels**

Technology-based systems and tools, structured organizations and ways of working, as well as different kinds of trainings and projects can be considered formal

channels to interact among employees and facilitate knowledge sharing. Structured physical places and virtual tools can create opportunities for employees to share their knowledge, experiences and ideas. Therefore, in addition to providing working environments and conditions that encourage employees to share knowledge, the organization also provides tools for employees to do so. (Chen et al., 2013; Siemsen et al., 2008; Ipe, 2003; Bartol & Srivastava, 2003.) One of the benefits of formal mechanisms, technology-based systems and tools in particular, is that they enable connecting a large number of employees, allowing them to share knowledge among each other (Ipe, 2003).

### **3.2.2 Informal channels**

Even if formal mechanisms and channels have an important role in knowledge sharing, prior research has shown that the biggest part of knowledge is shared in informal situations and interactions. Personal relationships and social networks are seen as informal mechanisms to facilitate knowledge sharing. (Ipe, 2003; Nahapiet & Ghoshal, 1998). In addition, informal mechanisms have an impact on face-to-face communication, which then in turn enhances creating trust. Trust has been recognized as one essential factor enhancing knowledge sharing as discussed in the previous chapter. Individuals need common and informal time together in order to create personal relationships with each other, which Granovetter (1992) calls “relational embeddedness”. According to Nahapiet & Ghoshal (1998) this concept of Granovetter concentrates on specific relations individuals have with each other like friendships and mutual respect, which then affect their behaviour. Informal channels are considered reliable by individuals. Stevenson and Gilly found in their study in 1991 that even if there are official channels for communication in the organization, individuals lean more towards informal relationships in communication.

### **Lack of opportunity**

Siemsen et al., (2008) state that the concept of opportunity is not as clear as the concepts of motivation and ability. There are several other resources, like money, related to the opportunity to share knowledge, but they define time as one of the most important ones. Siemsen et al., (2008, 433) also define time availability (TA)

“as the degree to which an employee has slack time available at work”. They also use this time-availability as proxy to knowledge sharing, because individuals need to have enough time available to be able to share knowledge with others. If individuals are occupied with their regular responsibilities, time becomes a major barrier to individual knowledge sharing. Lack of time has been pointed out in other previous studies as a reason why individuals are not willing to share their knowledge (Chen et al., 2013). In their study of human resource management and knowledge management, Pastor et al. (2010) mention distance – both physical and psychological – as a factor impacting on the opportunity to share knowledge. Long distances cause challenges in knowledge sharing, and by reducing distance, the opportunity to learn from each other can be provided by the organization. (Ibid.)

### **3.3 Ability to share**

Nahapiet & Ghoshal (1998) believe that knowledge is embedded in a social context and a common context is required for sharing and exchange of knowledge. Generally speaking ability can be seen as an individual's knowledge and skills to share knowledge. According to a dictionary definition, ability means human qualities like capabilities, experience, initial skills and earlier accomplishments which are useful for finalizing the needed tasks successfully (Minbaeva, 2013). Lack of ability may lead to limited capability of an individual to process information. Factors like lack of experience and limited intelligence have also been seen to reduce individuals' ability. (MacInnis & Jaworski, 1989; Anderson & Jolson, 1980.) Ability builds on individuals' earlier acquired knowledge which is needed for knowledge acquisition. Individuals' prior learning experiences may affect and improve their performance in future tasks. According to Cohen and Levinthal (1990), holding relevant knowledge and skills is essential for an individual's knowledge absorption capacity; it helps build associations between earlier unconnected information and increase creativity.

According to Chang et al. (2012) and Minbaeva and Michailova (2004), knowledge providers' commitment to sharing is essential. Some academics even suggest that

in order for knowledge sharing to be successful the knowledge provider has to be able to assess the competence and needs of the potential acquirer. The provider also needs to have visions of new ways of how his/her knowledge will be used and provide knowledge so that it is possible for the acquirer to use it efficiently. (Martin & Salomon, 2003; Reagans & McEvily, 2003). Szulanski (1996) also argues that one of the success factors of knowledge transfer is how the gap between knowledge providers and the knowledge acquirer is bridged. The wider and deeper the knowledge held by the provider is, the better they are able to understand which way their information might be valuable in another context. Consequently they are able to frame knowledge in such way that it makes sense to the potential acquirer, and therefore it is easier for the acquirer to take it into use. (Reagans & McEvily, 2003.) Moreover one's belief in one's own ability indicates self-efficacy, which seems to increase commitment to learning (e.g. Bandura, 1993).

### **3.3.1 Self-efficacy**

Self-efficacy is both an ability-related concept and a concept which sheds light on questions of why and how individuals share knowledge. Self-efficacy conceptions are formed via an evaluation process in which individuals engage when deciding whether they are able to perform an action based on the influence of personal and contextual factors (Endres et al., 2007; Bandura, 1993; Bandura 1977).

Bandura (1993; 1977) defines self-efficacy as one's belief in the ability to perform a certain task; it is as well the central cognitive mediator of the motivational process. According to Endres et al. (2007), self-efficacy theory offers a unique theoretical model which describes how persons can be motivated to share tacit and complex knowledge. The theory of self-efficacy proposes that individuals consider the complexity of the knowledge sharing task, their personal experiences and personal capability that may influence their personal ability to share knowledge as well as the level of support their environment offers for knowledge sharing. Environmental support could be provided by co-workers or superiors within a social network. (Ibid.) The context of the group or the organization is essential in impacting the creation of self-efficacy to share knowledge. Context has as well been

identified as a key element of knowledge-sharing behaviour. (Garud & Nayar, 1994.)

Self-efficacy has a provable effect on individuals' knowledge sharing actions. Based on a large number of previous researches, Bandura (1993) summarizes that individuals with a low sense of efficacy withdraw themselves from difficult responsibilities they perceive as personal threats. They have weak commitment to goals they choose to perform and when facing difficulties they decrease their efforts and give up easily. Individuals with a strong sense of efficacy view problems and difficult tasks as something to be mastered and overcome; they strongly commit to tasks and approach threatening situations with an assurance that they can take control over them. (Ibid.)

### **3.4 Nature of knowledge**

#### **3.4.1 Explicit and tacit knowledge**

As noted based on discussions in chapters one and two, one way to classify knowledge is to distinguish it into two different types: explicit and tacit. This is also the dominantly used way. Explicit knowledge is a kind of knowledge which can be codified and transferred between participants formally and systematically, and can be found for example in manuals, books and databases. In contrast tacit knowledge is very subjective and not easily expressive or coded. The roots of tacit knowledge are mostly in our contextual experiences, and individuals' own personal insights and intuitions are included in this category as well. The definition of tacit knowledge was originated by Michael Polanyi in 1966. (Nonaka, 2007; Small & Sage, 2006; Nonaka & Konno, 1998.)

According to Nonaka & Konno (1998), tacit knowledge has two dimensions: technical and cognitive. The first one covers the sort of individual skills often referred to as "know-how" and the latter contains principles, beliefs, values, schemes and mental models embedded in us and taken for granted. Tacit knowledge has been observed to be sticky in nature. In 1994 von Hippel presented the concept of

“sticky information” and defined “stickiness” as the marginal costs included in knowledge moving in such a form that is usable and effortlessly understood by the knowledge acquirer. In addition von Hippel states that stickiness for the knowledge provider rises from the tacitness of the knowledge which needs to be shared, while stickiness for the knowledge acquirer comes from absorptive capacity. Consequently tacitness of knowledge is viewed as a natural obstacle to successful knowledge sharing in an organization. (Ipe, 2003; Szulanski, 1996.)

It has been seen that explicit knowledge has an advantage over tacit knowledge because it can somewhat easily be shared between individuals. Nevertheless, in 1999 Weiss argued that even if explicit knowledge can be easily articulated, it does not necessarily mean it is available for others in the organization to use. In order to emphasise his point he separated explicit knowledge into two categories: one which can be easily shared and one which cannot, thus introducing the concepts of rationalized knowledge and embedded knowledge. The terms were introduced in the context of a professional service organization. Rationalized knowledge is defined as common, context independent, public and standardized and available, for example templates for drafting legal opinions. Embedded knowledge, instead, is defined as context-related, scarcely applicable, personalized, based on experience and even professionally or personally sensitive. Consequently embedded explicit knowledge is not necessarily easily shared between individuals in the organization. Notwithstanding whether the knowledge is explicit or tacit in nature, the value defined for it also has a substantial impact on whether and how individuals share it. (Ipe, 2003; Weiss, 1999.)

### **3.4.2 Value of knowledge**

The value of knowledge has an important role in knowledge sharing as well. When individual observes that the knowledge they have is valuable, knowledge sharing turns into a process directed by decisions about what knowledge to share, who to share with and when to share it (Andrews & Delahaye, 2000). In addition, as soon as individuals understand that knowledge they possess correlates with their individual reputation, career prospects, status and income, they become conscious

that unwise knowledge sharing could have negative impacts on them. Due to the commercial value of knowledge, and the fact that ownership of knowledge could be questioned, knowledge sharing is not an automatic process, but needs to be done wisely. (Ibid.) In professional organizations where employees perceive that the knowledge they have is their value in the company, they might be reluctant to share knowledge as it can be considered to reduce their own value and importance – in other words their power. Such an unwillingness to share knowledge is emphasized in situations where uncertainties and insecurity are present, for example acquisitions, merges (Ipe, 2003; Empson, 2001; Weiss, 1999) and offshoring projects.

### **3.5 Culture**

Knowledge and knowledge sharing have been recognized as critical for companies to survive and succeed, hence it is essential to understand how culture influences knowledge sharing in organizations.

Culture can be defined in many different ways. Hofstede (1980, 24) defines culture as “collective programming of the human mind that distinguishes the members of one human group from those of another.” He also considers culture to be a system of collectively held values. Culture and social environment impact people’s values and again values impact behaviour and views (Ibid). Before 1980 organizational culture was thought to be unconnected to national culture. However, Hofstede (1980) claims that an organization’s culture is embedded in national culture. Thus, national culture should be taken into account in human resource practices and considered an influence in organizational behaviour. (Rivera-Vazquez et al., 2009.)

#### **3.5.1 National and organizational culture**

Both national and organizational cultures influence knowledge sharing, and thus cultural aspects need to be taken into account and understood in order to make knowledge sharing effective and successful. Therefore certain cultural obstacles

need to be identified and overcome. In the existing literature cultural obstacles have been divided into two levels: 1) the macro level, which has to do with the cultural dimensions of Hofstede (1983) like Power Distance, Individualism/Collectivism, Masculinity/Femininity, Uncertainty Avoidance and 2) the micro level, which acts with the organizational culture because it is formed by the national culture of citizens working for the organization (Rivera-Vazquez et al., 2009).

According to McDermott & O'Dell (2001), an organization's culture can be seen as a reflection of the visible aspects of the organization, like its adopted values and mission. Thus, culture is embedded in the way individuals act and in the expectations they have of each other and how they interpret each other's behaviour. Finally, an organization's culture is deeply rooted in its core values and presumptions, which often are taken for granted as they are invisible and not communicated that clearly. The organizational culture being embedded in several layers of the organization can lead to an inconsistent way of acting of individuals in relation to the openly communicated values and missions. However, their actions are usually consistent with the organization's underlying core values. Hence, in an organization with a knowledge sharing culture, individuals share their knowledge because they see it as normal, instead of something they are forced to do. (Ibid.)

Individual level knowledge sharing can be impacted with different obstacles and barriers related to culture. The base for those obstacles can be either subjective or objective. Based on earlier researches, Hauke (2006) presents for example an unfavourable organizational culture, different technological backgrounds, poor commitment of managers to knowledge sharing and a lack of financial incentives and time as objective obstacles. Accordingly, protecting one's own position and expertise, lack of trust and fear of changes can be seen as examples of subjective obstacles.

The management has an important role in the organization in creating and developing an appropriate culture for knowledge sharing. Visible and invisible layers of culture need to be balanced by creating a culture which builds on invisible underly-

ing values and at the same time clearly shows the essence of knowledge sharing. (Rivera-Vazquez et al., 2009; McDermott & O'Dell, 2001.)

### **3.5.2 Sense of duty**

When analyzing the culture of the Department of Defence (DOD) for their conceptual research, Tinoco and Arnaud (2013) discovered a new cultural dimension not earlier studied in mainstream organization literature or management research: sense of duty. They define sense of duty as “the degree to which an organization feels a profound obligation and allegiance to support a mission or cause” (Tinoco & Arnaud, 2013, p. 39). Sense of duty includes values of integrity, loyalty, unyielding obedience, selflessness, subordination, duty and discipline; sense of duty is as well deeply connected with sense of obligation and loyalty to a cause. Tinoco and Arnaud’s study looked at sense of duty in a military environment, thus also organizations that share a commitment to supporting a mission or cause, like hospitals or non-profit organizations, can have this dimension in their culture. They also discussed sense of duty at the organizational level; however, organizations consist of individuals these organizations employ. These persons are likely to be diligent, obedient, disciplined, and selflessly committed. Even if this exceptional cultural dimension is highly related to a military culture; Tinoco and Arnaud (2013) argue that it also relevant outside the military boundaries.

In their study Duran & McNutt (2010) discuss personal sense of duty. According to their article, the German philosopher Immanuel Kant (1724-1804) stated that one needs to do one’s duty for duty’s sake; and as individuals we have an obligation to act consistently with our duty. Consequently it can be said that in moral actions reason leads more than follows. In an organization, the most obvious example of morally correct action is when employees decide to act according to their duty even if it contradicts their clear self-interest and evident desire to act otherwise. An individual’s tendency to behave opportunistically depends on the benefits gained by that kind of behaviour and the disposition towards the other party to a transaction (Douma & Schreuder, 2002. Ref. Duran & McNutt, 2010). However, Duran and McNutt (2010) argue that individuals who do not involve themselves in oppor-

tunistic behaviour, have either a strong personal sense of duty or they have been influenced by beliefs and ethical values embedded in the layers of the company or organization. These statements propose that a part of the individuals will not cheat in actions they are performing because that would be against their morality or ethical values. (Ibid.)

### **3.6 The knowledge governance approach and mechanisms**

As mentioned in chapter one, the knowledge governance approach (KGA) is based on the idea that knowledge management processes can be influenced and directed via different knowledge governance mechanisms (KGM) like organizational structure or HRM and management practices. By choosing the most suitable mechanisms, companies and organizations can enhance individual level knowledge sharing; therefore organizations have lately been very interested in knowledge governance. (Foss, 2010; Foss, 2007.) One way to categorize knowledge management mechanisms is to divide them into formal and informal ones (e.g. Huang et al., 2013; Foss, 2010). In order to understand the governance of knowledge sharing, it is essential to observe both kinds of organizational mechanisms, due to their mutual interdependence: formal organizational mechanisms can impact organizations' informal aspects (Foss, 2010).

Formal knowledge governance mechanisms like communication, management and HRM practices, reward systems and performance-based-pay, offer great opportunities for companies and organizations to communicate, create norms and build organizational culture. Norms and communication contribute to the knowledge sharing culture of organizations, and formal knowledge governance mechanisms support motivation for knowledge sharing by facilitating knowledge sharing opportunities in the company or organization. (Huang et al., 2013; Wang & Noe, 2010; Gagné, 2009; Cabrera & Cabrera, 2005.)

According to Huang et al. (2013), informal knowledge governance mechanisms can mostly be seen as methods for building friendship, mutual trust, norms and respect in relationships between individuals. Trust, cooperation in teams, social

norms and other social motivational factors in the organization are based on the organization's informal knowledge governance mechanisms (Huang et al., 2013; Quigley et al., 2007). The social norms of the company or organization can be created via the socialization process, and as part of the informal knowledge governance mechanisms they can generate a social pressure for individuals to act accordingly and thus enhance the willingness to share knowledge (Gagné, 2009; Quigley et al., 2007; Cabrera & Cabrera, 2005). Informal knowledge governance mechanisms in the organization (like informal team meetings and common lunch canteens) can be viewed as socialization methods to support individuals' possibility to create closer personal relationships with colleagues and enhance the social capital among them. According to Gupta and Govindarajan (2000), a good and trustful mutual relationship between knowledge sharing parties increases the willingness to communicate and share knowledge. Also, interpersonal relationships in social networks can impact knowledge sharing willingness via creating a favourable environment. (Huang et al., 2013; Cabrera & Cabrera, 2005.)

### **3.7 MOA framework**

The well-established Motivation, Opportunity and Ability (MOA) framework has been used to explain individuals' knowledge sharing behaviours in current discussions (e.g. Siemsen et al., 2008). It has also been used in several different researches and fields like marketing research (Rothschild, 1999) and knowledge work (Kelloway & Barling, 2000.) In addition, a similar framework called AMO (ability, motivation and opportunity) has been applied in HRM research, in order to describe the effects of HR practices on an organization's performance (Paauwe & Boselie, 2005). Reviewing the existing literature and discussions related to knowledge sharing it is clear that all these three factors, motivation, opportunity and ability, are tightly linked to an individual's level of knowledge sharing.

## **4 THE CASE, RESEARCH DESIGN AND RESEARCH METHODS**

The following sub-chapters present the case, the research design of this study, the research strategy, the chosen research approach and the research data. In addi-

tion, the data handling done by using a content analysis will be described and the reliability and validity of the research will be verified.

#### **4.1 The case**

The empirical part of this research was conducted as a multiple case study in the global IT company Alpha, which has operations in several countries and offshore units including in India. Drivers for offshoring are typically cost saving needs in the company or customer needs and requests. Sometimes employee co-operation negotiation is related to offshoring projects, which may increase uncertainty among employees who need to transfer their work to offshore units. It has been noted that some offshoring projects have been somewhat smoother than others and in some cases the number of challenges faced has been higher than in others. Two offshore projects (Project Gamma and Delta) from the company Alpha were selected for the research. The scope of both projects was application development and maintenance work, but the reasoning for the offshoring projects was slightly different. In project Gamma the aim was to enlarge an already existing onshore team to offshore and to spread competence offshore. In project Delta the scope was to transfer a large part of the onshore work offshore. In both cases the onshore country was Finland and offshoring was done to India.

Offshore project Gamma was considered to be somewhat smooth. In this project the starting point was to expand the existing team to offshore and widen the competence base of offshore colleagues. Another aim was to ease future retirement challenges related to applications concerned. Knowledge transferred during the project was mostly connected to the customer's business processes and different kinds of information about applications in the scope starting from very basic and general, like the functionality of the program/system at a higher level, down to detailed program information and program/system code. The nature of the shared knowledge was both explicit and tacit. Most of the onshore knowledge providers had been former employees of the current customer but had been outsourced to Alpha already several years previously. No employee co-operation negotiation was taking place in the unit at the time when the knowledge sharing and transfer

to India was done. The informants were mostly over 50 years old, and they all had long working experience. Nevertheless, most of the interviewees had no earlier experience of offshoring projects. Six of the interviews were done in relation to project Gamma.

In the other offshore project, Delta, the starting point was different and somewhat more challenges were faced during the project period. As mentioned earlier, project Delta included offshoring of application development and maintenance work. Knowledge shared and transferred during the project was related to applications and systems from overall functionality of the program and technical structures to program code and detailed level information. A large part of the information shared was explicit but most of the shared knowledge was tacit in nature. In the beginning of the project the aim was to transfer a major part of the work done onshore to offshore, and employee co-operation negotiation was going on parallel to the offshore project. A major part of the organization's employees was under negotiation, and such uncertainty related to the future led to number of employees leaving the organization for new employers. However, when the "knowledge drain" was recognized, the employee co-operation negotiations were finalized sooner, and in the end no-one was laid off as a consequence of the offshoring knowledge sharing and transfer project. However, due to the drastic start, the uncertainty was almost touchable during the project. The scope organization in project Delta had worked successfully with the same customer for years. Therefore it was difficult for some individuals to accept and understand the reasoning behind the offshoring project. The age structure of the informants was somewhat similar in project Delta than in project Gamma; they also all had long working experience. Eight people were interviewed from project Delta.

In order to get diverse angles to the themes concerned as well as a wider perspective on improvement ideas for offshoring projects, three managers with long experience and responsibility for these kinds of projects were interviewed as well.

Related to these two projects, the project managers, employees from onshore countries who were transferring and sharing the knowledge with offshore col-

leagues and some other key members of the projects were interviewed. Due to the subject of the study being quite sensitive, the interviews were conducted as personal theme interviews using a semi-structural template. Due to the geographical distances, a part of the interviews was handled via phone.

## **4.2 Research design**

Research always has an aim or a purpose, and selection of the research strategy is done based on that. The research can be exploratory, explanatory, descriptive or predictive. However, research may also have several purposes and the purpose can even change during the ongoing research process. (Hirsjärvi et al., 2009, p. 138.) This research can be considered to be exploratory and explanatory as the aim of this study was to research a somewhat novel subject which has not yet been widely researched and investigate and understand the factors enhancing individual level knowledge sharing behaviour in uncertain conditions.

### **4.2.1 The research strategy**

According to Metsämuuronen (2011, p. 224) the case study is the central strategy for data collection in qualitative methodology. Hirsjärvi et al. (2009, p. 134-135) argue that the purpose of a case study is to collect detailed and intensive information about either one case or a small group of cases which are related to each other. In a case study, one case, a group of cases or a certain situation is chosen for the study. The interest often lies in processes, and individual cases are studied in relation to the context in which they exist. Material and data for the case study is collected using several methods, for example reviewing documents, observing and interviewing. A typical aim for a case study is to describe and understand a phenomenon. (Ibid.) According to Metsämuuronen (2011, p. 223), a case study has certain benefits, for example the starting point of a case study is usually practical and therefore the results can be applied in practice. A common language can be used in reporting, which brings the study to the reach of a wider audience of readers. Readers can also make their own conclusions based on the case study report.

The focus of this study is individual level knowledge sharing in two offshoring projects in which work was transferred from an onshore to an offshore country. In order to understand what made individuals share their knowledge in such a context, detailed information and understanding about the phenomenon and participants were needed. Therefore case study was selected as the research strategy for this study.

#### **4.2.2 Qualitative research approach**

According to Metsämuuronen (2006, p. 208), after selecting the research strategy, the researcher needs to select which methodology – qualitative or quantitative – to use in the research. The qualitative research methodology is especially appropriate when the interest is to understand the importance of structures of individuals included in a certain context or when the interest of the research lays in detailed structures of events. The qualitative research approach is also suitable when researching such natural circumstances which cannot be arranged as tests or when researching natural circumstances where all impacting factors cannot be controlled. Qualitative research is appropriate as well when the focus of the research is to get information about the cause and the effect of cases which cannot be research via arranged tests. (Metsämuuronen, 2011, p. 220.)

Qualitative research is comprehensive and the data is gathered in a real and natural context. People provide the research data and the researcher's observations; in addition discussions have an important role when gathering information. In qualitative research the researcher aims to reveal unforeseen issues and observe the material and data in a detailed way, therefore inductive analysis is applied. Qualitative methods are used when gathering the data; the aim is to use methods which enable hearing the participants' voice. Theme and group interviews are examples of the qualitative methods used in qualitative research. The target group is carefully selected and the research plan can be flexibly modified during the research. Qualitative research handles cases as unique and the data is handled accordingly. (Hirsjärvi et al., 2009, p. 164.)

Because the purpose of this study was to research a somewhat novel and delicate subject, the qualitative research approach was well suited to the study. People were in a key role and provided information in interview situations; therefore the qualitative research method was selected for this study.

### **4.3 Research methods**

According to Metsämuuronen (2011, p. 220, p. 243-244) there are several research methods for qualitative methodology but the central and most commonly used research methods are observation, text analysis, transcription and interview. Observation in qualitative research is considered a fundamental technique to understand other cultures, and text analysis is used to gain a better understanding of the categories used by members of the culture. Transcribing is used in order to understand how research participants organized their speech or writings. When using interview as a qualitative research method, open or themed questions are presented to the selected individual or group. (Ibid.) Interviews can be executed for example as face-to-face individual or group interviews, form interviews or phone interviews. An interview can be open, structured or semi-structured and the length of the interview can vary from minutes to several days. Interview is especially applicable for example to exploratory studies or when emotional and intimate matters are researched. Interview is a method which is suitable for many different research situations, and worth using despite the fact that it can be considered to be laborious and demanding in the analysis phase. Semi-structured interviews can also be called theme interviews. These are often used when researching sensitive and intimate matters or subjects with weak awareness. (Metsämuuronen, 2011, p. 243-247.)

Due to the sensitive subject of the study, individual theme interview was selected as a data collection tool. Interviews were done individually either face-to-face or by using phone. Face-to-face interviews were done when possible, and phone was used when the geographical distance was such that it was not practical to have a face-to-face interview.

### 4.3.1 Data collection

In order to get a profounder understanding about the subject under research, the informants were selected according to their different roles in offshoring projects. The roles included in the study are individuals who had shared and transferred knowledge in the projects, project managers and other key members of the projects. Also some representatives of management with in-depth offshoring experience were included. Knowledge sharers, project managers and other key members were selected as interviewees from the two chosen offshore projects, Gamma and Delta. The projects were selected based on the different starting points and number of challenges experienced in the project phase. Offshoring projects always have some amount of challenge, but in the Gamma project the number of challenges in the project phase was considered to be smaller than in project Delta.

The data collection was done by using individual interviews held face-to-face or over the phone. Individual interview was selected due to the sensitive and intimate subject of the study and in order to get honest answers, individual opinions and views. With individual interviews the privacy of the informants was also secured. Themes and theme questions were composed based on the research questions and theoretical framework of the study. In total 17 informants were selected for the research. As mentioned earlier, six persons were interviewed from project Gamma and eight from project Delta. Three management representatives were interviewed. Eight interviews were done face-to-face and nine over the phone. Table 1 contains more detailed information about informants. As most of the informants were Finnish, the theme questions were prepared both in Finnish and in English. The themes were the same for all informants, but the theme supporting questions were modified to suit each role concerned. All themes were covered with each informant; however the order of the themes and possibly needed support questions were defined according to the course of the interview. As an example of the interview template, the template used for specialists' interviews can be found as appendix 1 in this study.

Table 1. Informant information of the study.

Informants	Project Gamma	Project Delta	Managements' representatives
<b>Gender</b>			
Female	4	4	
Male	2	4	3
<b>Role</b>			
Specialist	4	3	
Architect		1	
Project Manager	2	3	
Customer Manager		1	
Manager			3
<b>Working experience</b>			
10-20 years		2	2
21-30 years	3	2	1
31-40 years	3	4	
<b>Offshore experience</b>			
1-2 projects		6	5
3-4 projects			1
5-> projects			2
9 years or more			3

One interview was performed as a test interview in order to ensure the functionality of the themes and the support questions, as well as to check that the time reserved for the interview was sufficient. Some of the support questions were slightly modified after the test interview. One hour was reserved for each interview and depending on the informant the actual duration was from 35 minutes to approximately 75 minutes. The informants were informed beforehand that the interviews will be recorded.

#### 4.3.2 Data analysis

Research data analysis of the study was conducted by using the content analysis method. In this method research data is observed via consolidating, classifying and searching for similarities and differences among the data. Content analysis is text analysis, in which the reviewed data is already in a text format or materials modified into such a format. Text materials analyzed by using content analysis

may vary a lot. They can be for example interviews, discussions or diaries. The aim of using content analysis is to get a compact description of the phenomenon concerned and connect the results to prior research results and a wider context. (Tuomi & Sarajärvi, 2002, p. 105-110.)

Content analysis can be done either inductively (research data-driven) or deductively (theory-driven). In between and connecting these two aforementioned methods is abductive content analysis. In the inductive approach the theory or hypothesis is not tested, nor does the researcher decide what is important in the data. Inductive content analysis can roughly be divided into three phases: 1) data reduction, 2) data clustering and 3) abstraction. Reduction can be done for example by mirroring the research questions against transcribed data and searching for expressions matching the questions from the data. In the clustering phase similarities are searched among original expressions in the data. Groups are made of similar concepts and the groups are classified. Abstraction follows clustering; relevant data for the research is separated from the data, and theoretical concepts are created based on the chosen data. Figure 6 describes the process of inductive content analysis. (Tuomi & Sarajärvi, 2002, p. 110-115.)

### Phases of inductive content analysis

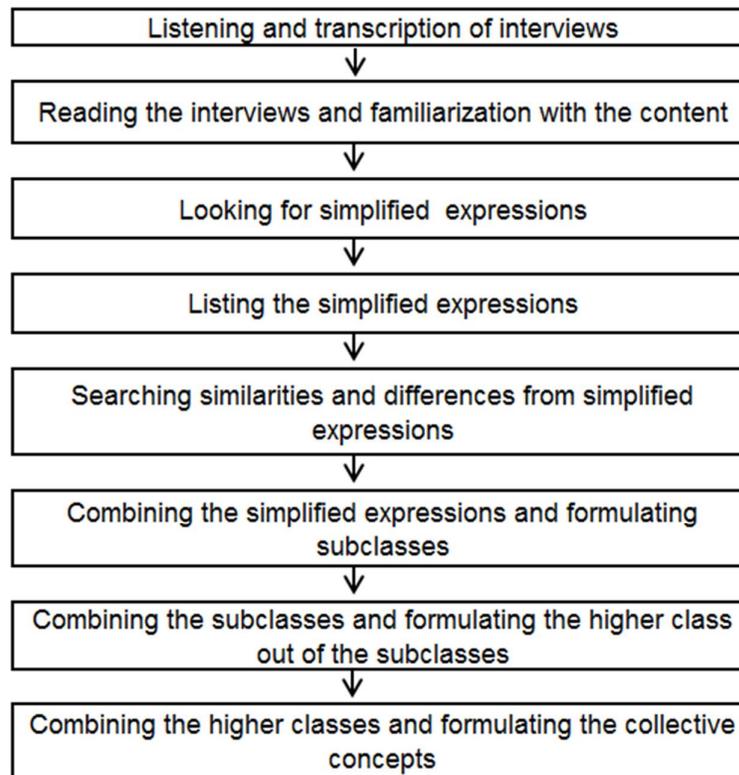


Figure 6: Process of inductive content analysis, adapted from Tuomi, J. & Sarajärvi, A. 2002, p. 111.

For this study the inductive approach was used and processing of the research data mainly followed the phases presented in figure 6. It started with transcribing the interview data and continued with familiarization with the data. The transcribed interview data was read through several times in order to internalize the content of the interviews. As next steps, the data was browsed through thoroughly following the themes of the interview frame to find out and list similar expressions for creating subclasses for those expressions. The higher classes were formulated based on the subclasses. Observations made were gathered according to the themes and combined with the research questions and theoretical frame of the study. The interpretation of results was done reflecting the outcomes against the previous literature, and based on this the research sub-questions were answered. Finally, the research questions were answered and the results viewed in a wider context. An example of the data analysis and processing can be found in appendix 2.

Both of the offshore projects, Gamma and Delta, were first analysed separately and results were compared in order to see similarities and differences between the projects. In addition the overall views of the managers related to the themes were reflected against findings of the projects in order to get a wider perspective on the themes.

Because the informants of the study were mostly Finnish, the interviews and transcriptions were for the most part made in Finnish. It should be noted that in the findings of the study in chapter 5, the quotations from the data have been translated from Finnish to English by the researcher and they may not be exactly equivalent to the original data. The interview question templates have also been translated in the same manner so might have the same issue as well.

#### **4.4 The reliability and validity of the research**

In order to avoid mistakes and errors in the research, reliability and validity needs to be evaluated for each study (Hirsjärvi et al., 2009, p. 231). The reliability of the research means repeatability of the result of measurement, and its ability to generate non-random data. Reliability can be evaluated in several different ways, for example, if several evaluators end up with same result, the result can be considered reliable. (Ibid.) The validation means the gauge's or research method's capability to measure what has been intended. Gauges and methods do not always correspond to the reality which the researcher intended to measure. For example interview questions can be misunderstood by the informant, and the answers received may not be valid for the research. (Hirsjärvi et al., 2009, p. 231-232.) The researcher can improve the reliability of the research by exact definition of the execution of the research; every phase needs to be explained at a detailed level (Ibid).

According to Eskola & Suoranta (1998, p. 214) validity is divided into external and internal validity. Internal validity means that there is a harmony between theoretical and conceptual definitions. Also the theoretical starting points and the definitions

of conceptual and methodological solutions need to be in a logical relation with each other. External validity, in turn, means validity in relation between interpretations, conclusions and the research data. (Ibid.) Validity can be added using triangulation in analysis (Hirsjärvi et al., 2009, p. 233). Simplifying the triangulation means combination of different methods, source of information, researchers or theories in the study. Data triangulation in the study means that one study includes different kinds of data which has been gathered from different informant groups such as nurses, doctors and patients. (Tuomi & Sarajärvi, 2002, p. 141-142; Eskola & Suoranta, 2008, p. 69).

In this study the illustration of the research process provides the possibility to repeat the study similarly. The framework and research questions have been presented as well. The framework of the study was based on existing literature and the themes and questions in the interview were consistent with the research framework. The results were analysed following the theoretical framework, and these were discussed together. Data triangulation was used in data analysis in order to increase the validity of the research. In this study the triangulation formed of the combination of the different informant groups related to the research questions. Different informant groups used in the study were knowledge sharing participants, project managers (or other key members) and representatives of management.

In this chapter the aim has been to present the cases and the research design and research strategy of the study. In addition the purpose has been to describe the research methods so that the reader could see and understand the background of data collection and data analysis. The findings of the study will be presented in the next chapter.

## **5 FINDINGS OF THE STUDY**

The findings of the study are presented in the following sub-chapters, reflecting the sub-research questions and case by case. Managerial views are presented in a

separate sub-chapter after the findings of the cases. Cross case findings will be evaluated in chapter 6.

## **5.1 Factors enhancing individual level knowledge sharing**

### **5.1.1 Offshore project Gamma**

Several different kinds of factors enhancing individual knowledge sharing were brought up by the informants. When looking at the overall picture, issues brought up were often connected to certainty, motivation to share, opportunity to share and ability to share knowledge. Also matters related to the knowledge governance approach and mechanisms like the role of the management or a suitable culture and climate – either national or company and team – clearly had positive influence on knowledge sharing. Communication, clear responsibilities and well working processes and structures were considered to support individual level knowledge sharing. Management's commitment and care for employees was also brought up.

#### **Enhancing factors related to knowledge governance mechanisms**

Open and honest *communication* was clearly considered a very important factor for enhancing knowledge sharing. This was brought up several times per interview and almost by every interviewed person regardless of their role in the project. Informants felt that information about the background of the offshoring projects and reasons and aims and future prospects should be communicated openly. Individuals wanted to know "What will happen to me?" However, it was well understood that these matters are not always positive or nice to hear, but it was viewed that even honest bad news is better than uncertainty. People felt that when they knew where they stand, it was easier for them to look to the future.

"In my mind the crux of the matter is that the background is known by all, so to say 'Why we are doing this'. (...) well if we are doing these kinds of things, we should know why we are doing it and what the goals are. That needs to be openly communicated to all. So that it's known if this is only our own aim and goal, is it some cost savings we are after, or does the customer have some goals as well". (Project manager F, Gamma)

“Generally these things are not handled thoroughly enough, so that people would understand why these things are done and what the aim is. These things are not clarified enough, and speculation about matters like ‘Does this mean that our work will totally end?’ will be left in the air. (..) It is most essential that an individual knows what she/he is doing.” (Specialist B, Gamma)

*Management’s commitment* towards employees was raised as an enhancing factor as well. The visibility and presence of management representatives were considered important, because they are concrete signs to employees that management is interested and focused on the case. The possibility to discuss openly with management was considered as a good way to eliminate – sometimes even unnecessary – fears and to support future knowledge sharing between the counterparties.

“But it particularly helped that we had those discussion sessions where everyone could bring up their fears. All fears and prejudices and everything – you were allowed to say everything aloud. Nobody’s opinion was shot down or judged, but everything which was said out loud was handled and discussed. It was especially helpful that you were allowed to say even the most extreme comments out loud. Generally it’s the same in life in general when you say things out loud; they immediately become a bit different compared to the situation where you just think about them alone on your own.” (Specialist D, Gamma)

The already existing *culture of knowledge sharing* was brought up as a clear enhancing factor. Sharing knowledge between colleagues had been a practice and part of the normal way of working among the individuals included in project Gamma already before this offshoring project; therefore it was considered as a booster for knowledge sharing in this offshore project too. It was considered important that there was a “one team” mentality among the project participants. There was a

strong willingness to build and maintain “one unified team” among the project participants regardless of their location.

“One thing which enhanced knowledge sharing and teaching was that we already had this kind of knowledge sharing culture in this unit. Getting help when you ask for it is something you can always count on. And similarly you want to help as well because you know that others are helping too. The same thing with sharing – you want to share because you know that others are sharing too. This kind of knowledge sharing culture helps.” (Specialist D, Gamma)

“Having one team was a very central concept in our project. We had a one team mentality on two levels: offshore and for our new customer team consisting of both the onshore location and the offshore personnel. This was really important, and in the end we really built one team. This enhanced learning, and project members could also get support from one another. If we didn’t have this one team mentality, someone might hold back knowledge and not be willing to share.” (Project manager F, Gamma)

### **Motivation-related enhancing factors**

*Certainty about one’s own future*, future vision and role were factors that enhanced and motivated individual level knowledge sharing too. If an individual had no fear of losing their job or were close to retirement, they felt more comfortable to share the knowledge with offshore colleagues.

“If I remember correctly we were told that this project would have no impact on our jobs. This kind of guarantee was given at the time.” (Specialist A, Gamma)

“I am approaching retirement age soon, so I need to leave these things to someone in any case.” (Specialist B, Gamma)

*Work motivation, work ethic and pride in one's work* were also mentioned as enhancing factors for knowledge sharing. Even if the knowledge sharing task had some negative sides in the form of uncertainty, employees had high work motivation and work ethic and they were proud of their own work. Therefore they wanted to carry out the given knowledge sharing work and task in a good manner as well.

“Commitment was good, even though of course we are individuals and each one of us grumbled and moaned - some more and some less. However, the work motivation was quite high, as was pride in one's work and competence. Everyone certainly did their best and succeeded as well.”  
(Specialist C, Gamma)

*Sense of duty* as an enhancing factor for individual level knowledge sharing was brought up by several informants. Orders and tasks given by a superior and management are considered a must; they are obeyed and not challenged. Employees do as they are told, and no questions are asked.

“It's when you are told [from a higher level] to hold these kind of trainings.”  
(Specialist B, Gamma)

“The obligation to share is for example that in our company we are just told from a higher level that this needs to be done. So it has been agreed. Someone at a higher level of management has agreed with the customer that we will now adopt this kind of pattern or way of working. And we don't have any voice in that, we just have to do as we are told if we want to keep our work.” (Specialist C, Gamma)

Sense of duty can be related also to national culture and norms, company culture and norms or fear of a negative impact of questioning a decided matter.

*Commitment* to the customer and to the company and the customer's commitment to the knowledge sharing project seem to work as enhancing factors for the indi-

vidual. It was considered important that the customer was also committed to knowledge sharing and wanted it to happen.

“If you try to think of these matters from the perspective of how they would be best for the customer, then it’s better just to share knowledge. Because at the end of the day the customer is the one who brings the bread to the table. And – let’s put it this way – perhaps even saves you from employee co-operation negotiation.” (Specialist C, Gamma)

“Most of these onshore employees are ex-employees of our current customer. They were outsourced to us several years ago but they still feel that they have the ultimate responsibility for keeping the customer’s wheels rolling, and they do everything for that.” (Project manager E, Gamma)

In this project it seemed like the connection to the previous employer – the current customer – was strong, and therefore the commitment to the customer was very high. In addition, the customer in practice took part in the knowledge sharing project. This was appreciated by project participants and boosted knowledge sharing.

*Personal relationship between the knowledge provider and acquirer* was raised as a significant enhancer of knowledge sharing. It was considered a benefit that employees had a close relationship and knew each other outside of work as well. It was easier to ask questions and work together.

“It was clearly seen that in some way favourable persons were identified while working – like ‘this and this person is really nice and it is fun to work with him or her’ or ‘she or he understands and grasps matters quickly’ and so forth. You like to work with certain people more than with certain others, as is normal in the workplace. There were these kinds of personal relationships.” (Project manager F, Gamma)

“One thing perhaps was that the colleagues selected to our team were nice people. (...) When you get to know each other better, it increases your will-

ingness to help colleagues and so forth. So if you are only over the phone or online, and never face-to-face, you don't learn to know the people, it is not that personal." (Project manager D, Gamma)

"It is important to create common rules and make it equally important that everyone follows them and that deadlines are kept. This concerns everyone. (...) We actually created common rules together while offshore employees were here in Finland. After the onshore period things were reviewed and we also made a feedback survey about satisfaction and trust (...) I see that these kinds of common rules are needed in every project. They need to be in place and respected. (Project manager F, Gamma)

One enhancing factor brought up by several informants was *perceived benefits*. The knowledge sharing project was seen as a possibility to move to jobs which are higher in the value chain. When sharing knowledge to offshore colleagues, employees felt that they were learning at the same time too. Learning was related for example either to the content of work itself or improvement of language skills.

"Well, yes, over the years I have learned that while teaching others you also learn something yourself. And that is actually true. When you teach someone else, you are absorbed into matters in a different way, you notice more yourself as well. You dig out facts that you have not been familiar with earlier, that's the way it goes. And then you face some questions to which you need to find answers and so forth. So in that sense I have felt that teaching is motivating." (Specialist D, Gamma)

Another perceived benefit was related to one's own work and the possibility to have a lighter workload or get better and more meaningful work.

"Well, let's put it this way: balancing my own workload was the biggest reason [for sharing]." (Specialist C, Gamma)

“(...) part of the people was under a really heavy workload, and they saw that this could even make their work easier in the future, they would not be that burdened anymore. They considered this a positive possibility to be able to concentrate on different kind of work they would like to do.” (Project manager E, Gamma)

*Rewards* connected to knowledge sharing divided opinions among the informants. Monetary rewards in particular were partly considered as a double-edged sword, and not necessarily the best way to reward employees in these kinds of situations.

“Yes, well, (...) there was a lot of discussion about these project rewards, and of course these could be taken into use. But then the system should really work, and people should know how it works. When people succeed – and that is many times the case – it would be good to recognize that. Then we come to the question of what the reward should be – should it be money or doing something together or... It is of course difficult since people are so different.” (Project manager F, Gamma)

“Rewarding is a bit like a double-edged sword. But of course it would be nice. (...) Perhaps it would be the best reward if someone would say that you will not be included in employee co-operation negotiations for 5 years. That one could have “work peace”, that would be quite nice.” (Specialist C, Gamma)

### **Opportunity-related enhancing factors**

An opportunity to share knowledge was emphasized as an enhancing factor. *Meetings and scheduled face-to-face training sessions* were considered essential and most effective for individual level knowledge sharing. *Visits* to India and Finland were necessary enablers allowing knowledge sharing to take place. *Technical tools* like Microsoft Lync and the possibilities provided by them are considered a must when the geographical distance is long.

“Well, especially when the case is that they are in India and we are here, Lync is good for sharing – you are able to share and see what is being done by the other, and you are able to discuss and go through the action. And then quicker and clear matters can be handled via mail. Of course it helps knowledge sharing.” (Specialist C, Gamma)

Other factors related to the opportunity to share knowledge brought up as enhancing factors were *working together and working with real cases*. The informants clearly emphasized that one of the best ways to share and transfer knowledge successfully was working together on real customer cases. The importance of the customer’s commitment also came up in connection with this point; there must be real customer work to be done after the theoretical and explicit knowledge has been transferred. It is important to be able to test the learned knowledge and matters in practice.

“(…) but it occurred to me that if you want this thing to work, it needs to be done so that you work together. There is no work of yours or mine but common work. Things are done together; that is actually the only way to learn. (...) In my opinion that is something which makes matters proceed. (...) Learning demands regular co-operation. Because things won’t happen so that you just take one lesson and then you’ll remember everything. You need to work and face issues, and get additional information related to them from colleagues and so forth. A natural way to learn is to have a problem at hand which you need to solve, and when you get background information related to that, then you are able to solve it.” (Specialist D, Gamma)

“The key thing is that you have hands-on work available, because through that you learn and understand what it is all about. We pushed the customer quite hard with ‘Now you need to have these change requests ready to get started.’ They needed to give them now, otherwise this wouldn’t work. We will not know whether offshore is able to perform these things or not, if they cannot be ‘hands on’ with it. During the onshore period we went through the

change requests and when they went back offshore, they implemented them.” (Project manager F, Gamma)

### **Ability-related enhancing factors**

Ability-related knowledge sharing enhancing factors were also identified. It was felt that special attention should be paid to placing the right persons to share information. This means that the knowledge provider should have the *appropriate skills and competences* as well as long enough *experience*. In addition the competence and *absorptive capacity* of the knowledge acquirer were considered to have an impact on the knowledge provider’s willingness to share knowledge. Fluent *language skills* were also mentioned as an enhancing factor for sharing.

“Well I think in order to be able to share knowledge and teach people, you need to have some kind of view and understanding about the matter. Documentation won’t come out of the blue (..) long experience and mastering the matter.” (Specialist A, Gamma)

“Well, it’s a good point that there are differences between the people – no matter where we are. Others catch the point quicker than others and some are more interested in matters than others. So another determining factor is that with receptive people you are able to go deeper into matters than with those who are not that eager to find out matters by themselves by reading the documents. In the latter case you need to explain the same thing several times – the difference is remarkable.” (Specialist C, Gamma)

“I found it relevant that I had spoken English earlier, which made it easier for me.” (Specialist B, Gamma)

Knowledge providers’ professional self-confidence, long experience and trust in themselves were also considered to enhance individual level knowledge sharing.

“Well, yes, of course, knowledge is derived from experience. It also gives you the self-confidence needed to tell matters to others as well.” (Specialist B, Gamma)

*Self-efficacy* as an enhancing factor for individuals to share knowledge was brought up too. Trust in one’s own abilities, solid experience and capability to cope and manage in new and different situations in the future were considered to enhance individuals’ knowledge sharing with offshore colleagues.

“I believe that my own background, the fact that I have done several different kinds of work, made it easier for me to share knowledge compared to people who have worked only with one application or system. That kind of person might experience the situation as even more threatening and fear that the work might disappear or end. On the other hand, if you have worked with several kinds of tasks and jobs you know that if this kind of work ends or disappears, there will be something else. So that can also have an impact on your attitude.” (Specialist D, Gamma)

“In particular, if you have several times been in a situation where you have jumped into the unknown, you are confident that you will make it and it is not a catastrophe if something new comes up – you know that you can learn and that you are able to do several kinds of jobs.” (Specialist D, Gamma)

### **Nature of knowledge**

The atmosphere and climate in the project was mostly such that both kinds of knowledge – *tacit and explicit* – were shared during the project. No difference was brought up related to these. Many of the manuals related to shared data were outdated or lacking, which naturally had an impact on knowledge sharing in the project, even though many manuals and instructions were created during the process.

“Well at least I saw that people were willing to share every kind of knowledge. It didn’t make difference whether it was tacit or in some manuals.” (Project manager E, Gamma)

However, uncertainty and fear of one’s own future – which will be looked at more closely in the next sub–chapter – had some impact on sharing knowledge which was considered critical in terms of the person’s importance for the company in the future. Knowledge was somewhat easily shared at the general level but the “critical” parts were left unshared. This was thought to be some kind of guarantee that the employee will still be needed by the company in the future. This was clearly also related to the *value of knowledge* recognized.

“Of course the fear of losing your own position is an obstacle. It also limits the level and type of knowledge which is shared. Yes, knowledge was shared, but how deep and how critical. Fear had an impact on that. (...) You kept the critical parts to yourself.” (Specialist D, Gamma)

As well in cases where considerable business critical risks with significant financial losses were seen or the knowledge was considered very complex, the knowledge was decided to be left unshared.

“Well some classification was done already in the beginning. Parts which were considered really complex or critical were left outside the sharing and transfer in the first place (...) and as we have this responsibility for the case if something goes wrong, the alarm comes to us. We then need to find ways to prepare the issue and ensure the functionality. So that kind of knowledge we didn’t want to [share]. In such points where there was a big risk of causing something negative. So such points were excluded from knowledge sharing already from the start, and it has been like this all the way. We have stated that we won’t even try to share that knowledge.” (Specialist D, Gamma)

A complete table of reported factors enhancing individual level knowledge sharing in project Gamma can be found in appendix 3 to this study.

### **5.1.2 Offshore project Delta**

When looking at the big picture for project Delta, factors thought to enhance interpersonal knowledge sharing in the project concerned were somewhat similar to those in the earlier presented project Gamma. Factors were often related to motivation and to the opportunity and ability to share knowledge. Trust, national culture and commitment were also brought up as factors enhancing knowledge sharing at the individual level. In addition, the knowledge governance approach and mechanisms related to matters like communication, management practices and organizational climate and culture as well as processes and procedures were considered as helpful aspects.

#### **Motivation-related enhancing factors**

Knowledge providers' *willingness to share knowledge* and the *personal relationship* between knowledge providers and acquirers were felt to be essential in successful knowledge sharing. It was considered important that the knowledge provider had the willingness to share knowledge and that the provider and acquirer knew each other also personally. In such cases there was often *trust* involved. Informal face-to-face meetings had a central role in promoting the creation of personal relationships. A common sense of humour was brought up as another factor promoting knowledge sharing.

“I thought back then that I did, however, know the people and I knew the application as well, and I didn't feel that it would be detrimental to me to tell these people how this works and how you should work with it.” (Specialist J, Delta)

“When they visited, you met face-to-face – like Pirkko and Patil met (...) after that they are friends – they talk about their children and other things – and after that it is easier to handle issues, when the other person tells first a

bit about what she/he has been doing earlier during the day and so forth..”  
(Project Manager P, Delta)

“When you have met once, you can put a face to the voice and the sense of humour. You know what you can say to her/him and so forth.” (Project Manager Q, Delta)

Moreover, *certainty of one’s own future* and continuance of one’s own work as well as *perceived benefits* were seen as enhancing factors for knowledge sharing. Eliminating the fear related to continuation of work made it easier for employees to share their knowledge with offshore colleagues. In addition, gaining something good and positive for themselves boosted sharing.

“In a way the situation in this project became easier when people understood that most of them – almost everyone – can keep their jobs and positions, and that in any case they will be in such a role that they need to cooperate with these Indian people in the future, and the better the Indians are able to take care of the work, the easier their role will be. They discovered real benefits for themselves.” (Project Manager Q, Delta)

The possibility to learn while sharing knowledge, new colleagues, challenging and interesting tasks were considered perceived benefits for the knowledge provider. As well, improvement of language skills was a positive benefit which made employees share their knowledge with offshore colleagues.

“(...) it was however a new kind of working – and I personally like that there are different things going on and new people. We were even able to visit, which was of course nice.” (Specialist M, Delta)

Feeling a joint togetherness with offshore colleagues and working together towards *common goals* as well as interpersonal trust impacted positively on knowledge sharing of the employees. Joint operation created *joint motivation* for the task and increased willingness to share knowledge with offshore colleagues.

“During this knowledge sharing project I felt more like we were in the same boat with offshore colleagues; we worked for the same application. That is how I felt.” (Specialist J, Delta)

Involvement and *commitment* of the customer was viewed as an important factor in individual level knowledge sharing in the situation concerned. Longer term commitment to work tasks was emphasized in the recruiting process on the offshore site. This turned out to be positive, as the knowledge acquirer’s longer term commitment to shared knowledge related work tasks was seen as essential for promoting knowledge sharing between individuals.

“The customer was really heavily involved as well, which had a big positive impact on the project. That helped us a lot. In addition, the clear message that this is how the customer wants this to be done, there was no hesitation at all.” (Project manager N, Delta)

“On the other hand we tried to hire people who would commit to this task for a longer period into the future. So that there wouldn’t be this kind of 3 months and change, 3 months and change..” (Project manager P, Delta)

*Professionalism, professional pride, work ethic and intrinsic motivation* of the knowledge provider were considered central factors impacting on the willingness to engage in individual level knowledge sharing. Knowledge sharing was viewed to be a natural part of professionalism, and it was considered important that work was done in an excellent manner.

“Well I feel it is part of my professionalism that I share my knowledge and tell how things are handled, instead of someone calling me afterwards asking ‘How should we now do this, you are the only one who knows’. I feel that it would have been poor performance from my side if such a thing would have happened and someone would need to call me afterwards.” (Specialist J, Delta)

“It is surely a certain kind of work ethic. People thought that ‘Even if this would be the last thing for me to do, I want to do it well. (...)’” (Customer Manager O, Delta)

“I don’t actually believe in external motivators anymore. The driver should rather be found from inside. And afterwards I was satisfied with the way I was able to share the application knowledge. So in that sense it was a reward in itself.” (Specialist J, Delta)

Also the fact that the knowledge provider had perceived his or her work as *meaningful* earlier was also considered an enhancing factor for knowledge sharing. A strong *sense of duty* was pointed out as a promoter for knowledge sharing. The employer and superiors were considered such authorities that orders from them were obeyed without questioning, even if the outcome of executing the orders would not be pleasant for the knowledge provider. It was felt that there is no other proper way to act and therefore orders to share knowledge were considered obligatory.

“Well, it has a lot to do with the fact that you have considered your own work meaningful (...). You have known that you do good and meaningful work.” (Project Manager P, Delta)

“Well, the authority of the employer is pretty heavy of course. You cannot refuse to do so if ordered.” (Project Manager N, Delta)

“We didn’t have any choice not to share, it was obligatory.” (Specialist M, Delta)

“Maybe I just was so dutiful that I thought that it just comes with my job and this is what I’m paid for.” (Specialist J, Delta)

No larger scale *rewarding* or incentive system was applied in project Delta. However, it was considered that rewarding and recognition processes and systems should be in place in a project like this. It was as well understood that rewarding is not simple and straightforward because people are motivated by different things.

“If there should be rewarding for some projects, these kinds of projects should definitely be the ones to reward for (...). It is mentally very tough when you have to give away everything you have done and worked with.” (Project Manager N, Delta)

“You should just find ways to motivate everyone. You would need to know who to pat on the head and who to pay money to.” (Customer Manager O, Delta)

### **Opportunity-related enhancing factors**

Opportunity-related factors were considered essential in successful individual level knowledge sharing. Even if both kinds of knowledge, tacit and explicit, were shared, a substantial amount of the knowledge shared in the project was tacit in nature. *Meeting face-to-face* was seen as the best and most efficient way to share tacit knowledge in particular with the offshore colleagues. It was also felt that in face-to-face contact it was easier for the knowledge provider to see if the colleague did not follow and needed additional clarification. As well it was easier for the knowledge acquirer to make additional questions and request more support from the knowledge provider.

“When there is plenty of tacit knowledge, face-to-face is unbeatable (...). The fact that people are on the spot is so much more efficient and they ask more spontaneously. You don’t have to prepare the questions beforehand but can ask direct questions like what should I put here or how should I.. And so on. That is a significantly better way.” (Project Manager P, Delta)

*Working together with real cases* and proper and workable *IT and ITC tools* to share knowledge and communicate with each other was thought to be vital to en-

hance individual level knowledge sharing. Some people preferred to communicate in writing with technical tools rather than over phone. It was seen that technical tools helped to overcome even language problems.

“Finding real work tasks is really important. It doesn’t matter whether you read the code back and forth 10 times – you need to be able to work with it. Actual working is what ensures that knowledge has actually transferred.”  
(Project Manager P, Delta)

“Lync was really excellent, and the same thing with Live Meeting and other tools as well. Those were used a lot.” (Customer Manager O, Delta)

“Of course technical tools support knowledge sharing. I like to use those when communicating with them. I feel that verbal communication is difficult for me, especially when it is hard to understand their English. And perhaps I’m also not that good at expressing my own thoughts and ideas verbally in English, so I prefer writing.” (Specialist K, Delta)

### **Ability-related enhancing factors**

Different factors connected to either knowledge providers’ or acquirers’ abilities were as well brought up as supporting factors for individual level knowledge sharing. *Competence and experience* of both counterparties were seen as necessary success factor for it. Also proper *field-specific understanding* was considered to be needed in order for the knowledge acquirer to be able to receive and utilize the shared knowledge in an efficient way.

“It helped that I was really familiar with the application. The question was mostly about being able to create the training package into a smooth and easy to use form.” (Specialist J, Delta)

“Creating field-specific competence – that is the big task. For that you need several months, you can say that it takes half a year...” (Architect L, Delta)

Knowledge providers' own strong *professionalism* as well as knowledge providers' and acquirers' *diverse and global experience* and deep knowledge about the substance were recognized as essential factors.

"I think that knowledge sharing is part of professionalism, and I don't in any case feel that I would like to hold back knowledge, but the opposite, I gladly share everything I know." (Specialist J, Delta)

"(...) but in addition probably also the experience of working in a global company earlier, and how familiar one is to working in a foreign language and with people from another culture, and things like that." (Project Manager Q, Delta)

*Absorptive capacity* and *social capability* of knowledge acquirers were as well considered important factors for success in knowledge sharing. It was considered vital that the knowledge acquirer had enough capabilities and experience – including social ones – in order to understand what kind of questions were required to be asked in order to get the needed and essential knowledge shared. In addition, the absorption capacity of the knowledge acquirers' team was considered to support knowledge sharing as well, because every team member had their own experience and competence and they could support one another if needed.

"And then on the other hand, how great experience they needed to have in order to understand what questions needed to be asked in order to get the needed information. That they had enough experience in something similar so that they were able to request the information in the right way. Someone with no needed experience and lack of social skills would not make it that well." (Project Manager Q, Delta)

"A certain strength arose – in a way – when there was a group or team as knowledge acquirer. Usually at least one of them captured the idea and was able to support the others and ask me if they had understood correctly. I felt that it was good to have the whole application team, responsible for the ap-

plication in the future, in the sharing sessions at the same time.” (Specialist J, Delta)

Individual level knowledge sharing was also enhanced by the knowledge provider’s strong confidence in their own competence and experience and their trust in the future and capability to manage and cope under any arising circumstances; in other words knowledge sharing was enhanced by the knowledge provider’s *self-efficacy*.

“(…) in particular those with stronger competence and experience, it was easier for them to share (…) and of course your own experience and how certain you feel about yourself had an impact.” (Project Manager Q, Delta)

“But those who have certain information about their future, they know that even if they were laid off, they would get a new job.” (Customer Manager O, Delta)

### **Culture-related enhancing factors**

Culture – both national and organizational – was seen as a promoting factor for individual level knowledge sharing. An open and supportive climate and an already existing knowledge sharing culture in the organization increased the willingness to share knowledge. It made knowledge sharing to offshore colleagues more natural and gave onshore employees strength to cope in the insecure situation.

“We had an extremely good atmosphere in the organization, and it was really easy to ask anything from anyone. I think that helped the sharing as well as coping with the matter.” (Specialist M, Delta)

“(…) the Indian culture might even be a benefit in some way (…) they are in a way really flexible. So the culture can be considered as a benefit in some way. (Project Manager Q, Delta)

### **Enhancing factors related to knowledge governance mechanisms**

Open and honest communication, utilizing already existing working processes and practices, and well-organized project work and planning were thought to promote individual level knowledge sharing.

“Reasons must be told and communicated: why we are doing this, what are the goals and what the benefit to the company and to the individuals involved is. It should be told what each one of us can learn from this. Visions for individuals’ future prospects should be provided. That is at least the priority number one.” (Project Manager N, Delta)

### **Nature of knowledge-related enhancing factors**

There was no difference indicated in the willingness to share tacit or explicit knowledge. Some of the transferred applications were old or passive ones, and documentation was missing or not up-to-date. Therefore a lot of tacit knowledge needed to be shared in the project. It was seen that already existing documentation made sharing easier, but both kind of knowledge – tacit and explicit – was shared in project Delta.

“Sharing documentation was of course one way, meaning that all possible materials and documentation were shared for familiarization.” (Project manager Q, Delta)

“I did share both tacit and explicit knowledge. However, there was probably less written documentation. I think my competence related to knowledge sharing was actually demonstrated in my ability to structure my tacit knowledge based on experience and pass it forward.” (Specialist J, Delta)

However, it was understood and in some way even accepted that part of the tacit knowledge remained unshared. When the amount of tacit knowledge to be shared is big, all of it cannot be shared or transferred completely.

“A great amount of knowledge and experience was left unshared. You just cannot help that. And I think that I have seen plenty of graphs related to these kinds of offshore projects which show that the level of service will drop for a while before the experience level rises again. No-one can ever transfer all tacit knowledge.” (Project Manager P, Delta)

A complete table of reported factors enhancing individual level knowledge sharing in project Delta can be found in appendix 4 to this study.

### **5.1.3 Managerial view**

Managers’ views about factors enhancing individual level knowledge sharing were as well mostly related to motivation, opportunity and individuals’ ability and were somewhat similar to the factors from the projects presented earlier.

#### **Motivation-related enhancing factors**

*Certainty and future prospects* of the employees were seen as enhancing factors for individual level knowledge sharing in offshoring projects. Open and honest *communication* about the reasons, aims and outcomes as well as perceived benefits for employees was seen as essential. In addition interpersonal *trust* and the *personal relationship* between the knowledge provider and acquirer were seen as vital for successful knowledge sharing.

“It’s still the certainty, meaning that it probably does not have to be really clear what the person will be doing, but a kind of a certainty that there will be some opportunities for the person, all the time somehow keeping the information flow open between the project or management and the employee. Even if something is not clear yet, share the information, and when the message is clearer share again, share the information.” (Manager H)

“I have seen that when there is transparency in the overall system, even if people are initially resistant, when they see that these people ultimately have good intentions, they all strive to be successful.” (Manager I)

*Pride in one's own work, professional pride and commitment* to the customer were brought up as factors boosting individuals' knowledge sharing in offshore projects.

“What can be motivating here, though not always, is to show ‘what I have done’. After somehow realizing that ‘hey, I cannot change it, it will happen.’ Then it is prestigious to show that ‘This is what I have been doing’. Somehow acknowledge that this is huge work which has been done.” (Manager H)

“Actually it is then also a kind of personal commitment of people towards the customers. In the end they understand that ‘OK, I cannot do anything about this, and if I still want this customer to be happy, the only thing I can do for it is make this knowledge transfer go well.’” (Manager H)

*Rewarding* was seen as an important factor, but it was also mentioned that in the end it does not guarantee any better results in individual level knowledge sharing and it can turn against itself if it has not been thoroughly thought through. Suitable and reasonable KPIs for rewarding were seen essential as well as rewarding a good attitude towards knowledge sharing. In addition it was viewed that different kinds of rewarding methods should be used besides monetary rewarding.

“I have seen some proposals that we should give a reward, some monetary reward, to people who are transferring. Although it is nice but I think it will not make the transfer any better. In my opinion, this is just a nice bonus but it will not really change the quality of the knowledge transfer.” (Manager H)

“I have seen that rewards could be very different based on the situation: it could be money, sending people on short and long term assignments to the base or where the conditions will be transferred. (...) So I see that reward

and recognition should be there, but you have to weigh them based on the situation.” (Manager I)

### **Opportunity-related enhancing factors**

The opportunity *to meet and work together with real cases* was brought up also by managers. This was also seen as a good way to increase cultural understanding and mitigate the challenges related to different cultures. Common *IT and ICT tools* were considered important, but it was brought up that tools should not be drivers for knowledge sharing but should support for it.

“Well of course common tools are important, but like I said regular face-to-face meetings are essential. (...) but then when you save on travel costs and so forth, it does not happen. In the end it is important that employees need to work together. (...) Information is located in people’s heads, is difficult to transfer via papers, it is not even understandable. So that parallel time of working together, depending on the competence area, can be several months or even a year. That of course increases the costs, but in the long run the return on invest is improved.” (Manager G)

### **Ability-related enhancing factors**

*Competence* and correct *attitude* of the knowledge acquirer were considered essential in individual level knowledge sharing. In addition to appropriate technical *skills*, the *maturity* and *capability* to understand the difficult situation of the knowledge provider was seen as essential in order to make knowledge sharing smooth and successful.

“They also need to understand the sensitivity of the matter. So what happens, at one end you are really happy – because we have a job for the next coming years, and someone will not have the job. This is the sensitivity of the matter everyone needs to understand, and when we run these programmes there’s success and eventually things still happen, but you are still making all attempts to make it friendly – or not friendly but a more lucrative environment rather than just forcing things.” (Manager I)

### **Culture-related enhancing factors**

*Understanding the cultural differences* and investing into *cross cultural trainings* for the offshoring project members were seen as enhancing factors for individual level knowledge sharing in the projects. It was seen as important that cultural differences were raised in informal common training situations. These kinds of situations were also seen to advance personal relationships between knowledge acquirers and providers.

“I have been in projects where these kind of common cross cultural trainings have been arranged in the beginning of the project. It is essential that training is common, not different for Finns and Indians. It would also be good to arrange the training in connection with some free time activity, in order to have free discussion and to learn to know each other outside of work as well. These kinds of trainings should always be arranged in these offshore projects.” (Manager G)

### **Factors related to knowledge governance mechanisms**

Open, honest and well-handled *communication* was considered vital for individual level knowledge sharing to take place in a good way. Being as transparent as possible in the communication throughout the project and remembering that the need for communication in these kinds of uncertain situations is enormous and should not be forgotten were seen to enhance individual level knowledge sharing.

“I think to do any kind of exercises like this you need to have 100% transparency about what is going to happen. Although the end result is not very positive for some people (...) I have seen that when there is transparency in the overall system, even if people are initially resistant, when they see that these people ultimately have good intentions, they all strive to be successful.” (Manager I)

In addition, some organization-related matters which were seen as enhancers for individual level knowledge sharing were brought up by management. *Performance*

*of the organization, maturity of the organizational structure and maturity of people working in the multicultural environment* were seen as factors enhancing individual level knowledge sharing. Also ensuring *common processes and tools* for individuals and management's role as an enabler were mentioned. Management's understanding about the realistic time needed for knowledge sharing was considered a supportive factor as well.

"I believe that to a larger extent I believe that the performance of the organization, in terms of the growth, in terms of the profitability, in terms of maturity of the organizational structure, working in a more global delivery model, or more distributed model, I think that as a second point, and then third is the maturity of people working in the multicultural environment." (Manager I)

"I mean planning, being open, and really taking decisions and accepting the fact that the start of the transfer will go slowly, and not taking that as a mistake or anything like that. First people need to understand the culture, meet each other, realize that actually these are good people, and then understand the business context – and basically this means nothing has been transferred. And it can take several weeks before this situation is reached. Basically carrying out the necessary preparation phase and not underestimating it." (Manager H)

## **5.2 Obstacles to individual level knowledge sharing**

### **5.2.1 Offshore project Gamma**

The findings related to obstacles to individual level knowledge sharing in project Gamma were as well mostly related to motivation and the opportunity and ability to share knowledge. Management's role, its attitude and cultural differences were as well seen as obstacles to knowledge sharing.

### **Motivation-related obstacles**

Among the informants of project Gamma, *uncertainty* both in general and on the level of the Gamma project was considered a major challenge for knowledge sharing. *Fear of losing one's work and status* was clearly felt to be the biggest obstacle to individual level knowledge sharing. This was as well the case in the project concerned even if the main purpose of the project was not to transfer all the work away from onshore but rather to expand the team offshore and enable onshore employees to carry out more value added work. Uncertainty was heavily present despite of the management's promises to maintain the jobs in the onshore in the future as well.

“But of course, right in the beginning when you don't know much about this thing, and then an announcement comes that this kind of offshore transfer project will be started and part of the work will be transferred to India. In that situation there are strong fears and worries and so on.. (...) When you don't know the facts the fears can be – how to say – unrealistic.” (Specialist D, Gamma)

“Of course it is clear that uncertainty does not promote the willingness to share knowledge, because there is the fear that you will lose your own work if it is transferred to another place.” (Specialist B, Gamma)

Uncertainty and fear of losing one's importance and status led as well to protecting one's work by sharing only such information which was not strategic or critical. Critical information was left unshared in order to maintain one's importance for the company.

“I would believe that everyone tries to hold really tightly on to their own special area. Even if it were obligatory to share, you would try to leave the strategic part of the knowledge to yourself. (...) Well, keeping the critical parts to yourself is based on the fact that you make yourself needed. So that you don't suddenly notice that someone else knows the same as you, and now

management is starting to compare the costs. The situation onshore is always 'on thin ice.' ” (Specialist C, Gamma)

### **Opportunity-related obstacles**

*Too tight timetables and lack of resources* were considered obstacles in project Gamma. Outdated or completely missing written data related to knowledge that needed to be shared had either to be created or updated, and time needed for this was not sufficiently taken into account in the project plan.

“And at the same time the training plan needed to be made, like ‘What shall I tell them there and at which level?’ (...) And there was plenty of missing documentation, a need to translate documentation and so forth. It should not be done in such a tight timetable. It was a clincher there. We were told ‘to put our heads in to the lion’s mouth’ in a way. We would have needed more time for preparations.” (Specialist C, Gamma)

“You did not have enough time to think about things. Essential issues might have been left unshared because you did not have enough preparation time.” (Specialist B, Gamma)

“At least I was mentally so overloaded at the time. In addition to normal work I took care of the knowledge sharing, so I don’t know – it was kind of personally stretching at that time.” (Specialist A, Gamma)

### **Ability-related obstacles**

*Language and difficult accents* were considered obstacles in individual level knowledge sharing. Even if the company operates globally, and the official language in the company is English, it does not guarantee that individuals’ language skills in different countries are at such a level that communication would necessarily be effortless.

“Well, clearly the biggest issue was the language problem. (...) The Indian accent and way of speaking was quite hard to understand – at least in the beginning. But you quite quickly got used to it.” (Specialist A, Gamma)

*Business specific and difficult vocabulary* caused challenges in the knowledge sharing. Terminology was tightly connected to the field of the customer’s operation and the vocabulary used was not consistent even in Finnish. A lack of a common “dictionary” related to specific terms was seen as a hindrance in knowledge sharing.

“The first and most important obstacle was the complexity of the issues and terms (...) they are so difficult that defining what they mean in practice even in Finnish is hard, not to mention in English.” (Project Manager E, Gamma)

“It was not agreed with the customer what kind of terminology is in use – the issue is special terminology, but no dictionary whatsoever was available, and we needed to invent certain terms all by ourselves.” (Specialist C, Gamma)

The *lack of sufficient competence and skills* or the *lack of needed background information* of the knowledge acquirer was considered as a hindrance in knowledge sharing. Also the *shortage of industry and business specific understanding* about the field concerned was considered to delay the knowledge transfer.

“If we speak about a certain industry and the person does not have any hunch what it might include... Then you need to start from scratch and begin with telling what the company does and what kinds of products are in question and things like this.” (Specialist C, Gamma)

### **Culture-related obstacles**

*Cultural differences* were seen as a barrier to knowledge sharing. Reading a foreign culture’s signs and weak signals was not necessarily easy. For example the Indian way to say “I didn’t understand what you mean” is not as explicit as the

Finnish one. Also knowledge acquirer's too optimistic opinion about one's own abilities was felt to be a slight problem in individual level knowledge sharing. It was seen that knowledge sharing was prolonged due these kinds of cultural misunderstandings.

“Admitting the fact that one had not understood something was hard. You could conclude that from their body language. Especially if – normally there were two people per application – the other one had more experience and was quicker to catch the point, it was hard for the other one to admit that she/he had not understood something. So that was one of the cultural differences.” (Specialist C, Gamma)

“But what then started to bug me was that these Indians are much more optimistic than Finns: when Indians feel that they know something, they feel that they actually know much more than what they know in practice. As well they thought they were able to handle much more complicated matters than what they actually really could. That caused conflicts” (Specialist D, Gamma)

A complete table of reported obstacles to individual level knowledge sharing in project Gamma can be found in appendix 5 to this study.

### **5.2.2 Offshore project Delta**

In project Delta the findings related to obstacles to individual level knowledge sharing were as well mostly related to motivation and the opportunity and ability to share knowledge. Cultural differences and the weak role and alignment of management were also seen as obstacles to knowledge sharing.

#### **Motivation-related obstacles**

*Uncertainty* was brought up by several participants as a key obstacle to knowledge sharing. It was seen that if a person really fears losing their job or there is a genuine threat of permanent unemployment for example due to high age or not pos-

sessing the most up-to-date capabilities, the willingness to share knowledge was low. Uncertainty also promoted *overall change resistant behaviour*.

“Of course the situation has an impact on the willingness to share knowledge: if a person thinks that ‘If I tell everything I know and then there will be employee co-operation negotiation and I will be fired.’ Naturally especially those with the worst possibilities to get a new job or those with the worst future prospects are less willing to share anything.” (Project Manager Q, Delta)

“Of course people fear losing their job. There are plenty of good experts here working in such a technical environment that they won’t necessarily get a new job anymore. For example people working in these old technical environments.” (Specialist K, Delta)

*Lack of sensible reasons for offshoring* and for the knowledge sharing project was as well considered an obstacle. If reasons behind the project were unconvincing and far-fetched, sharing was not considered meaningful and people felt belittled. As well, if the transferred applications were old and passive, the sense of useless work was considered to hinder sharing.

“I do question the reason of this kind of outsourcing arrangement both overall and in terms of price. (...) With the turnover of employees in India taking place, new employees need to be trained time after time... At the end of the day, is it as profitable as it seems based on some hourly price comparison?” (Specialist J, Delta)

“(...) it should be considered what kinds of applications are worth transferring. We have done a lot of wasted work and teaching when transferring applications which will be closed and to which no changes will be done. When we transfer these kinds of applications, which need only ‘palliative care’, in my opinion it is a waste of resources at both ends, here and in India.” (Specialist K, Delta)

*Reluctance to share* and to receive knowledge was seen to hinder individual level knowledge sharing. In some cases only the minimum amount of knowledge was shared, and if the knowledge acquirer did not ask the right questions, the knowledge remained unshared. In addition, transferred applications were partly old, and knowledge providers felt that the willingness of knowledge acquirers – who had brand new skills and newly acquired competence related to new applications and systems – to learn and work with them was not very high. In addition the overall worry about the poor employment situation and offshoring trend in Finland was considered an obstacle to smooth individual level knowledge sharing. Worry about the future was expressed not only at the individual level, but in a wider scope at the country level.

“No-one was blatantly reluctant to share knowledge, but there were obviously cases where knowledge was not shared if the Indians did not understand to ask right questions. Then knowledge remained unshared.” (Project Manager Q, Delta)

“In addition to losing my job, I feel that this is not a good trend for the Finnish society.” (Specialist K, Delta)

*A poor personal relationship* between the knowledge provider and knowledge acquirer and *perceived costs* of sharing were viewed as preventers. It was felt that in the beginning of the project, building a good personal relationship is more important than gaining quick substance understanding. Perceived cost was brought up as an obstacle to individual level knowledge sharing. If a person has given the impression of being a robust specialist but in practice the level of expertise is not that high, the willingness to share one’s knowledge is low to avoid revealing the unpleasant truth.

“What really matters is creating a connection between people. It is not that critical if they do not understand anything about the application yet, but if

the communication after familiarization is not working, that is something to be worried about.” (Customer Manager O, Delta)

“There were cases where someone had presented themselves as a really strong expert in their own area, and then when knowledge sharing should have taken place the nasty truth was revealed and for example all documentation under their responsibility was poor or they were unable to tell anything about the matter either in English or in Finnish. That kind of situation can turn into an obstacle to knowledge sharing. Someone can resist sharing due to being afraid that the truth about their incompetence and poor skills would be revealed.” (Project Manager Q, Delta)

*Management trivialized knowledge providers’ skills and competences* during the project. In an expert organization, this gave employees the impression of being undervalued and belittled. This kind of behaviour from management was considered another obstacle.

“Our competences were underestimated and trivialized. As I mentioned earlier, as if the training package could be given to any man from the street with some coding background, they could take care of these things. I felt that it dragged me down a bit.” (Specialist J, Delta)

### **Ability-related obstacles**

Prejudices arose as obstacles to individual level knowledge sharing. Onshore colleagues had reservations about the foreign society and education system. Trust in offshore colleagues’ competence was also questioned. The foreign country and culture and dramatic and sad news in the media were brought up as a source of prejudices.

“And then another thing – this is a bit bad of course – but there are still prejudices (...) for example against the level of competence of foreign people. Like what is the level of competence there? How have they been educated in this? News from India presented in the media is mostly sad. We

are not told how many universities there are in some city, or how many people graduate from them, or what kind of education there is. Those kinds of thing are not generally known here.” (Project Manager P, Delta)

*Difficult terminology* as well as *language and accent problems* were brought up as obstacles to individual level knowledge sharing. Correct terms to use were not even clear in Finnish, and much less in English.

“I think it is more significant that many of us still have poor language skills and because of that there are misunderstandings. It is difficult to explain certain matters in a foreign language, and is considered quite tough, therefore some things will not be explained or shared at all.” (Project Manager Q, Delta)

The manager’s praise and *exaggeration of skills and competences* of offshoring colleagues turned out to be a moderator in the sharing situation when the real competence level of an offshore colleague was revealed. It frustrated knowledge providers and turned against knowledge acquirers.

“Well it certainly influenced knowledge sharing that we were told beforehand that these chosen colleagues are really nice people with excellent competence and education as well as long experience and so forth.. And when you then noticed that things were not as they had been told, it, well... impacted like ‘Okay, now she/he does not understand this or this either.’ It should be considered whether it is worth praising so much beforehand because it causes negative responses.” (Specialist M, Delta)

### **Opportunity-related obstacles**

Resources or rather *lack of resources* was brought up as an obstacle by several informants. The offshoring project with knowledge sharing was on top of normal duties, so people included in knowledge sharing were also tied up with taking care of the production environment or other urgent projects.

“We had had an enormous workload already, I mean other work than this project, and this offshore knowledge sharing project came on top of that.”  
(Specialist M, Delta)

In the case of certain applications the responsible person had left the organization and a knowledge provider was not even available. These situations were considered as obstacles to individual level knowledge sharing.

“Another reason which prevents knowledge sharing is that under these kinds of circumstances competence disappears, I mean leaves. The best ones often leave.” (Project Manager Q, Delta)

*Lack of* proper application related *documentation* was viewed as an obstacle to individual level knowledge sharing as well. If the same person takes care of an application for years, it is considered typical that the documentation level might suffer. In addition it was felt that *impractical premises* and *problems with technical tools* impacted negatively on individual level knowledge sharing.

“When it comes to old systems, it may be that documentation is just this and that. When people have been running systems for years it is really typical that documentation has not been updated.” (Project Manager P, Delta)

“These technical matters should be in order (...) we had quite poor conference rooms in use: we sat in a little cubicle with no windows and proper air conditioning. It was not nice, and then you even needed to fight for a beamer. If I’d had an influence, these sharing sessions would have been arranged elsewhere.” (Customer Manager O, Delta)

### **Culture related obstacles**

*Differences in national cultures* were brought up as obstacles to individual level knowledge sharing as well. Different ways to communicate and express for example “no” or “I didn’t understand” or differences in managing time and the meaning

of “deadline” were the most common issues hindering sharing. Different procedures and ways of working were developed to overcome these issues.

“Indians don’t admit if they don’t understand something. It needs to be dug out, so that you ask them to do it and then you follow up to ensure there will be some results.” (Project Manager N, Delta)

“Well their concept of time is a bit different, for example for them 6 June is only indicative, but for us – if there is a deadline, that is the deadline.” (Customer Manager O, Delta)

### **Obstacles related to the knowledge governance mechanism**

*Lack of open and honest communication as well as poor management and HRM practices* on some levels of management were considered obstacles to interpersonal knowledge sharing. *Absence of clear focus and scope of the project* in the beginning as well as mixed signals in communication and clear lack of commitment from both customers’ and organizations’ middle management were viewed as obstacles to knowledge sharing in project Delta. *Lack of commitment* from managers in some part of the project gave permission to individual employees not to commit either. Simultaneous employee co-operative negotiations and offshore knowledge sharing project was felt to be badly planned and reduced individuals’ motivation to share. Process-wise it was considered that simultaneous business transformation and a project in which work is to be transferred offshore was not seen as the best possible fit in terms of knowledge sharing. It gave an excuse to the knowledge provider not to share “old information” because business processes were going to change in the future.

“(…) people were poorly led in the sense that management wanted knowledge to be shared in an agreed time period, but that message was not cascaded down, and middle management was not committed to this project so that would have cascaded this same message to their subordinates. What then happened was that each individual had the possibility to decide whether they were willing to share knowledge or not. The possibility

to be on 'Italian strike' or give minimum input was given to people. Weak leadership enabled this in this case." (Project Manager Q, Delta)

*A strong and well-functioning work community* in addition to considering one's own organization as a place where everything is perfect were brought up as an obstacle to individual level knowledge sharing as well. In such a climate and culture it was difficult for employees to see any need for change.

"This organization which was supposed to share and transfer knowledge had been cliquey and had felt like a kind of perfect place to work already for a long time. It was felt that everything was just great there: the client had been satisfied and a culture had been born where everything had been taken care of in a really great way, and that there was no reason – none whatsoever – to criticize this organization. When such a culture is really strong and there is a strong opinion that we are an excellent unit and good team, it is definitely even harder to comprehend that someone would consider this bad. (...) When such a culture was strong, it complicated knowledge transfer." (Project Manager Q, Delta)

*Mitigation of obstacles* related to knowledge sharing was seen as important. Different kinds of trainings and inductions were provided in order to overcome for example cultural differences. In addition, providing future prospects and vision for onshore employees was seen as an important way to mitigate uncertainty.

A complete table of reported obstacles to individual level knowledge sharing in project Delta can be found in appendix 6.

### **5.2.3 Managerial view**

Obstacles viewed by management followed the obstacles seen by the project members listed above. *Uncertainty, lack of trust* and *end of the working contract* were viewed as obstacles to individual level knowledge sharing. Different levels of

*change resistance* and *lack of commitment* of the knowledge provider were brought up as well.

“In my opinion it [uncertainty] is one of the most – or it is one of the biggest factors in the quality of knowledge transfer. And the reason is that people naturally tend to think also about themselves, meaning ‘What it will mean to me?’ It’s logical, it’s understandable and it’s like that, and if they are moving work it does not matter to what country (...). People immediately start to think: ‘OK, first of all what will it mean for me, will I continue here, what I will be doing?’” (Manager H)

If sufficient attention is not paid to *cultural differences* they can become an obstacle to individual level knowledge sharing. *Language problems* and *lack or wrong kind of competence* of knowledge acquirers or providers were brought up as obstacles as well.

“[It is important] to get the right people with the right kind of mentality and experience of handling these kinds of things. If we involve people in projects only because they have 20 years of experience in managing projects, it will not add any value to the project if they don’t have cross-cultural diversity experience.” (Manager I)

*Lack of organizational maturity, inadequate managerial practices and competences in addition to non-alignment for customer middle-management* were considered as obstacles to sharing knowledge.

“So when a customer says how much time you will take to knowledge transfer, we say 3 months, 6 months or maybe sometimes a year. And I think when we are quoting these numbers, mostly we are considering the efforts, mostly we are considering the complexity of the factors and then we see how much time it will take. But I think we usually forget the emotional and human aspect of these transitions and projects where most obstacles arise

from. According to my experience, those obstacles arise often from people issues.” (Manager I)

## **6 CROSS CASE FINDINGS**

In this chapter case specific findings from the previous chapters are collected and outcomes are compared with each other following the research questions. Comparative tables of enhancing factors and obstacles can be found in appendix 7 and 8.

### **6.1 Factors enhancing individual level knowledge sharing**

When comparing the factors enhancing knowledge sharing between these offshoring projects it seemed that despite the differences in their insecurity context, the factors enhancing sharing were to a great extent similar.

#### **Motivational enhancing factors**

In both projects motivational factors like certainty and clear prospects for one’s own future, perceived benefits like improvement of language skills or the possibility to work on more interesting tasks, and a personal relationship with the knowledge acquirer were highlighted. Also high working ethic and sense of duty were brought up as factors enhancing knowledge sharing by informants in both projects. It was seen as important that no matter what the circumstances, one must do one’s duty – as ordered – and do it well. In addition joint production motivation as well as rewarding and recognition were brought up as a method to support knowledge sharing under these circumstances. However, clarity and transparency were demanded from reward and recognition systems in order to function well. When looking at differences between the projects, intrinsic motivation, trust, willingness to share and social capability and positive attitude were more clearly brought up in project Delta which was carried out under greater insecurity. In project Gamma, where there was less insecurity, the commitment of and to the customer were more brought up as factors enhancing knowledge sharing. The possibility to mentally prepare oneself for knowledge sharing was highlighted in project Delta, whereas

the opportunity to use offshore for balancing one's workload was viewed as a perceived benefit and brought up in project Gamma.

### **Opportunity-related enhancing factors**

Opportunity-related factors were viewed fairly similarly among the informants in the projects. Importance of face-to-face contact was seen as essential in both projects. When operating with great geographical distance, working with IT and ICT tools like laptops, web cameras, Microsoft Lync, YouTube and so forth was emphasized by the informants. In addition working together on real cases was considered one of the main enhancing factors in individual level knowledge sharing.

### **Ability-related factors**

Factors related to ability were considered similarly in both projects. Competence of both knowledge providers and acquirers was recognized as an enhancing factor for individual level knowledge sharing in both projects; for example field specific business understanding was brought up similarly. Also the absorptive capacity of the knowledge acquirer and self-efficacy of the knowledge provider were seen as essential enhancing factors. In project Delta, the absorptive capacity of the knowledge acquirer's team was also brought up as a factor supporting knowledge sharing.

### **Factors related to knowledge governance mechanisms and culture**

In terms of cultural and knowledge governance related matters, a well-functioning professional work community and a pre-existing knowledge sharing culture were emphasized in both projects. In addition to open communication, common processes, procedures and templates were seen to have significant importance for successful knowledge sharing behaviour. In project Gamma, project specific common working rules were created and were seen as a supporting factor for knowledge sharing in the project. National culture was viewed more as an enhancing factor in project Delta, in which the smiling and positive attitude of Indians was considered as a supporting factor. Better understanding about foreign cultures was thought to improve knowledge sharing in both projects.

### **Nature of knowledge-related factors**

The tacit or explicit nature of knowledge made no major difference in terms of sharing in the projects. However, documentation was missing for part of the applications and systems and it needed to be created. In practice part of the tacit knowledge needed to be transformed into explicit knowledge in both of the projects. In project Gamma it was brought up that knowledge with a significant business risk or related to a considerable risk of paying damages for production stoppage was mostly left unshared. In addition some critical parts of knowledge were left unshared in project Gamma in order to maintain the individual's importance for the company.

### **Managerial view of enhancing factors**

Reflecting the cross case findings against the views of the interviewed management who discussed the issues from a wider perspective, it can easily be noted that very similar or same enhancing factors were brought up by management representatives. The project informants mentioned a larger number of factors, which however can be due to the deeper personal experience of employees who are knowledge providers in the projects. The representatives of management on the other hand had wide experience in the matter, and therefore discussed the matter on a higher level.

The enhancing factors for individual level knowledge sharing reported per project in the study can be found in appendix 7 to this study.

## **6.2 Obstacles to individual level knowledge sharing**

When looking at the obstacles to individual level knowledge sharing in the projects concerned, more obstacles were brought up in the project with greater uncertainty (Delta). Nevertheless, some similarities were easy to find as well.

### **Motivation-related obstacles**

Despite the guarantee given in project Gamma that offshoring would not have a direct impact on the participants' employment situation onshore, uncertainty was

viewed as one of the biggest obstacles to knowledge sharing motivation in both projects. Fear for one's own position and status caused unwillingness to share knowledge and holding knowledge back. Offshoring as a way of working was not seen as a positive trend for Finnish society, and that reduced some employees' motivation to share knowledge with offshore colleagues in both projects. In project Delta the prejudices towards the foreign country, culture and colleagues were brought up as factors reducing the willingness to share knowledge. Also inappropriate reasoning for offshoring and lack of appreciation from management were considered factors detrimental to knowledge sharing especially in project Delta.

### **Opportunity-related obstacles**

Lack of resources and too tight schedules were highlighted by informants as opportunity related obstacles in both projects. Offshore projects with knowledge sharing demands were additional to people's own normal duties, which caused heavy workload and stress for the employees involved. Also a lack of documentation particularly related to old systems and applications was viewed as a factor hindering knowledge sharing.

### **Ability-related obstacles**

However, in addition to uncertainty mentioned above, ability-related factors like foreign language and difficult accent were brought up as the main obstacles to individual level knowledge sharing. Due to problems in speaking a foreign language and understanding accents, some knowledge was left unshared. In addition, difficult terminology and field specific vocabulary caused barriers to sharing as well. Doubts about the knowledge acquirers' absorption capacity were brought up in both projects – this can also be related to the differences in national cultures, which was also considered a challenge in knowledge sharing. Due to differences in national culture, interpreting the gestures of others correctly or being able to evaluate the level of competence and need for additional advice and support were considered difficult.

### **Obstacles related to knowledge governance mechanisms**

In project Delta, the knowledge governance approach and mechanisms received more attention than in project Gamma. It was clearly stated that in project Gamma management from both the company's and the customer's side was very committed to the project. This was shown by active communication, discussions and being present and available for the personnel especially in the beginning of project. In project Delta it was strongly felt that commitment of middle management from the customer's and the company's side was partly missing. This caused mixed signals in communication and poor leadership and management of matters. Several informants from project Delta thought that more assertive leadership behaviour would have smoothed individual level knowledge sharing; they also felt that the decision to share or not to share should not have been left for each individual to make as it was at the time. An interesting finding was also that strong "everything is just perfect in this organization" kind of thinking in the organizational culture was considered a hindering aspect, because the need for the change was hard to understand at the individual level.

### **Managerial view of obstacles**

Comparing the cross case findings of the projects related to obstacles with the obstacles brought up by management representatives, similarly to the enhancing factors the project informants brought up a larger number of obstacles than the managers. The reason for this can be assumed to be the same as in the enhancing factors – personal experience and "hands on" work. Managers look at the matter from a slightly different perspective and therefore have slightly different points of views.

The obstacles to individual level knowledge sharing per project reported in the study can be found in appendix 8 to this study.

## **7 RESULT, DISCUSSION AND CONCLUSIONS**

This final chapter presents the result of the study. The main research question is answered by answering the sub-research questions first. Results of the study are reflected against previous academic discussions and studies, and reasons behind the result and the possible impact of differences in the case contexts are reflected. In addition, based on the study's results, managerial implications are provided. Finally, the limitations of the study are discussed and proposals for future research are given.

### **7.1 Result of the study**

In this sub-chapter the result of the study is provided by answering the sub-research questions. The objective of this Master's Thesis was to bring insight into factors impacting and enhancing individual level knowledge sharing under offshore project circumstances where uncertainty is strongly present and to gain an understanding about what leads an individual to share their knowledge while knowing that their own job may be at risk.

The aim of this study was to find an answer to the main research question:

*“What makes individuals willing to share knowledge within the organization under uncertain conditions?”*

The main question was approached via sub-research questions which are answered in the sub-chapters below. In conclusion there is no unambiguous reason or only one answer to why individuals share their knowledge in uncertain conditions or circumstances like offshoring projects. Individual level knowledge sharing in these situations can be considered more like a puzzle. There are plenty of small bits and pieces – enhancing factors – related to motivation, opportunity, ability and the individual's environment, which need to be in place at the same favourable time and “place” in order to lead individuals to be willing to share their knowledge

in uncertain conditions. Nevertheless, there is a favourable “space” for this kind of complex puzzle situation where knowledge sharing can happen; according to Nonaka and Konno (1998) it is called Ba.

### 7.1.1 What is individual level knowledge sharing?

The first sub-question “What is individual level knowledge sharing” was approached by reviewing existing literature of individual level knowledge sharing, which was closer presented in chapter 2.3 Individual level knowledge sharing is summarised in figure 7 below.

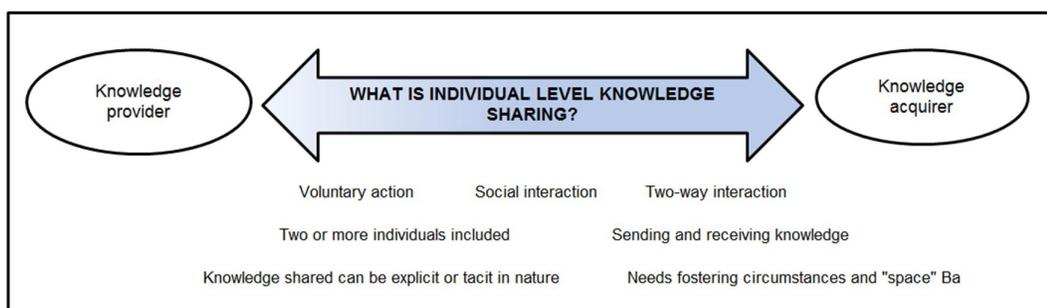


Figure 7: Individual level knowledge sharing.

As a summary and as an answer to the first sub-question, individual level knowledge sharing is seen as voluntary action between two or more individuals where knowledge, which can be considered for example information, ideas and expertise, is made available for others in order to help them perform better and in a more productive way. Knowledge sharing is also mutual two-way interaction, sending and receiving, where the knowledge provider converts his/her knowledge into such a form that can be absorbed by others. After sharing, knowledge becomes jointly owned by the knowledge provider and acquirer. (Foss et al., 2009; Lin, 2007a; Ipe, 2003; Bartol & Srivastava, 2002.) Shared knowledge can be either explicit – like documents and manuals – or tacit – like experience based – in nature, and usually sharing explicit knowledge is considered easier, whereas sharing tacit knowledge is found more complicated.

Knowledge sharing is an essential part of Nonaka and Takeuchi's SECI model. According to Nonaka and Konno (1998), in order for it to happen, knowledge sharing needs fostering circumstances which they call Ba, freely translated as "place" in English. Ba can be viewed as a mental, virtual or physical space – it can also be a combination of these "places" (Ibid). Several factors influence individuals' willingness to share their knowledge; Weiss (1999) states that such factors can be for example sensitivity of knowledge and the type and quality of the relationship between the knowledge acquirer and knowledge providers.

Even if the answer to the first sub-question was composed from existing literature, it was clearly noticed that the empirical part of the study confirmed and strengthened the literature's view of individual level knowledge sharing. Based on the result, individual level knowledge sharing was seen as social interaction between two or more persons and that by sharing one both receives and learns. In addition, documented knowledge was considered easier to share than tacit, which most often required meeting face-to-face in order to be successful. The importance of the personal relationship between the knowledge provider and acquirer, as well as the possibility to utilize IT and ICT tools in individual level knowledge sharing, were highlighted in the results. Thus, the concept of Ba in all its different forms and combined was clearly present and an essential part of individual level knowledge sharing.

One difference could, however, be seen: Bartol and Srivastava (2002) define individual level knowledge sharing as a voluntary action; however, in an offshoring project where work from an onshore site is transferred offshore, sharing is not always voluntary, but ordered and instructed by management and superiors. Knowledge needs to be shared despite uncertainty related to the final outcome of knowledge sharing for the knowledge provider. Based on the empirical part of the study, knowledge sharing happens, at least to some extent, even if sharing is not voluntary. This was described well by Project Manager N in the Delta project.

"Well, the authority of the employer is pretty heavy of course. You cannot refuse to do so if ordered." (Project Manager N, Delta)

### **7.1.2 What are the factors enhancing individual level knowledge sharing?**

The second sub-question “What are the factors enhancing individual level knowledge sharing?” was approached via an exploratory and explanatory qualitative multiple case study. The purpose was to find factors enhancing individual level knowledge sharing under uncertain conditions like offshore projects. Even if both offshoring projects, Gamma and Delta, were done inside a global company, the starting points of these two offshoring projects in the study were slightly different as was described earlier in chapter 4.1. Nevertheless, despite of the differences in the projects’ starting points and insecurity context, the findings were fairly similar and no remarkable difference was found between the projects.

Based on the findings, certainty about the future and one’s own work situation, and open and honest communication seem to increase an individual’s willingness to share knowledge in uncertain offshoring projects. Open and honest communication is important, and even if the message is not necessarily nice to hear, honesty is respected. Knowledge sharing action needs to offer something good for the knowledge providers – like learning or providing new career opportunities. In addition, the personal relationship between the knowledge provider and acquirer seems to be an important factor enhancing the willingness to share knowledge.

Based on the study’s result, an employee’s commitment to work and to the customer and the customer’s commitment to the offshore project can clearly improve the employee’s interest in knowledge sharing. Professionalism, high work ethic and sense of duty seem to enhance individuals’ knowledge sharing as well. Knowledge sharing is easier and smoother for individuals if favourable opportunities are provided for them. Employees need to have a sufficient amount of time to prepare for knowledge sharing, and they need to be able to meet face-to-face and utilize IT and ICT tools in sharing. Working together on real cases and spending unofficial time together seem to have a positive influence on knowledge sharing between the acquirer and provider. It seems that professionalism and suitable competences of both the knowledge provider and acquirer has importance as an

enhancing factor for knowledge sharing. Also the absorptive capacity of the knowledge acquirer is recognized as an advancing feature. Strong professional identity and an individual's trust on his/her capabilities and coping in new situations (self-efficacy) are favourable and increase knowledge sharing between individuals.

Organizational culture and its norms, in addition to well-functioning lower level team cultures in an organization, can be seen as factors which increase an individual's willingness to share knowledge. An already existing culture of knowledge sharing facilitates knowledge sharing between individuals as well. Based on the study, reward and recognition might also work as an enhance. However, in this case the pattern of the rewarding system needs to be transparent and understandable and KPIs should be carefully selected and evaluated.

In this sub-chapter the second research sub-question "What are the factors enhancing individual level knowledge sharing?" was answered. A full list of factors enhancing individual level knowledge sharing based on this study can be found in appendix 9, where they are placed in the theoretical framework of the study. Obstacles to individual level knowledge sharing will be discussed in the next sub-chapter.

### **7.1.3 What are the obstacles to individual level knowledge sharing?**

The third sub-question "What are the obstacles to individual level knowledge sharing?" was also covered via empirical research data. When conducting the interviews and analyzing the study results, it became obvious that obstacles were more or less badly handled enhancing factors. If a factor which should enhance knowledge sharing did not work or was missing, it became an obstacle. As well, while discussing the obstacles, informants started to discuss enhancing factors and vice versa. It seemed to depend on the person's own "lenses" through which they looked at the matter. However, a larger number of obstacles were brought up in project Delta, the project with greater uncertainty.

Uncertainty and fear of losing one's work are often recognized as obstacles in offshoring projects. This was the case also in this study. Uncertainties also on a wider scale – like on the country level – can have a negative impact on an individual's willingness to share knowledge with offshore colleagues. Based on the study's results issues related to cultural difference like different language, diversity of norms and dissimilar patterns of behaviour cause challenges in projects and need to be overcome in order to make knowledge sharing successful. According to the study's results, culture related matters can act as a significant obstacle to interpersonal knowledge sharing. Lack of knowledge providers' and acquirers' skills, competences and experience, as well as a lack of knowledge acquirers' absorptive capacity, seem to be obstacles to successful knowledge sharing as well. Based on the study's results, too tight timetables and lack of resources (time, money and people) in offshoring projects can work as an obstacle to knowledge sharing. In particular, lack of common face-to-face time to work together can have a negative impact on interpersonal knowledge sharing. The results also point out that badly handled and insufficient communication and poor management practices can be obstacles to interpersonal knowledge sharing. However, luckily most of the obstacles can be turned into enhancing factors if they are recognized. Based on the study, the mitigation of recognized obstacles can be viewed as an important way to increase individuals' willingness to share their knowledge.

In this sub-chapter the third research sub-question "What are the obstacles to individual level knowledge sharing?" was answered. A full list of obstacles to individual level knowledge sharing based on this study can be found in appendix 10, where they are illustrated in the theoretical research frame of the study.

## **7.2 Discussion**

The starting points of projects Gamma and Delta were slightly different as mentioned in chapter 4.1, but a majority of the enhancing factors and obstacles in both projects were very much alike. In this chapter the results of the study are reflected against previous academic discussions and studies, and reasons of the result and possible impact of differences in the case contexts are reflected.

## **Motivation**

As can be seen in appendix 9, the biggest part of the knowledge sharing enhancing factors found in this study were related to motivation, and were similar to those identified in current academic discussions (e.g. Ipe, 2008; Wang and Noe, 2010), including trust, reciprocity, considering knowledge as power, perceived benefits or personal relationships between individuals. Also certainty about one's own future has a great impact on individuals' willingness to share knowledge. The results showed that individual level knowledge sharing under uncertain conditions seems to be driven by different kinds of motivation types defined in earlier literature like extrinsic or intrinsic motivation (e.g. Lam & Lambermont-Ford, 2010; Lin, 2007b), norm based motivation (Lindenberg, 2001) or joint production motivation (Lindenberg and Foss, 2011). Motivation to share knowledge in situations like these varies between people, depending on the individuals and their situations. The results show that in both projects individuals' motivation for knowledge sharing varied from fear of losing one's work for not obeying orders to high professional pride, work ethic and work motivation. This was well described by Specialist J in project Delta:

“Well I feel it is part of my professionalism that I share my knowledge and tell how things are handled, instead of someone calling me afterwards asking ‘How should we now do this, you are the only one who knows’. I feel that it would have been poor performance from my side if such a thing would have happened and someone would need to call me afterwards.”  
(Specialist J, Delta)

## **Sense of duty**

Also a strong sense of duty promoted individual level knowledge sharing in uncertain conditions. Sense of duty as a factor impacting on interpersonal knowledge sharing came up in the results of both projects and was recognized and brought up by both specialists and project managers. As discussed in chapter 3.5.2 the concept of sense of duty was studied as a cultural dimension at the organizational level in military-related organizations by Tinoco & Arnaud (2013) and at the per-

sonal level by Duran & McNutt (2010). Sense of duty was expressed by Specialist M and J in project Delta in the following words:

“Maybe I just was so dutiful that I thought that it just comes with my job and this is what I’m paid for.” (Specialist J, Delta)

“It’s when you are told [from a higher level] to hold these kind of trainings.” (Specialist B, Gamma)

Sense of duty can be connected to organizational culture, and behaviour related to sense of duty might be seen somewhat similar to behaviour in norm-based motivation. However, based on the interviews and results of the study, the researcher’s impression is that the sense of duty reported in the study is not necessarily precisely the same as norm- or authority-based motivation (e.g. Lindenberg, 2001), neither is it directly explainable by the Theory of Planned Behaviour or Theory of Reasons Action (Fishbein & Ajzen, 1975). In addition, according to Tinoco and Arnaud (2013) it is not part of organizational citizenship behaviour either.

Why do individuals actually follow orders and share their knowledge in a situation where sharing could lead to unpleasant consequences for the knowledge provider? Based on the result, accurate and correct knowledge was shared in both projects, also in project Delta under greater insecurity, and pseudo sharing did not really exist. A strong sense of duty might even be connected to features of nationality based on the nation’s history, or strong norms related to culture – either national or organizational. Deeper understanding about the sense of duty and its possible connection to national culture would be needed in order to have a better understanding of the concept in the context concerned.

### **Opportunities and working together**

In both projects and in every informant group, a sufficient amount of resources, face-to-face meeting possibilities and functional use of IT and ICT tools on site and over long geographical distances were emphasized as opportunity-related enhancing factors of knowledge sharing. Opportunity can be seen as favourable circum-

stances like working together and the possibility to have access to other individuals. This reflects well the current literature of opportunity-related enhancing factors: For example virtual tools, physical environments and structured organizations are considered ways and channels to enhance individual level knowledge sharing (Chen et al., 2013; Siemsen et al., 2008; Ipe, 2003; Bartol & Srivastava, 2003; Nahapiet & Ghoshal, 1998). Without proper opportunities to share knowledge, sharing is difficult or will not happen at all. The importance of working together and having opportunities to share knowledge were highlighted in the following words of Specialist D from project Gamma and Project Manager P from project Delta:

“(...) but it occurred to me that if you want this thing to work, it needs to be done so that you work together. There is no work of yours or mine but common work. Things are done together; that is actually the only way to learn. (...) In my opinion that is something which makes matters proceed. (...) Learning demands regular co-operation.” (Specialist D, Gamma)

“When there is plenty of tacit knowledge face-to-face is unbeatable (...) That is a substantially better way.” (Project Manager P, Delta)

Working together on real cases and learning by doing were heavily highlighted by all informant groups in the study. When reflecting the result of the study and earlier academic discussions, one can say that common face-to-face time between the knowledge provider and acquirer is essential in interpersonal knowledge sharing. It supports mutual trust building and enables closer relationship creation. (e.g. Ipe, 2003; Nahapiet & Ghoshal, 1998.) Working together can also be seen as building a common history of shared experiences and creating in a way a common and predictable way of behaving and common culture. Similarly when working together, mutual understanding can more easily be created because tangible examples can be demonstrated without difficulties caused by distance. By using concrete cases and examples, a common understanding and base can be created even if discussion in a foreign language might sometime fail. The literature of Hecker (2012) and Bechky (2002) support these kinds of findings and these reflections are well in line and supported by their studies.

### **Abilities and self-efficacy**

Based on the results, the most central enhancing factors related to ability to share knowledge were competence and experience of both the knowledge provider and acquirer, self-efficacy of the knowledge provider and the absorptive capacity of the knowledge acquirer. Self-efficacy, which was explained as the knowledge provider's certainty of their own capabilities and robust trust in their ability to manage and cope even when faced with an uncertain future, was viewed as an intrapersonal knowledge sharing enhancing factor. Self-efficacy was described as follows by Specialist D from project Gamma:

“I believe that my own background, the fact that I have done several different kinds of work, made it easier for me to share knowledge compared to people who have worked only with one application or system. That kind of person might experience the situation as even more threatening and fear that the work might disappear or end. On the other hand, if you have worked with several kinds of tasks and jobs you know that if this kind of work ends or disappears, there will be something else. So that can also have an impact on your attitude.” (Specialist D, Gamma)

Ability-related findings are coherent with earlier academic writings, where ability is seen as individuals' knowledge, capability and experience, and where the lack of ability can be seen as a limiting factor for an individual to process knowledge. (Minbaeva, 2013; MacInnis & Jaworski, 1989; Anderson & Jolson, 1980.) In literature related to self-efficacy, Bandura (1993; 1977) has defined self-efficacy as one's belief in the ability to perform a certain task, and according to Endres et al., (2007) self-efficacy theory offers a unique theoretical model which explains how people can be motivated to share complex and tacit knowledge in particular. These views were reflected in the study results. The results showed clearly that when an individual is confident in his/her own competences and capabilities, and is self-confident enough to trust that he/she will cope in any future situation, knowledge sharing is not seen as a threat. However, increased insecurity at the

society level and the current employment situation overall might have an impact on the willingness to share, despite the self-efficacy experienced by individuals.

### **Uncertainty**

As mentioned earlier the level of uncertainty in the beginning of the project was different in project Gamma and Delta. In project Delta insecurity was higher in the beginning of the project and even caused “knowledge drain” from the organization concerned as people started to change employer. However, after the employee co-operation negotiations in the organization had been finalized and no-one lost their job, the level of insecurity in both projects could be considered to be approximately the same.

Findings of both projects show that uncertainty seems to be one of the major obstacles to individual level knowledge sharing. In the case of uncertainty, factors like trust and openness in addition to psychological safety are usually missing. In such cases individuals are reluctant to share their knowledge. This is also observed in prior literature (e.g. Orlikowski, 1993). As well in the offshoring context individuals located onshore are afraid of losing their jobs and might view offshoring as a negative trend also for the onshore society overall. This could be seen in project Gamma, where – despite the guarantee that offshoring would not have a direct impact on the work situation onshore – people were still insecure and afraid of losing their jobs. Offshoring is viewed also from a wider, not only from an individual, perspective. The informants particularly in project Delta highlighted this issue, and the global effect of offshoring was also discussed by management. Equivalent issues and discussion were brought up in previous offshore-related literature by Zimmermann and Ravishankar (2011) and Levy (2005). Losing one’s job after sharing knowledge can also be seen as a punishment for knowledge sharing, and according to Burgess (2005) such a fear can hinder knowledge sharing. This was well described by Specialist K in project Delta:

“Of course people fear losing their job. There are plenty of good experts here working in such a technical environment that they won’t necessarily

get a new job anymore. For example people working in these old technical environments.” (Specialist K, Delta)

Szulanski (1996) documented the lack of motivation as one of the major obstacles to knowledge sharing. In addition he recognized that fear of losing one’s importance based on knowledge has a negative impact on individual level knowledge sharing. Results of the study clearly brought up the fear of losing one’s status and importance and change resistance as well as overall reluctance to share knowledge as a form of a common lack of motivation. These findings are coherent with Szulanski’s (1996) earlier research. However, despite such fear knowledge was still shared in both projects, as Specialist M from project Delta states:

“We didn’t have any choice not to share, it was obligatory.” (Specialist M, Delta)

### **Time and resources**

The findings also show the lack of needed resources like time, people and money and non-functional IT and ICT technology as obstacles to individual level knowledge sharing. The results followed the previous findings of Szulanski (1996) and Weiss (1999). The findings of the study highlighted the lack of time in the projects. This was strongly brought up within both projects. Offshoring and knowledge sharing projects were mostly handled as additional extra work to people’s own normal duties, and the time reserved for actual knowledge sharing with offshore colleagues was considered too short in both projects and within every informant group in both projects and within management. The lack of time and too tight timetables easily create an extra burden for knowledge providers and may lead to exhaustion. Some crucial matters might even be unshared due to lack of time, like stated by Specialist M from project Delta and Specialist B from project Gamma:

“We had had an enormous workload already, I mean other work than this project, and this offshore knowledge sharing project came on top of that.” (Specialist M, Delta)

“You did not have enough time to think about things. Essential issues might have been left unshared because you did not have enough preparation time.” (Specialist B, Gamma)

### **Nature of knowledge**

Knowledge shared and transferred during the projects was mainly related to the customer’s business processes, applications and systems in the scope, starting from overall functionality of the program and technical structures to program code and detailed level information. Part of the knowledge was in explicit format, like documentation, and part of the knowledge was tacit in nature. In terms of tacit and explicit, there was no remarkable difference related to individuals’ willingness to share knowledge; both kinds of knowledge was shared during the projects.

However, the findings of the study showed that the nature of knowledge was seen as an obstacle based on its critical nature. Knowledge was considered as power, and at least the critical part of knowledge was left unshared as a way to protect oneself, and sensitivity of knowledge was used as an excuse not to share it. Even if the security level of individuals’ current jobs was supposed to be better in project Gamma, leaving the critical parts of knowledge unshared was brought up there in particular. This shows well that despite guarantees given from the management side, insecurity is still present in offshoring projects, and individuals are willing to protect themselves. Specialist C from project Gamma describes the situation as follows:

“I would believe that everyone tries to hold really tightly on to their own special area. Even if it were obligatory to share, you would try to leave the strategic part of the knowledge to yourself. (...) Well, keeping the critical parts to yourself is based on the fact that you make yourself needed. So that you don’t suddenly notice that someone else knows the same as you, and now management is starting to compare the costs. The situation onshore is always ‘on thin ice.’” (Specialist C, Gamma)

This mirrors well the previous discussions; according to Weiss, (1999) criticality and sensitivity of knowledge can have an impact on individuals' willingness to share knowledge. Knowledge can as well be seen as a source of power, and therefore sharing it can be seen as an action reducing it. In that case the nature of knowledge becomes an obstacle to knowledge sharing (Ipe, 2003; Empson, 2001; Weiss, 1999).

In this chapter the results of the study were reflected against previous academic discussions and studies, and reasons for the results and the possible impact of differences in the case contexts were reflected. Managerial implications are provided in the next chapter.

### **7.3 Managerial implications**

Based on the findings of the study, management's role in individual level knowledge sharing is important and mostly enabling and supportive, thus based on the result there are several practical individual level knowledge sharing related implications which can be useful for managers working in offshoring cases in the future. In this chapter the most essential implications from the study are highlighted and some practicalities are suggested.

#### **Resourcing and providing opportunities**

According to the study management's role is to enable proper conditions and environment for individual level knowledge sharing by providing needed resources person, money and time wise. Based on these findings it is recommended that special attention is paid to the planning phase of the offshore project in order to guarantee required resources. Accurate definition of scope and scale helps resourcing and selecting the right individuals with the needed capabilities and experience for the project. As well, necessary technical tools and environments needed in knowledge sharing can then be planned and implemented according to exact need. It is as well suggested that in addition to the "hard" and technical part of the job transfer, the importance of face-to-face time and common time working together during the project would be realistically included already in the planning and calculation phase, in order to avoid unpleasant surprises during and after the pro-

ject. It is as well proposed that managers should, especially in the beginning of the project, pay attention and take into account the importance of the soft and human perspective of the job transfer and individual level knowledge sharing. They should also have enough patience and tolerate the time taken to build a solid foundation and mutual trust for individual level knowledge sharing to take a place under circumstances like this. This would improve knowledge sharing later during the project and in the long run.

### **Commitment and being present**

Based on the study, commitment of the managers throughout the organization is essential. Being visible and leading by example supports individual level knowledge sharing. Managers “walking the talk” at different stages and situations is essential to dispel uncertainty and fears related to the situation and to prevent uncertainty and suspicions from cascading downwards to the individual employee level. As well, an assertive leadership style and clear guidelines and rules are important and needed in order to secure unified working towards common goals. The customer’s will and commitment to the offshoring project encourage individuals to share their knowledge in offshore projects as well. Therefore it is recommended that management ensures the customer’s commitment to the project and its goals both in terms of content and finance. In addition it is suggested that managers really “walk the talk”, are visible to employees and ensure that project-related meetings and information sharing sessions are arranged and that they take part in them. Likewise it is important to ensure that commitment is in line throughout the project and throughout the whole organization to avoid mixed-signals communication related to the project concerned.

### **Communication**

The results show that communication really does matters. The need for communication is huge in offshoring projects where jobs are transferred elsewhere and uncertainty about the future is present onshore. It is suggested that a communication professional is included in the projects to support managers in communication matters; however, managers and superiors have the key role here. Communication should be open and honest, regular and carried out throughout the project.

Especially communication and dialogue with employees about the reasons, goals and future roles is essential in the beginning of the project. Regular information about progress of the project is also important.

### **Decreasing uncertainty by providing future prospects and vision together with HR**

As mentioned earlier, according to the results of the study, uncertainty is one of the biggest obstacles to individual level knowledge sharing. On the other hand managers' and HR's role, as well as functional management and HR practices, are considered as enhancer for knowledge sharing. Strong change management skills are important for managers to be able to support employees and an active role and solid involvement from HR is essential in offshoring projects. Therefore it is recommended that change management trainings would be arranged for managers to the needed extent. Furthermore it is suggested that HR would allocate a special HR partner role for offshoring projects, in order to support managers and employees in coping with the situation and to enhance new career paths and future prospects for individuals involved.

### **Mitigation of culture and language differences**

According to the study results, cultural dissimilarities and different native languages had a major impact on individual level knowledge sharing. Working in a global company and environment does not guarantee that working across cultures and using a language other than one's own native language is easy. Neglecting cultural and language aspects in the offshoring knowledge sharing project causes problems for individual level knowledge sharing, and it can also cause a financial loss for the companies. Therefore it is suggested that structured cross cultural trainings would be developed based on available best practices and experiences, and those would be implemented into each offshore project reflecting the scale and scope of the project. In addition, language training is recommended to the needed extent in order to encourage individuals to communicate in a foreign language. As well, the role of a language mentor could be implemented in projects to lower the threshold to use a foreign language.

### **Rewarding and recognition**

Based on the results of the study, rewarding and recognition in offshore cases is a double-edged sword. It can be an enhancer for individual level knowledge sharing; however its impact on sharing or quality of shared information is not necessarily significant. In order to work properly, the reward system should be clear and transparent. It is recommended that a rewarding and recognition system would be integrated into offshore knowledge sharing projects. However, the pattern of the system and key performance indicators (KPIs) should be carefully thought through in order to achieve the positive impact of such rewards on both the individual and the company.

### **7.4 Limitation and future research**

The research has some limitations, and therefore the findings of this study need to be viewed in the light of its limitations. The data was gathered from the IT industry, and from one company. Therefore it might be that the results and implications cannot be widely generalized across companies in the IT industry or across different industries. The age range of informants in the study was such that it might have some impact on part of the findings as well. For example the work ethics and work moral which came up as motivational factors in the study are often – but not exclusively – connected and related to the generation after the baby boomers and early generation X. Therefore future studies in a different industry and focusing on a different age range could possibly provide a different perspective on the issue. In addition the research focused on knowledge sharing projects from Finland to India. It might be that the Finnish national culture and typical characters of it have had an effect on the results. An interesting future research subject would be comparing knowledge sharing motivational factors in offshore cases among different nationalities. It would also be fascinating to research the concept of sense of duty more closely in the national or personal context.

It would have been beneficial for the study results to do some additional interviews related to the feeling of “obligation” or “sense of duty” that individuals brought up as an enhancer of their knowledge sharing. This could have shed some additional

light onto the matter. However, the timetable of the study was strict and it was not possible to carry out these extra interviews in this case.

Finally, during the research it was noted that the idea that only management is allowed to think seems to still be strongly present in companies. Employees do as they are told and act according to instructions received, even though they know that taking a different approach would lead to better and more appropriate results. This is a somewhat challenging situation from companies' knowledge management perspective and from their success perspective. Combining this topic with personal and impersonal trust and leadership behaviour would make this an interesting future research subject.

## **7.5 Conclusion**

It seems that offshoring will be a natural part of and increasingly embedded in companies' operations in the future. In order to gain and maintain the competitive advantage over their competitors and to be able to build right kind of competence structure for global workforces, companies need to be able to understand how successful knowledge sharing is enhanced, enabled and executed within offshoring projects. Knowledge sharing always involves individuals, and therefore it is essential to realize the importance of individual level knowledge sharing and factors impacting and enhancing it.

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APPENDIX 1: Interview template used with specialists in their semi-structured theme interviews

<b>Background information</b>
<p>Name:  Role:  Age:</p> <p>Language skills:  Work experience:  Experience in offshoring projects:</p>
<b>Themes &amp; supportive questions</b>
<b>1st Theme: Factors for individual level knowledge sharing under uncertain circumstances</b>
<p><b>Supportive questions:</b></p> <p>How uncertainty about the future and the continuation of work affect knowledge sharing within the organization? Why?</p> <p>Please describe how you experienced your own situation in the project? Why?</p> <p>Please describe what factors/things impacted your own situation?</p> <p>Why did you share your knowledge with the foreign colleague?</p> <p>What kind of information you shared?</p> <p>What kind of information you did not share?</p> <p>Why didn't you share your knowledge with the foreign colleague/ or in what kind of circumstances you found the sharing difficult?</p> <p>Please describe how the certainty/uncertainty impacted to knowledge sharing?</p> <p>Please describe how your background and previous experiences impacted to your knowledge sharing?</p> <p>How did you share the knowledge?</p> <p>What motivated you to share your knowledge with a colleague in offshore country?</p>
<b>2nd Theme: Obstacles to individual level knowledge sharing</b>
<p><b>Supportive questions:</b></p> <p>Please describe the issues which you considered as obstacles in interpersonal knowledge sharing?</p> <p>Which issues you consider the most critical?</p>
<b>3rd Theme: The role of the company and management in enhancing the individual level knowledge sharing</b>
<p><b>Supportive questions:</b></p> <p>How and in which way the company and management could influence to success of knowledge sharing in offshore projects?</p>
<b>4th Theme: Lessons learned &amp; Improvement ideas for offshoring cases in the future</b>
<p><b>Supportive questions:</b></p> <p>How would you improve knowledge sharing in offshoring projects in the future?</p>

## APPENDIX 2: Example of data analysis method

Concepts	Higher class	Sub class
<b>Motivation</b>	Social capability and positive attitude	Active and open attitude
	Certainty	Coming retirement
		Feeling safety with own job
		Position in the organization
	Clear and honest future prospects	Clear future roles of onsite and offshore
	Commitment of the customer	Customer visits
		Customer's involvement by allowing visits
		Customer's involvement in training
		Customer's involvement over all
	Commitment to customer	Feel of responsibility of customers productions
		Respecting customer state of will
		Seeing the best for the customer
	Joint production motivation	Working together for common goal
	Norm based motivation	Doing as told even knowing it will not lead to wanted results
		Strong professional identity and responsibility of own work
	Perceived benefits	Access to different and higher value added work tasks
		Access to higher value added work tasks
		Balancing the workload
		Being in the "same level" with offshore
		Improvement of the language skills
		Improvement of the language skills and wider understanding about the substance as well.
		Own learning while teaching and sharing knowledge
	Personal relationship	Charm of novelty, new challenges, new colleagues, meaningful work
		Same wavelength and common way of thinking with the person concerned
	Rewarding and recognition	Trusted and favourite persons to work with, and have good relationship with those
		Best reward would be excluded from coming personnel negotiations
		Clear and transparent reward systems and reasonable set goals
Clear, transparent and understandable reward and recognition system		
Importance of appreciation and recognition, rewards does not have to be money		
Importance of smaller appreciation and recognition, not always money		
Sense of Duty	Rewarding is a bit like two ended sword. Would be good to have, but more important would be to thank and recognized	
	Authority based motivation	
	Fear & following the instructions	
Work motivation	No benefit of not sharing	
	Getting continuator for the work	
Professional pride	Professional pride and commitment to the work	

APPENDIX 3: Factors enhancing individual level knowledge sharing in offshore project Gamma:

Concepts	Factors enhancing individual level knowledge sharing in offshoring project Gamma
<b>Motivation</b>	<ul style="list-style-type: none"> <li>Certainty</li> <li>Clear and honest future prospects</li> <li>Commitment of the customer</li> <li>Commitment to customer</li> <li>Work ethic</li> <li>Work motivation</li> <li>Professionalism</li> <li>Professional pride</li> <li>Joint production motivation</li> <li>Norm and hedonic based motivation</li> <li>Sense of Duty</li> <li>Personal relationship</li> <li>Perceived benefits</li> <li>Rewarding and recognition</li> <li>Social capability &amp; positive attitude of knowledge acquirer</li> </ul>
<b>Opportunity</b>	<ul style="list-style-type: none"> <li>F2F importance</li> <li>IT &amp; ICT Tools</li> <li>Resources</li> <li>Understanding the wholeness</li> <li>Working together with real cases and systems</li> </ul>
<b>Ability</b>	<ul style="list-style-type: none"> <li>Absorptive capacity of knowledge acquirer</li> <li>Competence and experience of knowledge acquirer</li> <li>Competence and experience of knowledge provider</li> <li>Self-Efficacy</li> </ul>
<b>KGA</b>	<ul style="list-style-type: none"> <li>Climate and working culture</li> <li>Common rules</li> <li>Communication</li> <li>Knowledge sharing culture</li> <li>Management practises</li> <li>Management's support &amp; commitment</li> <li>Measurement for the knowledge sharing</li> <li>Organization of project</li> <li>Practices, Processes and Procedures</li> <li>Well working professional work community and team</li> </ul>
<b>Nature of Knowledge</b>	<ul style="list-style-type: none"> <li>Tacit and explicit knowledge sharing</li> <li>Documentation</li> </ul>

APPENDIX 4: Factors enhancing individual level knowledge sharing in offshore project Delta:

Concepts	Factors enhancing individual level knowledge sharing in offshoring project Delta
<b>Motivation</b>	Certainty Clear and honest future prospects Commitment of the knowledge acquirer Work ethic Work motivation Professionalism Professional pride Evangelical-Lutheran upbringing Intrinsic motivation Joint production motivation Norm and hedonic based motivation Sense of Duty Meaningful work Willingness to share Personal relationship Perceived benefits Rewarding and recognition Social capability & positive attitude of knowledge acquirer Trust between knowledge provider and acquirer
<b>Opportunity</b>	F2F importance Independent working IT & ICT Tools Mental preparation to sharing Resources Understanding the wholeness Working together with real cases and systems
<b>Ability</b>	Absorptive capacity of knowledge acquirer Absorptive capacity of the team Competence and experience of knowledge acquirer Competence and experience of knowledge provider Self-Efficacy
<b>Culture</b>	National culture
<b>KGA</b>	Climate and working culture Communication Knowledge sharing culture Management practises Organization of project Practices, Processes and Procedures Well working professional work community and team
<b>Nature of Knowledge</b>	Tacit and explicit knowledge sharing Documentation

APPENDIX 5: Obstacles to individual level knowledge sharing in offshore project Gamma:

Concept	Obstacles for individual knowledge sharing in offshoring project Gamma
<b>Motivation</b>	Change resistance Fear (of losing ones work and position/status) Personal relationship & chemistry Trivializing knowledge provider's competence and knowledge Uncertainty
<b>Opportunity</b>	Lack of documentation Lack of resources ( time, people, money)
<b>Ability</b>	Difficult terminology Language and accent problems Prejudice against knowledge acquirer's absorptive capacity Prejudice against knowledge acquirer's competence Skills & Competences of knowledge acquirer Uncertainty about own abilities
<b>Culture</b>	National culture differences
<b>Nature of Knowledge</b>	Critical business risk knowledge

APPENDIX 6: Obstacles to individual level knowledge sharing in offshore project Delta:

Concept	Obstacles for individual knowledge sharing in offshoring project Delta
<b>Motivation</b>	<ul style="list-style-type: none"> <li>Change resistance</li> <li>Fear (of losing ones work and position/status)</li> <li>Lack of sensible reasons for transfer</li> <li>Negative attitude of knowledge provider</li> <li>Perceived costs</li> <li>Personal relationship &amp; chemistry</li> <li>Reluctance for learning old systems and applications</li> <li>Reluctance for sharing knowledge</li> <li>Trivializing knowledge provider's competence and knowledge</li> <li>Uncertainty</li> </ul>
<b>Opportunity</b>	<ul style="list-style-type: none"> <li>Problems with IT &amp; ICT Tools</li> <li>Lack of documentation</li> <li>Not suitable premises and IT &amp; ICT</li> <li>Lack of resources ( time, people, money)</li> </ul>
<b>Ability</b>	<ul style="list-style-type: none"> <li>Difficult terminology</li> <li>Knowledge acquirer's absorptive capacity</li> <li>Language and accent problems</li> <li>Prejudice against knowledge acquirer's absorptive capacity</li> <li>Prejudice against knowledge acquirer's competence</li> <li>Skills &amp; Competences of knowledge acquirer</li> </ul>
<b>Culture</b>	<ul style="list-style-type: none"> <li>National culture differences</li> <li>Prejudices against foreign country &amp; culture</li> </ul>
<b>KGA</b>	<ul style="list-style-type: none"> <li>Insufficient communication</li> <li>Poor management and HRM- practises</li> <li>Non-committed customer's middle management</li> <li>Non-committed the middle-management of the company</li> <li>Organizational culture</li> <li>Parallel change processes</li> </ul>
<b>Nature of Knowledge</b>	<ul style="list-style-type: none"> <li>Confidentially used as excuse for not sharing</li> </ul>

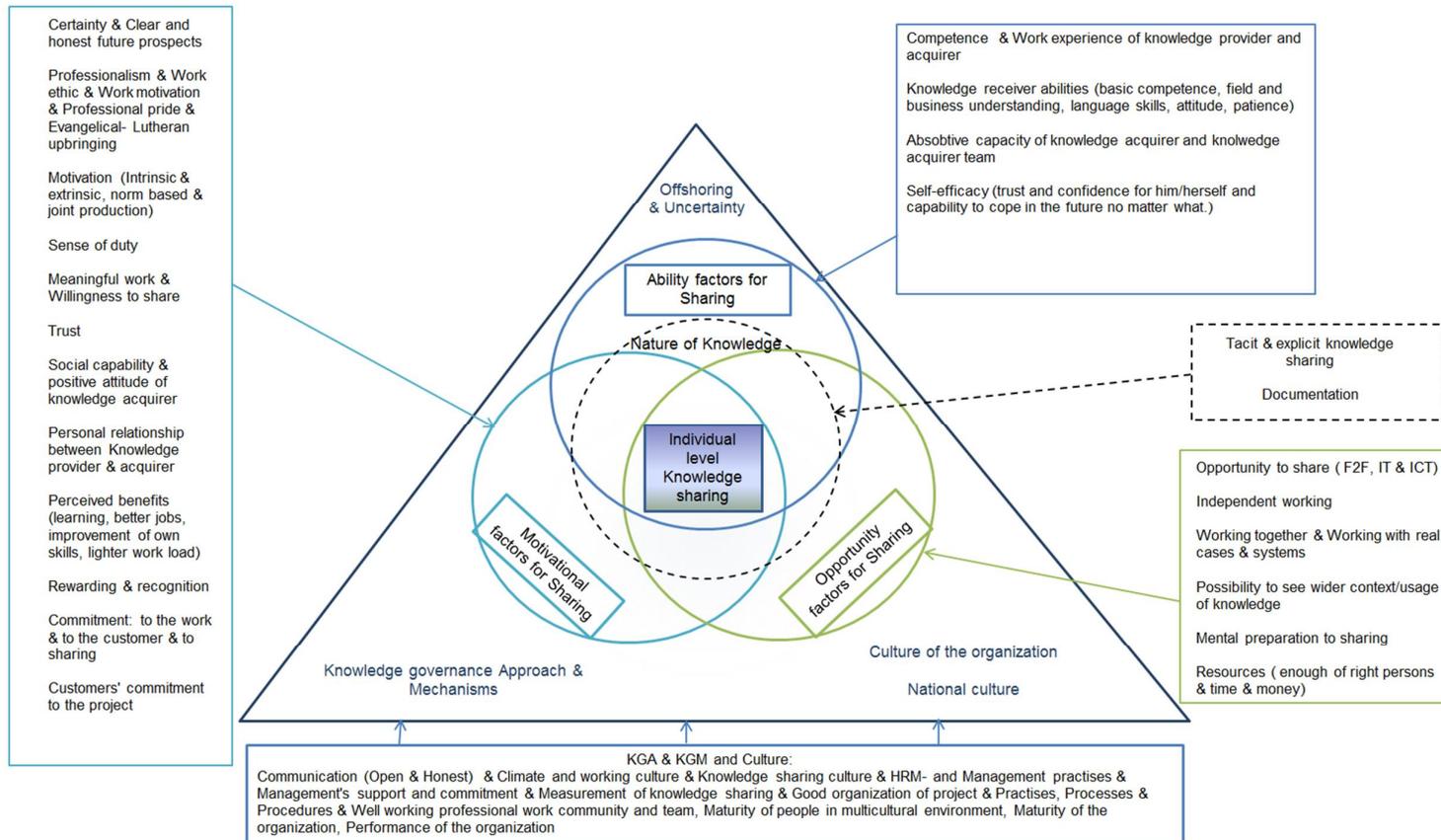
APPENDIX 7: Cross case findings related to factors enhancing individual level knowledge sharing in offshore cases Gamma and Delta.

Concepts	Factors enhancing individual level knowledge sharing in offshoring projects	Project Gamma	Project Delta	
<b>Motivation</b>	Certainty	X	X	
	Clear and honest future prospects	X	X	
	Commitment of the customer	X		
	Commitment of the knowledge acquirer		X	
	Commitment to customer	X		
	Work ethic	X	X	
	Work motivation	X	X	
	Professionalism	X	X	
	Professional pride	X	X	
	Evangelical-Lutheran upbringing		X	
	Intrinsic motivation		X	
	Joint production motivation	X	X	
	Norm and hedonic based motivation	X	X	
	Sense of Duty	X	X	
	Meaningful work		X	
	Willingness to share		X	
	Personal relationship	X	X	
	Perceived benefits	X	X	
	Rewarding and recognition	X	X	
Social capability & positive attitude of knowledge acquirer	X	X		
Trust between knowledge provider and acquirer		X		
<b>Opportunity</b>	F2F importance	X	X	
	Independent working		X	
	IT & ICT Tools	X	X	
	Mental preparation to sharing		X	
	Resources	X	X	
	Understanding the wholeness	X	X	
	Working together with real cases and systems	X	X	
<b>Ability</b>	Absorptive capacity of knowledge acquirer	X	X	
	Absorptive capacity of the team		X	
	Competence and experience of knowledge acquirer	X	X	
	Competence and experience of knowledge provider	X	X	
	Self-Efficacy	X	X	
<b>Culture</b>	National culture		X	
<b>KGA</b>	Climate and working culture	X	X	
	Common rules	X		
	Communication	X	X	
	Knowledge sharing culture	X	X	
	Management practises	X	X	
	Management's support & commitment	X		
	Measurement for the knowledge sharing	X		
	Organization of project	X	X	
	Practices, Processes and Procedures	X	X	
	Well working professional work community and team	X	X	
	<b>Nature of Knowledge</b>	Tacit and explicit knowledge sharing	X	X
		Documentation	X	X

APPENDIX 8: Cross case findings-related obstacles to individual level knowledge sharing in offshore cases Gamma and Delta.

Concept	Obstacles for individual knowledge sharing in offshoring projects	Project Gamma	Project Delta
<b>Motivation</b>	Change resistance	X	X
	Fear (of losing ones work and position/status)	X	X
	Lack of sensible reasons for transfer		X
	Negative attitude of knowledge provider		X
	Perceived costs		X
	Personal relationship & chemistry	X	X
	Reluctance for learning old systems and applications		X
	Reluctance for sharing knowledge		X
	Trivializing knowledge provider's competence and knowledge	X	X
	Uncertainty	X	X
<b>Opportunity</b>	Problems with IT & ICT Tools		X
	Lack of documentation	X	X
	Not suitable premises and IT & ICT		X
	Lack of resources ( time, people, money)	X	X
<b>Ability</b>	Difficult terminology	X	X
	Knowledge acquirer's absorptive capacity		X
	Language and accent problems	X	X
	Prejudice against knowledge acquirer's absorptive capacity	X	X
	Prejudice against knowledge acquirer's competence	X	X
	Skills & Competences of knowledge acquirer	X	X
	Uncertainty about own abilities	X	
<b>Culture</b>	National culture differences	X	X
	Prejudices against foreign country & culture		X
<b>KGA</b>	Insufficient communication		X
	Poor management and HRM- practises		X
	Non-committed customer's middle management		X
	Non-committed the middle-management of the company		X
	Organizational culture		X
	Parallel change processes		X
<b>Nature of Knowledge</b>	Critical business risk knowledge	X	
	Confidentially used as excuse for not sharing		X

## APPENDIX 9: The reported enhancing factors for individual level knowledge sharing



## APPENDIX 10: The reported obstacles to individual level knowledge sharing

