Knowledge Sharing in IT consultancy firms

Exploring the knowledge sharing mechanisms in small IT consultancy firms.

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Abstract

Knowledge management is a key avenue for consulting firms to ensure survival and maintain competitive advantage. Prior research has focused on many different aspects of knowledge sharing in IT firms and projects. However, even when the importance of KS is acknowledged in IT consulting firms, little is known about how the mechanisms look like inside these firms. The purpose of this study is to explore the knowledge sharing mechanisms in small IT consulting firms or offices. Qualitative methods were used to approach the KS phenomenon, which involves six interviews that included senior consultants and managers from various firms. The results show that the small firms have a better advantage when it comes to sharing. Furthermore, that most knowledge sharing in these firms occur in an informal way since consultants prefer social interaction than using systems. Finally, the results show that a concept labelled as “Knowledge market” strongly exist in consultancy firms in small cities like Umeå.

Keywords: IT consultancy firms, Knowledge management, Knowledge sharing, Knowledge market, Knowledge management systems, Informal knowledge sharing, Professional networks

1. Introduction

As today’s economy is being labelled a knowledge-intensive economy, knowledge management (KM) has been a source of interest to many scholars and practitioners in different fields for example in management studies (Gold and Malhotra, 2001), Information Systems (Alavi & Leidner, 2001) and Economics (Gertler, 2003; Coles, Daniel & Naveen, 2008). Knowledge is considered to be a critical strategic resource (Wang & Noe, 2010; Landaeta, 2008; Geisler, 2007) and therefore its management is crucial for business survival (Argote & Ingram, 2000), competitive advantage (Grant, 1996; Jackson, Chuang, Harden & Jiang, 2006), and innovation (Oke, 2007; Mas-Machuca and Costa, 2012; Cavusgil et al., 2003; Obeidat et al.,2016). Although KM constitute a key aspect of many forms of organizations, consultancy firms are particularly considered as knowledge-intensive firms (Sarvary, 1999; Fincham, 1999) because of their reliance on knowledge as a resource, and as a product offer to their clients, thus constituting a key component of their intellectual capital (Apostolou & Mentzas, 1999). Given their reliance on knowledge as a source of creating value for their clients, efficient KM is a critical aspect in this regard (Mas-Machuca & Martínez-Costa, 2012; Masa’deh et al., 2015; Powell & Ambrosini, 2012). Knowledge and individual’s competence is considered as the consultancy firm’s main assets (Robertson & Hammersley, 2000; Engwall & Kipping, 2002). For these firms, other forms of input are not as important as knowledge (Alvesson, 2001) and their survival and competitive advantage is attained by being able to develop and exploit knowledge faster than their competitors (Leonard-Barton, 1995; Nonaka & Takeuchi, 1995). This is a necessary pre-requisite, as a firm need to develop competencies that enable them to seize on dynamic opportunities in an ever-changing business environment. Since consultants and their knowledge and competence are the firm’s main assets, there is an interest about how knowledge can be transferred within these companies in order to leverage innovation and individual competence.
Although literature acknowledges the importance of KM for consultancy firms (see e.g. Engwall & Kipping, 2002; Desouza & Evaristo, 2003; Cooke, 2005) there is a lack of understanding of the strategies that consultancy firms adopt in order to ensure effective knowledge transfer. This presents confusion and inability to understand the dynamics of KM in IT consultancy firms. Understanding knowledge transfer mechanisms in IT consultancy firms is important because they are one of the extreme examples of knowledge intensive firms and the important role they play in the IT sector. Leiponen (2006) describes knowledge sharing (KS) in consultancy firms as a paradox, where the urgency, need, and the importance of KS is acknowledged, but there is still a lack of attention attributed to it. Three main important factors that make KS crucial for consultancy firms. First is that consultants are perceived skilled based on their knowledge. Knowledge is what they offer, which means an existence of a conflict of self-interest and organisational interest of sharing knowledge. Second, consultants can develop new skills, competence and be more creative when they share knowledge with others (Matzler et al., 2008). Third, is the drawback consultancy firms face when a consultant decides to departure from the firm as their knowledge leaves the company with them. (Massingham, 2010; Dunford, 2000).

Previous research has focused on KS in consultancy firms, KS in consultancy firms projects, KS and innovation, and barriers of KS in different contexts. However, in the researcher personal opinion, there is still a lack of research about KM, especially in IT consultancy firms. The motivation of this study is based on multiple reasons. First, the information technology sector is a sector characterised by a fast pace advancements, but most research has focused just on management consultancy firms and not IT firms. Second, prior research has focused on exploring KM activities in consultancy firms and focused on the project's context. However, the focus of this thesis is on KS sharing inside the IT consultancy firm in order to understand how consultants in the same firm share with each other the knowledge they gained from outside the firm. Moreover, KS mechanisms differ based on context and people, and prior studies have been conducted in different countries. This study focuses only on small firms or offices branches in Umeå based on the belief that it is worth exploring led activities in different country context and workplace sizes. Exploring and understanding this phenomenon will provide more theoretical data about the KS in IT consultancy firms, giving an opportunity for further research to explore many different aspects. Furthermore, it will help IT consultancy firms to understand how the actual mechanisms of KS work inside the firm allowing them to better design and manage the mechanisms. Against this backdrop, this research is guided by the following research question:

What are the knowledge sharing mechanisms within small IT consultancy firms?

The rest of the thesis is structured as follows. First, related literature that deals with the role of consultants as knowledge workers is reviewed. Followed by a review of knowledge and knowledge management with a focus on knowledge sharing. Chapter 3 focuses on the methodology of the thesis providing and explaining the research approach, data collection, analysis, ethical considerations, and limitations of the study. Chapter 4 presents the results of the study based on the grounded theory coding, while chapter 5 discuss the results of the study with related literature and its implications. Finally, chapter 6 conclude the thesis and discuss the possibilities of further research.
2. Related Research

2.1 Consultancy Firms
Consultancy industry falls under the umbrella of knowledge-intensive business services (KIBS). Knowledge intensive business services firms are characterised by being knowledge intensive which to great extent rely on their experts’ judgment and knowledge in the delivery of their service (Lowendahl, 2005). Consultancy Industry is an industry, which lives and thrives on knowledge. Consultancy firm engages in knowledge work where its activities and occupations are “characterised by an emphasis on theoretical knowledge, creativity and use of analytical and social skills.” (Frenkel et al., 1995, p.773). Knowledge is a key to value creation in almost all industries and organisations. However, for consultancy firms, the knowledge they create and share with their clients represents the core service they provide. Consultants are the main asset of their companies and considered as the main resource as the firm’s competitive advantage lies in the consultant ability, skills and creativity to solve problems and provide solutions for clients (Lowendahl et al., 2001). Accordingly, the most strategic challenge for consultancy firms is developing and sustaining their consultants. Taminiau, Smit & De Lange (2009) argued that people in consultancy sector are social people who would prefer to engage sharing in verbal communication form. Consultancy firms are always engaged in new projects, for such firms there is no typical or standard project. Each project or assignment is unique with new challenges and questions. The nature of their work requires consultants to work and adjust to different, teams, partners, and clients. Their work supported previous research that knowledge workers prefer have verbal communications in from of conversations than just using systems and documents (Carstensen & Sørensen, 1996; Magnusson et al, 2000).

2.2 Knowledge management

2.2.1 Knowledge
In this paper knowledge is defined as Davenport & Prusak (1998, p.5) described it “a fluid mix of framed experience, values, contextual information, and expert insight that provides a framework for evaluating and incorporating new experiences and information.” Knowledge enables people to understand patterns (Udeaja et al., 2008) and relations between events or actions (Hislop, 2005). Most researchers distinguish between two types of knowledge, explicit and tacit knowledge (Nonaka & Takeuchi, 1995; Alavi & Leidner, 2001). Explicit knowledge and sometimes referred to as codified knowledge is the knowledge that is easy to codify into tangible forms and transfer across individuals or groups (Nonaka & Takeuchi, 1995). This type of knowledge is easy to articulate in words since it is considered to be impersonal which mean it can be separated from the individual who has the knowledge. It can be presented in various formats like books, written procedures, manuals, project documents, journal articles, e-mails, etc. (McInerney, 2002; Blair, 2002). Explicit knowledge is to some extent easy to evaluate, organize and be available for others who need it (Davenport & Prusak, 1998). On the other hand, tacit knowledge is knowledge gained by an individual through experience, common sense, values and beliefs (Stewart & Waddell, 2008), but it is difficult to express in words (Nonaka & Takeuchi, 1995). It is in the individual mind as experience, intuition, judgment, etc. and it is subjective because it is bounded by emotions and hunches (Choo, 2000). Tacit
knowledge is hard to codify, externalize and share (Magalhaes, 2004). Tacit knowledge is also said to be slow and costly to transfer (Grant, 1996). Some scholars have argued that most of the important knowledge that an organization can use falls under the tacit knowledge (O’Dell & Leavitt, 2004). However, some have argued that the complete division between tacit and explicit can be misleading because knowledge does not have to fall at any of the both extremes of these dimensions, but within a continuum between these two boundaries (Connell et al., 2003).

2.2.2 Knowledge management
In the past 2 decades, there has been an increasing amount of literature on knowledge and knowledge management (KM) (Holsapple & Singh, 2003). KM in its basic form, is about creating, storing, transferring/ sharing, storing/retrieving, and using knowledge (Alavi & Leidner, 2001) in the company to achieve organizational goals. This process can even occur in organizations without the presence of any formal strategy (Supyuenyong et al., 2009). Many views and approaches to KM have emerged in the last two decades; codification, personalization, process, practice (Hansen, Nohria & Tierney, 1999), mechanistic, cultural/behavioral, systematic (Manuel, 2008), and pluralistic (Powell & Ambrosini, 2012) approaches. One of the most famous approaches and a key concept in KM is the codification and personalization (Grover & Davenport, 2001). These strategies depends mainly on how the firms deal or approach knowledge. Firms which rely on the interaction between people as the main component of knowledge transfer, will depend on personalization approach. While, codification approach means that the firm relies more on the repositories of explicit knowledge. These two approaches are used simultaneously but with more focus on one approach than the other. However, some have claimed that there is lack of information about how does consultancy organizations manage their knowledge (Desouza & Evaristo, 2003; Sparrow et al., 2004). KM is a core capability for consultancy firms in order to achieve competitive advantage, but it is still a challenge to consultancy firms. Dunford (2000) investigated challenges of KM faced by consultancy firms. He argues that too much reliance on explicit knowledge may provide a challenge for consultants and might not provide the competitive advantage promised from the KMS. Another challenge is the limit to codifying the tacit knowledge. Consultancy firms expenditures on knowledge systems have been increasing in hope of more effective and efficient management of knowledge. But challenges for diffusing knowledge still exists after the implementation of knowledge management systems (KMS). Since KMS like any information systems depend on the user initiative to use it. However, even when KMS can handle and share big amount of knowledge, it’s not the same case with tacit knowledge. When it comes to tacit sharing, personal channels like informal or formal sessions, meetings, coffee breaks are more appropriate for sharing. An interesting concept in the knowledge management literature is the knowledge market (Grover & Davenport, 2001; Davenport & Pruzak, 1998). This concept recognize that the knowledge holder recognizes the value of the knowledge, and they require something in return in order to share it. This can be valuable knowledge, value, respect, etc.

A review by Alavi & Leidner (2001) reviewed the literature on KM from various fields. They presented a detailed organisational KM process view focusing on IT potential role in this process. Gold and Malhotra (2001) examined the effectiveness of KM from an organisational
capabilities perspective. They argued that firms should consider their capabilities in terms of knowledge process (architecture of acquisition, conversion, application, and protection) along with knowledge infrastructure (technology, structure, and culture) to as a precondition and guarantee of success and efficiency of KM. Donnelly (2008) investigated the KM practices of multinational consultancy based on two national contexts; The UK and The Netherlands. He found strong similarities in the KM mechanisms between the firm in the two countries. These mechanisms are team-based interaction, electronic libraries/databases and intranet-based knowledge forums, coach/apprentice training model, and network relationships. KM provides individuals with the chance to share and learn from skills, experience, and knowledge, therefore, improving professional development and performance. Providing necessary enabling context and facilitating the environment for knowledge transfer is the management main role, rather than control the knowledge work process (Collison & Parcell 2001).

2.2.3 Knowledge sharing and transfer

Knowledge Transfer and Knowledge Sharing are terms that have been used interchangeably by different authors when discussing knowledge (e.g. Bock, Zmud, Kim & Lee, 2005; Argote & Ingram, 2000). In order to better comprehend the research topic, the difference between both terms must be presented. Knowledge sharing (KS) refers to the knowledge exchange process between people. It can be between individuals, teams, or organisations (Paulin & Sunesson, 2012). While knowledge transfer (KT) is about sharing and applying knowledge that has already been identified and acquired in order to enhance the current ideas or create new ones and be applied in a different setting (Paulin & Sunesson, 2012). So, knowledge transfer is an umbrella for knowledge sharing process in addition to using this knowledge in different context. The sharing and transferring of knowledge is crucial and a main pillar of KM. Therefore, KS efficiency is a key component of any KM strategy. This process attempts to connect different professionals across different function, platforms, and geographical distances. The focus on organisation’s ability to transfer knowledge was pushed by three shifts in KM (Desouza & Paquette, 2011). First, is the acknowledgement that knowledge can be possessed by anyone who is working and not just experts. Second, valuable knowledge is embedded in groups and communities and not just “disconnected individuals”. The third is the acknowledgement and treatment of knowledge as unstable commodity or asset. KS can occur between different entities; Humans, technology, and organisations. The most common form of sharing occurs between human to human. A recent study by Powell and Ambrosini (2012) stated in organisations, KT can be personal or impersonal and can be transferred through formal or informal transfer mechanisms. Taminiau et al (2009) differentiated between formal and informal KS in consultancy firms. They defined the informal process as all the sharing which exist besides all the institutionalised forms of KS; For example, lunches or talking at the coffee machine.

The literature often refers to informal knowledge as informal networks and informal communication (Awazu, 2004). It is therefore, important to focus on interpersonal KS since consultants rely on interpersonal consultants to get advice because of the huge amount of information available (Taminiau et al 2009). McDermott (1999) points out that knowledge is embodied in many phenomena. Therefore, most knowledge exists in informal forms like stories told between colleagues and chance workplace discussions, but in written form. Werr
and Stjernberg (2003) showed that the experience of the consultants is considered as the most important source of knowledge when it comes to consultancy projects. The experience was usually shared among consultants in a verbal way as stories in an informal setting like hallway meeting or over a cup of coffee. Therefore, just relying on codified systems to share knowledge is not optimal (Dunford, 2000). The nature and complexity of knowledge will affect the KS along with the size of the group sharing (Powell & Ambrosini, 2012). For example, Sparrow (2011) argued that the knowledge flow is affected by the firm’s size, and smaller firms are more likely to use personalization rather than codification to manage knowledge. Other believe that knowledge is deeply rooted in a context which makes it hard to articulate (Johannessen, 2008).

There are many ways to share and transfer professional tacit knowledge (Leonardi, 2015). One way is having direct communication and conversations with other individuals. Another approach would be by observing how others communicate. Both approaches are usually combined and a traditional way of doing that is apprenticeship model, where an individual takes the responsibility to transfer his/her knowledge to an apprentice (Nonaka & Takeuchi, 1995). Fong (2003) suggested imitation, observation and sharing experiences face-to-face as a social way of KS. There have been claims that KM allows organisations to be less dependent on individuals (Riege, 2005). However, this is not completely true in consultancy industry as they will always depend on their consultants. The knowledge does not completely transfer from one consultant to another. Still, the organisational benefits gained from KT would be great and the consequences of losing knowledge source will be less. KS can also be approached on a team level. Working together in teams encourage the team members to share more especially if the rewards are team based (Cabrera & Cabrera, 2005). For example, Robertson and O’Malley (2000) argue that one of the success factors of knowledge intensive firms is the use of inter-disciplinary project teams.

Due to the nature of knowledge, knowledge sharing is not an easy process. Individuals and organizations are faced with many challenges trying to share knowledge. A main challenge is the type of knowledge. Tacit knowledge as mentioned earlier is hard to express or put into words, which creates difficulty for the receiver of knowledge and makes it depend on their ability and capacity to understand. What individuals know is represented more by how they can act than by what we can articulate (Polanyi, 1966), which limits the extent to which tacit knowledge can represented in an explicit form. Sometimes consultants arrive at an answer intuitively which makes it hard to explain (Davenport & Prusak, 1998). Small firms have greater advantage than large organizations in organizing and sharing their tacit knowledge even if large organizations have more resources and capabilities to manage their explicit knowledge (Wong & Aspinwall, 2004). Also, knowledge requires time to be transferred. Explicit knowledge sharing now is facilitated by IT and KMS systems which helps in making this type of knowledge available in timely manner, but this might not be the case with tacit knowledge. Moreover, unwillingness or the lack of motivation is a barrier to sharing knowledge. Not every knowledge holder may be willing to share his knowledge with others. Dunford (2000) states that power and influence might be lost when knowledge is shared. However, Kankanhalli, Tan & Wei (2005) tested the use of electronic knowledge repositories in public sector. They found out that knowledge and power loss did not have an impact on sharing while self-efficacy and enjoyment in helping had the most impact on their motivation
to use the systems. Sometimes, the knowledge holder may not mind sharing, but lacks the initiative to start or participate in the process. Organizational culture may act as a challenge to knowledge sharing if it does not encourage sharing. David and Fahey (2000) points out that culture affects the assumptions about knowledge. Moreover, it outlines the relationships between individuals and organizational knowledge and creates the context for social interaction which affects how knowledge will be used. Gupta and Govindarajan (2000) stated that building the social environment and trust within this environment in which people are to share knowledge is critical for the success of the process. Von Krogh et al. (2000) also agreed on the role of trust and argued that trust is a precondition for KS and it’s a major concern for KM. Providing rewards is considered as efficient way to enhance KS as suggested by (Bartol & Srivastava, 2002). They discussed different rewards systems for four KS mechanism; Formal sharing, informal sharing, knowledge databases and communities of practice.

3. Methodology
This chapter provides an overview of the research methodology used in this thesis and justify its appropriateness in exploring the topic. It starts with explaining the motivation behind the thesis. A walk through and discussion of this study philosophical and methodological stance will be provided in the following section. Then data collection, data sampling, data analysis, ethical considerations and limitation of the study will be discussed.

3.1 Philosophical and methodological choice
Many authors have discussed the importance of understanding the philosophical backgrounds of research methodology because of the effect it can have on the research design and research as whole (Easterby-Smith et al., 2012; Creswell, 2007). Ontology and epistemology are the centre of debate when it comes to the philosophical background of research. Epistemology refers to the assumptions about knowledge and how to obtain it (Hirschheim, 1994). There are three research philosophical positions/assumptions which falls under epistemology, which are interpretive, positivist and critical (Chua, 1986). The author will take interpretive approach as it deems most suitable to investigate the topic since, the organizational process involved in knowledge and KS is deeply rooted in context. KS mainly consist of social interaction mechanisms where individuals exchange knowledge with each other, then transferring knowledge, includes producing this knowledge through KS with others. This phenomenon “KS” could be examined through the individual’s’ perceptions and interpretations to identify and explore their motives, intentions, activities, etc. Interpretive approach helps exploring this phenomenon “KS” through how the individuals, and groups perceive and understand their experiences, motives, intentions and dealing with other intrinsic subjectivity of many of the phenomena involved (Easterby-Smith et al., 1991). Based on three important factors, a qualitative approach is taken to answer the research questions and explore the phenomena context. First, qualitative approach is the most appropriate when trying to understand a phenomenon or concept that is under/researched (Creswell, 2003). Second, qualitative research allows flexibility when it comes to variables and mechanisms being investigated. Third, it is useful in understanding complex human behaviour and relationships (Sofaer,
Three of the most common methods in qualitative research are grounded theory, ethnography, and case study (Creswell, 2009; Myers, 1997). The most common qualitative method used in IS is Case study research (Orlikowski & Baroudi, 1991). Case study can either describe a unit of analysis or a research method. In this thesis, Case study is used as a research method (Myers, 1997) to acknowledge the uniqueness, complexity and situation/individuals specificity involved.

3.2 Sampling and data collection

It was decided that qualitative semi-structured interviews were the best way to collect data for this investigation. Semi-structured interviews allow to have a series of predetermined questions prior to the interview, but it gives flexibility to change, add or remove some questions during the conversation according to the interviewee response (Silverman, 2011). Moreover, they are suited to explore respondents opinions and perceptions about complex issues since they enable clarification of answers (Louise & While, 1994), which allows to follow relevant topics that may stray during the interview or during the coding process. An interview guide (see appendix 1) was developed based on three major themes: Formal KS, informal KS and the environment. The seven guidelines for conducting interviews in IS research suggested by Myers and Newman (2006), was considered and adopted while developing the guideline and conducting the interviews. In order to allow for more flexibility interviews conducted were divided between, face to face and phone interviews. To acquire the most effective results, six consultants within 5 IT consultancy firms in Umeå were chosen as participants for this study. Small IT consultancy firms or small firm branches were chosen as they are the target that the study wish to address. The number of employees in firms offices ranged from 5 to 60 people depending on the firm or the office size. Minimum of four years of consultancy experience was chosen as a criterion for participants. However, this experience does not have to be in the same firm. Table 2 gives a summary of the participants and other relevant information. One of the participants agreed to be a pilot test which participated in an informal interview that helped shaping the interview guide. Based on a purposive sampling, six interview participants were chosen according to the specific criteria mentioned earlier.

<table>
<thead>
<tr>
<th>Name</th>
<th>Title</th>
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<tbody>
<tr>
<td>A</td>
<td>Business and consultant manager</td>
<td>40 min.</td>
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<tr>
<td>B</td>
<td>IT consultant</td>
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<td>C</td>
<td>Business and consultant manager</td>
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<td>D</td>
<td>IT consultant</td>
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<td>E</td>
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<td>F</td>
<td>IT consultant</td>
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Table 2 - Job title and duration

3.3 Data analysis
The basic concepts of grounded theory were adopted during the analysis phase. However, acknowledging the argument that grounded theory main aim is theory generation, in this study, it was used rather as an analytical approach to guide the data analysis. The use of grounded theory was motivated by the need to understand knowledge sharing practices grounded in the data. This is because of knowledge as a broad term and knowledge sharing practice, in particular, are subjective and as such can very much vary according to the research context. Also, grounded theory allows data analysis process to be conducted simultaneously with data collection (Corbin, & Strauss, 1990). It provides the space for the researcher to go reach pure induction by going through an iterative process of data collection and analysis each informing the other (Charmaz, 2011). Interviews were audio recorded with the due consent of the participants and were transcribed literally with some exceptions that affected the sentence structure. Data was analysed based on an open and axial coding. The purpose of the coding is to identify and explore topics to write about (Corbin, & Strauss, 1990). The iterative coding procedure adopted from grounded theory allowed the author to pursue concepts as they emerge from the data (Charmaz, 1990) until theoretical saturation is reached. Open coding process started after the first interview was conducted and transcribed. Line by line coding was followed in order to be sure that the initial codes were grounded in the data. Based on the coding and the analysis, the interview guide was updated and adjusted after each interview was conducted in order to focus on the key themes that emerged from the data. Around 300 codes arose from the open coding process. Selective coding was then used to generate and sort the key categories based on the codes generated (Charmaz, 2011). Examples of the open and selective coding are presented in appendix 2 and 3. Data collection was ceased after it was felt that the data and coding did not provide more clues to the research question and theoretical saturation was reached.

### 3.4 Ethical considerations and limitations of the method

It was important to be clear and honest with all research participants regarding the study. The research aim, data collection and how data will be presented were discussed with the participants. Participants were free to choose the confidentiality and anonymity levels they would prefer. Due to the nature of the topic and since decisions involved sensitive data about companies and individuals, it was decided that a high level of anonymity will be followed throughout the research and the data collected will not be disclosed at any time. As requested, the participants received a copy of the transcripts with quotations used in chapter 4. The quotations were not used except after being reviewed and approved to publish by the participants. Participants had the right to not participate and withdraw from the study at any point. An important limitation that needs to be noted regarding the current study was establishing trust between the author and participants. Due to the sensitivity of the topic, there could have been a lack of trust between the author and participants (Ritchie & Lewis, 2003) which could have influenced the amount of data presented by the respondents.
4. Results

This chapter presents recurrent themes and categories grounded in data from the empirical findings on knowledge sharing mechanisms and its role in innovation. Based on the analysis and coding process the following themes and subthemes emerged; Formal KS and informal KS under “KS mechanisms” theme, while knowledge market, and environment and culture under “Consultancy” theme.

4.1 KS mechanisms

The First thing that respondent A said when asked about his opinion about KS was that it is a tricky process for firms

\[ \text{It’s a tricky process to put together. [Respondent A]} \]

The main distinction that can be made about KS mechanisms is about how formal the mechanism is. According to respondents, formal KS are usually one or more of the following KS systems, formal meetings, working together/in-house projects. While the informal could be summarised to informal discussions and networks. An important point to consider when talking about KMS is the type of knowledge and the definition of KMS. Most respondents divided knowledge into two categories: technical or hard knowledge, and soft knowledge. When asked about the knowledge types that affect the use of the system, respondent E said:

\[ \text{Yes, there are of course technical knowledge. It is often something you use this in these channels and tools. [Respondent E]} \]

This distinction helped the respondents explain what kind of knowledge is transferred through formal or an informal way, and why certain tools were good to use and not others. Hard or technical knowledge for respondents is the knowledge that can be written, easily transferred and does not depend much on the context. A code line was an example mentioned by respondent F. Someone might post an online thread and ask which is the best way to link these codes, then the answer could also be online and delivered without face-to-face interaction.

\[ \text{You have this hard knowledge, java questions. How do you solve method of some kind, some problems. Then, you can google it. [Respondent F]} \]

He continued that soft knowledge is the opposite where sharing this knowledge might just need more than transferring it through a medium. It will require discussion and face-to-face interaction.

\[ \text{But there are questions that need the discussion. It is the important way to share knowledge, you don’t have one clear answer for the question. [Respondent F]} \]

Both types of knowledge are important, but the informal knowledge is more crucial for consultants. One of the reasons is that the all companies focus on the providing the formal
sharing channels and neglect the informal which makes it less interesting as respondent C says. All respondents see that the informal is as important as formal. It is a mix and balance between both formal and informal sharing. Respondents believe it is a tricky process but crucial for KS.

Because people need to set time for this sharing. And if you make it too structured, then you make it less interesting. So, you need to find a balance for structured knowledge sharing and unstructured spontaneous sharing. [Respondent C]

4.1.1 Formal sharing
Respondents discussed different strategies followed by firms and consultants to address their formal KS, based on their size, type of work, geographical position, etc. Almost all respondents agreed that the systems or platforms that they are using can be labelled as non-pure KMS. However, it’s still considered as their formal KS system. Respondent D said that as long as the systems are sufficient to share formal documents and have an interactive part where questions can be posted and answered.

I can’t say we use any standard tools or standard software. But in Sweden, we have a platform for sharing knowledge ... It’s kind of wiki where you can put questions and answers for different solutions, documents, what we call practice for standard solutions, etc.  [Respondent D]

When the participants were asked on whether they use the system or not, four out of six participants indicated that they rarely use it. The reason was either they believed that the systems or platforms were non-efficient or that they simply they did not have enough time for using it. Respondent F state:

We have this... SharePoint. Microsoft platform system, but it really sucks, no one uses it. And, I think that’s not typical for (company name) only, but most consultant organisations. They use Microsoft platform or whatever and think this will solve the problem, but they never do because it's not about tools. [Respondent F]

Respondent A also agreed that he does not have any need for it.

I mean it is, not really frequently used, but if you want to you can. I haven’t used it that much because I don’t really have the need for. [Respondent A]

However, the only exception was respondent E who claimed that the KMS is frequently used in his firm. Their dependency on their systems and platforms were due to the geographical and time constraints.

Now we use them frequently especially slacks is very common for the area where I work. We have it in knowledge sharing between offices since we are distributed both in geographically and also in time.  [Respondent E]
All the respondents mentioned formal meetings usually occur with and at the customer site, but mostly not with their fellow colleagues. The results in this section represent meetings within consultancy firms and not consultants within their projects or assignments. A formal and structured meeting process existed in all the respondents’ answers. However, the frequency of the meetings, timings, and the purpose varied from one firm to another. Some firms meet in order to discuss the common challenges facing the firm and their consultants in the future. Others meet to give updates on the work process in different branches. While others meet to share specific knowledge with specific groups. Respondent A stated:

*Once a year and then we have bigger interactions with teams here in Umea ... We get together and have meetings and discuss where do we see our challenges and things like that. But not really regarding technical evaluations or things like that.*

[Respondent A]

The reason behind that was the time and geographical constraints forced on consultants due to their work as respondent A stated.

*But we don’t get together here at (company name) since we are so spread out, we don’t really have that.* [Respondent A]

Consultants are usually spread out at different customers sites and each project has different intensity patterns. This creates difficulty in making more consultant meetings where it would fit everyone. However, this created dissatisfaction among some of the respondents because they believed that these meetings create a basic ground for all KS that follows and that the meetings frequency were not enough. Respondent F indicated that when they don’t meet often, then they are interested and discuss personal topics than work related topics.

*Well, I don’t think we meet often. But then we are more interested in each other than discussing problems that probably are just interesting for me or is not common or company knowledge that we share with them. I think meetings, formal groups, culture, that’s the basics.* [Respondent F]

There were also specific meetings especially for consultants who are leaving or departing the firm. These meetings purpose differed from the timing of the decision. If a consultant leaves in the middle of the project, then there are intensive meetings with senior and other consultants in order to be able to capture the knowledge of the specific project to the other consultant who will replace him/her.

*It’s not easy to get all the knowledge and competence document to stay in the company. Of course, we have techniques when a consultant is leaving to make sure we documented all the solutions and knowledge about the customers he/she is working at. And, he has to leave certain forums and other external and internal things that are connected to the company. But of course, it is very difficult to stop*
If you want to take knowledge when you leave a company, you have that, it’s possible to do that. No one can stop it. [Respondent D]

While if the departure was in between assignments as respondent C said, there is a formal meeting just to discuss with the consultant about his decision and usually, these meetings do not involve capturing knowledge from the consultant.

Not about knowledge sharing. It’s about talking through why are you leaving the company, and if there is anything we can improve as a company. It’s those kinds of questions that come up when you leave the company, not knowledge stuff. [Respondent C]

One of the most effective and efficient way to team up and work together according to respondents F. This can be in many forms, such as working together on a customer assignment or having and in-house project for example. Working together or pairing up allows consultants to meet and discuss knowledge in a formal way. This creates a strong responsibility to share knowledge even without being asked to, just because everyone shares the goal of making the project succeed. It makes the sharing process easier. Working together on a project gives the basic ground for more informal sharing later. Moreover, working in teams is effective is the frequency of meeting during the project. Project and team meetings are more frequent which allows for more interactions. Respondent F expressed his dissatisfaction because not having in-house projects. He argued that having in-house is the most efficient way for consultants in firms to meet. It can be considered the bigger side of teamwork or partnering up. It creates the environment for consultants to meet and know each other and discuss assignment specific knowledge.

I have argued my company to take in-house projects and let people work on those projects. Because that’s where you grow your own culture, your own knowledge. I think you need to have a group at least on an in-house assignment working with real working questions. [Respondent F]

Respondent C mentioned another type of collaborating, was joining other colleagues at different workshops or seminars in his free time. This gave him the opportunity to observe, learn and discuss with his colleague about different topics.

If I have 100 percent utilisation for me then, of course, I work for that, but when I get little slack I can use this time to build knowledge. For example (name) a colleague is in a workshop, then I join him as a documentor then I get to know how he or she like to set up workshops or something. [Respondent C]

4.1.2 Informal sharing
Most respondents confirmed the importance informal sharing mechanisms in IT consultancy firms. When asked about what is the most common form of sharing knowledge, almost all of
the respondents agreed that most sharing in the firms happens in an informal way and not the opposite. Respondent D mentioned that around 80 percent of the KS is informal.

*Informal I would say. Mostly even if we would like to do the opposite but informal ... I would say but most of the day maybe 80-85 percent of KS is informal.* [Respondent D]

This sharing usually happens at lunch breaks, in front of the water cooler, coffee machines, knocking on someone’s office, etc. There were many ways of informally sharing knowledge, and mostly it is spontaneous and in verbal communications. Respondent A stated:

*We have informal meetings mostly because most people are out working. So we have meetings at lunch, and we share knowledge at that time.* [Respondent A]

There was a common agreement that the knowledge shared informally is usually very valuable. However, there is usually one condition which is that this knowledge is of relevance to the other person. It is worth to note that this is not a rule. Whether the respondents motive was asking something specific or just searching for a second opinion, this kind of communication and discussions helps to improve the consultants work quality.

*So, you know it’s very informal and very spontaneous... When you search for a second opinion whatever matter you need, you always increase quality in your output significantly.* [Respondent C]

Respondents acknowledged that even with the importance and value of informal sharing, it is a tricky process since it is not structured or managed formally. The structured informal mechanisms are welcomed; however, most firms lack it. Respondent A clearly indicated that he has to accept the fact even if he is not satisfied with it because that’s where a lot of knowledge resides.

*Of course, you are not really satisfied with that kind of situation, but for me, a lot of knowledge is not shared within a document with the specification of what the customer wants. A lot of things comes out standing at the water cooler talking about things.* [Respondent A]

Respondent C indicated that the unstructured sharing is not a problem at the moment since their company size is small.

*We don't have many formal processes going on, but since we are very small firm it's going quite well with the informal process so to speak.* [Respondent C]

A different and common way to share knowledge within consultancy firms is using networks. All respondents agreed that they depend on their personal or firm’s professional networks in order to share and gain knowledge. Networks usually consist of people who share the same interest and have a way of meeting or communication. The city size also plays a role in these
networks according to respondent A. The size of Umea is relatively small which makes consultants mostly know, worked, or heard about each other.

We have a really solid knowledge and a network of people here in Umea. This region, we know who is good, and we who to ask what. If we need to collaborate with something, we know where to go. So, that network is in place. Sometimes I do connect with people in (previous company). [Respondent A]

These networks can be either labelled as personal professional networks or firm professional networks. The distinction can be made according to who drives the motive to join the network and where most of its members are from. Consultants usually join or create their personal professional networks based on their experience. For example, respondent F indicated that he relies more on his personal network since his company did not provide any.

I rely on my own network. I worked within this business for so long, so I know a lot of guys and I know who’s skilled. If they don’t know and they can’t answer the questions, they will probably know someone who could ... Unfortunately, we don’t have that type of networks within the company. [Respondent F]

Firm professional networks are networks facilitated by the firm in order for their employees to interact and transfer knowledge. Some companies call it groups of interest or some specifically term them as networks. Even if the meetings in these networks might not be very frequent but it allows consultants to have access to contacts that can be of help and value.

They have a meeting or not a meeting, we call it society. Once a month, that we different team man of ours so to speak. Wednesday evening for example, when you can, we have special teams if people are interested in tech or can be about anything off topic. So, can be almost anything. [Respondent E]

However, respondents indicated that even if the firm provided networks for sharing, it is still up to each individual to participate or not. This is what respondent B indicated when he was asked if he has to participate in his network or not.

They have a network for it but I mean, it’s up to me to use it and reach to people. [Respondent B]

4.2 Consultancy

4.2.1 Environment and culture

IT consultancy firms can focus on selling consultants, providing in-house projects or both at the same time. Based on respondents, the firm’s focus and business strategies taken by IT consultancy firms affect the KS mechanisms. Respondent C indicates that some IT consultancy firms just focus on recruiting and increasing the number of consultants, while other firms focus on building a knowledge base within the company.
Some firms also work a lot with building the brand, knowledge base in the company. Other companies build a stockpile of CV without any further ambitions in building knowledge. [Respondent C]

According to respondents another important factor that has an effect is the firm size, specifically the size of the offices. Of course, all firms aim to grow in size and recruit as most skilled people as possible. However, most respondents indicated that the bigger the size of the firm, the more confusion it creates when it comes to KS. The problem of not knowing who to reach occurs when there are many consultants to reach and a lack strong ties between them. Respondents A states:

_We have the privilege of not being very big, about 40 people here. It’s harder of course in (City) where they are 800 people. So, you can’t know everybody and know what they want and interact in the same way. So, it’s all matter of scale I would say._ [Respondent A]

However, smaller firms or small branch offices are a good example of sharing as respondent F mentions. The information about other consultants and their work and the strong relationships with them helps in facilitating KS. In small firms or offices, respondents claim they know who is skilled in which are and who is weak in other are. They know details of each other projects and assignments. The strong relationship ties make it possible to reach each other and ask for help easier than in bigger companies. And therefore, the KS is more intensive as respondent A indicates.

*If you see the good examples are in these small firms sharing with each other.* [Respondent F]

*I think it is more challenge to share knowledge in a big company. But in a very small company when you need to call your colleagues every single day, then I think in a way the knowledge transfer is much more intensive._ [Respondent A]

In order to support the KS, all respondents agreed that the firms should provide the right environment and culture. If these 2 factors are missing, it will be difficult to share knowledge even if they try to share. According to respondents, the culture creates a sense of responsibility and duty for a consultant to participate in sharing. It’s the management role to provide the right tools for sharing in addition to forwarding principles and policies to encourage sharing. The availability of the communication channels and tools, the transparency attitude and the goal oriented firm, consultants will share knowledge as a part of their role. Transparency culture is the best way create culture since sharing cannot be demanded.

*I think, if you want to build a transparency culture in a group there is only one way to do it. If you are a boss you can put principles and policies and say we do encourage sharing, and bring tools to the table so everyone has the tools for sharing. But, then as a colleague, there is only one thing you can do, just be a good
example. This is the culture so to speak, you can’t demand sharing. [Respondent C]

For example, Respondent E indicated that he has no strategies for people who do not share knowledge because based on their culture they are expected to.

I don’t think we have this culture here, people are very much open minded with information. I would say it will be almost embarrassing if it was noticed that people held back information. [Respondent E]

The culture and environment that firms build can create certain expectations from consultants. Consultancy firms need to be clear about what is expected in terms of KS when recruiting consultants. Otherwise, even if it may appear obvious based on the culture, some consultants might think that participating in the KS is more of a choice rather than part of their duty as one of the respondents states:

The expectations of a consultant are something that a company needs to make clear when hiring people. To say we hire you now, you should do your assignment and then you should be part of our KS. Giving, and taking. That’s one thing, you should do as a consultant. I think expectations must be clear when hiring people because if you don’t, maybe I think you have to share, but the guys behind me think it’s time to go home! [Respondent F]

Some respondents agreed that this scenario is not common with firms attributed with strong KS culture. However, being clear and strict from the start avoid any confusion and unnecessary wrong expectations. It is also important to link participating to the firms KS to being an example of a good employee. Forwarding this view will increase the willingness of employees to be part of the KS as respondent E views.

You need to make them understand in order for the larger picture for the company. We need to share and you need to get a positive connection between sharing and being a good employee. [Respondent E]

Respondent F notes that the culture and the environment act as a source of attraction for consultants. Consultants build and strengthen their competence by sharing knowledge. Therefore, skilled, and ambitious consultants prefer to work in firms which will help them develop, otherwise they lose interest in the firm and leave.

Well if you see the good examples are these small firms share with each other. If you are new there, you will instantly be part of KS and you will gain on it. You will be more skilled than if you go to a company that has no culture for KS. Well, you are “in a bad position”, you have your own knowledge, but you won’t be better. So eventually, you will be bored. Never have an opportunity to share and
gain new knowledge from your colleagues, and then you quit and go to somewhere else. The whole company will lose one good guy. [Respondent F]

4.2.2 Knowledge market
Based on the coding process, a pattern of knowledge market existed in the codes, even if it was not specifically mentioned. All respondents indicated there are various reasons to share knowledge, most of these reasons were around their personal belief, how they perceive themselves as consultants and how the consultancy sector works. Respondents realise that they need the knowledge to survive and improve in this sector and they acknowledge the role of sharing in this process. Moreover, they argue their job requires a lot of social interaction which creates the need to have good relationships with others. When respondents were asked about the negative aspects of knowledge sharing. Everyone agreed that there are no bad consequences. Only exceptions to share are sharing sensitive data with competitors and sharing non-disclosure data to any person. Outside these two constraints, as respondent C indicates there should be no limit to sharing as long as it is possible.

As a group, there is no negativity, unless share sensitive data that you shouldn’t share. That is, of course, a prerequisite of decent high discussion. Don’t share things that you are not allowed to, but then otherwise share as much as you can. [Respondent C]

All respondents believed that sharing benefits them in the long run. If they keep his/her knowledge to himself, others will do the same with this person. However, the opposite is true. Now someone needs help, maybe in the future, they will need help. The process is based on the concept of“ give and take”. Respondent C adds that the benefits may not be always realised immediately but in the long term.

Well, I am on this side of the spectrum which like sharing 9 times out of 10. Sharing is a good thing. I think even if I lose in the short run, I gain in the long run. [Respondent C]

Respondents perceived that sharing affects the reputation. Sharing is a way of showing others the competence and knowledge they hold. It is to prove that they are good in this areas and others can know and pick them. The most famous consultants are the ones who are good at what they do and the ones who share the most. Respondents E and F stated:

I would say that people that share the most, are the most popular. [Respondent E]

You will gain on sharing your information because everyone will know that you are the one to hire. [Respondent F]

Almost all respondents mentioned directly or indirectly how the consultant’s identity (or as an individual) is important for KS. When they were asked about if they believe consultants should share knowledge, they all agreed that sharing a part of their job, starting with sharing
with the customers and ending with colleagues. Changing customers, projects, and the context they work with provides them with valuable competence and experience. Therefore, they acknowledge the value of other consultants’ experience and realise that getting access to this knowledge pool will help them improve and develop their competence and career. A consultant who hides knowledge is a consultant that no one would like to work with and will have a slow career death as described by respondent F.

Well if they don’t share, then no one will share with them and their CVs will be cold. So, they will die a slow death on the market. We have a lot of people in the consultancy business who have worked on one technique for very long, and they haven’t shared anything. They haven’t been interested in what other people do and one day their assignment is off. No customer wants them, so they get sacked. So, another way to say it, that you should share to be hot on the market and to survive. [Respondent F]

Therefore, there is an agreement between respondents that most consultants have an open attitude and thrust towards knowledge. As respondent F mentioned, sharing knowledge is a way to show the individual’s skills and self-satisfaction. Moreover, sharing comes with the advantage of being popular in the firms or networks as respondent E indicated. Sharing knowledge is a sign of capability and a way marketing themselves for others in the sector. The main strategy used by most respondents is to be open as much as possible and try to help and interact with other as long as the time allows for it.

I think everyone really wants to share their knowledge, they want to feel skilled. [Respondent F]

If you are someone that can share information, you become very popular and are seen as a good member. If you share knowledge, the strategy is be open as possible within the company with your knowledge. [Respondent E]

Moreover, respondents added that the value of the sharing acts as a stimulus. To see that they were able to help, provide value to others, and that help is appreciated. Respondent D, for example, claimed that this appreciation it is the best thing to motivate him to share

To see good in the work. It’s, of course, you get stimulated when you help a colleague and you get a thanks back. When you see a colleague is delivering the best job... The appreciation you get back from a colleague, that’s the best thing to motivate. [Respondent D]

He continued mentioning that this attitude should be followed with everyone, even if a consultant is leaving the firm. He did not see that leaving the firm is a reason not to share to each other.

The good about knowledge sharing is that consultants get all the knowledge about the company and the solutions and so on. But, I don’t think you can have this
mindset that you shouldn't share knowledge and competence because colleagues might leave the company. I don't know. I can't see anything bad. [Respondent D]

5. Discussion

The aim of this study was to explore KS as one of the mechanisms of knowledge management in IT consultancy firms. To investigate this, an inductive qualitative research approach was based on interviewing senior consultants and managers in order to answer the research question: *What are the knowledge sharing mechanisms within small IT consultancy firms?*

In this section, results from the study will be discussed and related to the literature, followed by limitations of the research and suggestions for future research. Small IT consultancy firms and small branches offices will be referred to as small consultancy firms in the following section.

5.1 KS mechanisms

Managing knowledge in consultancy firms is a tricky process. In this study, consultants differentiated between two types of knowledge: Hard/technical and soft knowledge. This differentiation is corroborating the findings of a great deal of the previous work in this field (Nonaka & Takeuchi, 1995; Nonaka & Konno, 1998). The results are in agreement with Taminiau et al., (2009) argument that there are formal and informal sharing process in consultancy firms. Based on the results, consultants differentiated between informal and formal mechanisms. Moreover, consultants agreed that different types of knowledge can be approached and shared differently. Consultants use different strategies depending and the context and other factors. This supports Powell and Ambrosini (2012) claim that the complexity of the knowledge will affect the sharing process and the way it will be shared.

5.1.1 Formal KS

Following the consultant's distinction of knowledge types, the result shows that consultants considered KMS as the main formal way of sharing, but it was only used in three ways. The first is to share explicit knowledge since it is easy to share and distribute through systems. This finding supports prior research on knowledge which linked the complexity of the knowledge with the sharing strategy (Powel & Ambrosini, 2012). Tacit knowledge or hard knowledge as respondents referred to, is easy to articulate in and put in a system (Nonaka & Takeuch, 1995). Consultants agreed that this knowledge is usually shared as documents (Blair, 2002; McLnerney, 2002) online which other consultants have access to (Davenport & Prusak, 1998). One challenging aspect of using systems is the consultant’s motivation to use the system. Results have shown that consultants lack the motivation to use the system except to share formal or work related documents. Time factor can be playing an important role in this. Consultants indicated that it is time-consuming and difficult to try to put knowledge in systems or platforms which is in agreement with Dunford (2000) work. Generalizing specific context knowledge is problematic (Johannessen, 2008) because either the whole context has to be elaborated or if the knowledge is generalized then knowledge loses its context value. This explains why consultants only take effort in sharing tacit knowledge through systems. It takes less time and effort than explicit knowledge to share. The second motive is when consultants
are restricted by geographical constraints and using the systems or platforms is the only way to share knowledge. This is the only exception when consultants use the KMS/platforms to try to share tacit knowledge. However, these are the extreme cases where the tools might be the only channel of communication. Furthermore, consultants used the systems or platforms to guide them to others who can help them. Systems were used in order to know who is working on what and how to reach them. KMS/platforms used as a facilitator for informal sharing makes more sense when it comes to consultancy. Results have indicated that most consultants hate and don’t usually use knowledge systems in their firms, but just as a tool to reach other individuals. This is consistent with Powell and Ambrosini (2012) who suggested that pluralistic approach is an efficient way of using KMS systems. Moreover, results support the previous studies that claims that knowledge workers are social and would prefer social activities (Carstensen & Sørensen, 1996; Magnusson et al, 2000). Where firms can depend on the KMS to link individual to each other and act as a facilitator for KS rather than a way of KS. As Leonardi (2015) identified direct communications and conversations as a way of sharing knowledge. This can be achieved in the formal or informal way. Formal meetings are usually pre-planned meetings with an agenda and are institutionalized by management. They are usually supported by organizational resources and services aiming to facilitate in knowledge transfer (Taminiau et al., 2009). Results have supported prior research regarding the meetings, however, it stresses that the frequency of the meetings determines its efficiency.

Prior research has supported the notion that working in teams or groups have a positive impact on KS. The results of this study also indicated that consultants believe that in-house projects or working in groups is a preferred way of sharing knowledge. It is no surprise that consultants believe that working together is the best way to make consultants from the same firm to collaborate and share knowledge. A possible explanation for this can be that it is a way of forced environment or culture of sharing since the rewards are team based (Cabrera & Cabrera, 2005). Based on the results and previous arguments in this section, it is obvious that consultants want to share with their colleagues but are restricted by many factors. While this kind of work will allow them to restrain themselves from most of these factors. Moreover, working together mean sharing the same goal which acts as a motivator for sharing. Furthermore, it allows for more tacit knowledge sharing under a formal mechanisms (Robertson & O’Malley, 2000). For some consultancy firms, their business might now allow for taking in-house projects. However, firms should then consider allowing consultants to work together. It does not only remove some sharing restrictions and allow intensive KS but also strengthen the relationships between consultants which is reported to also have a positive impact on KS (Cabrera & Cabrera, 2005; Robertson & O’Malley, 2000).

5.1.2 Informal KS
Prior research on KM has discussed the importance of informal and tacit KS in organisations and KIBS. The results showed that consultants prefer to share tacit knowledge in an informal way and that tacit knowledge and the informal sharing are the most important in consultancy firms. All respondents argued that their colleague’s experience is what matters the most and the most efficient way to get it is through socially interacting with others. This result supports prior studies which have stressed the value of knowledge that resides in colleagues experience (Werr & Stjernberg, 2003) and that most useful knowledge resides in tacit knowledge (O’Dell
The results show that most knowledge sharing for consultants is in an informal way like discussions during different places and times, and using networks. A great amount of knowledge sharing occurs in informal places like spontaneous hallway meetings or over a cup of coffee. In relation to existent literature, this paper confirms the results of Taminiau et al., (2009) who indicated that informal ways such as discussions are common of way sharing knowledge in consultancy firms. This view is also supported by Werr and Stjernberg (2003) study that claimed that consultants usually share knowledge in a verbal and informal way like over a cup of coffee. Moreover, informal knowledge sharing can occur through observation, and/or imitation (Fong, 2003). There are several possible explanations for this result. One possible explanation is of McDermott (1999), that knowledge is embodied in phenomena and context and it is hard to write in words. This also creates difficulty to put in a knowledge system (Magalhaes, 2004). Therefore, that knowledge is usually shared in informal settings. Another possible explanation is that consultants are social people who would prefer to share knowledge in a verbal way (Taminiau et al., 2009) and since firms formal meetings are not adequate, they go more towards informal sharing. This might also explain why even in firms in which knowledge sharing is highly institutionalised, most knowledge sharing takes place informally (Von Krogh et al., 2000). The results also show that professional networks stand on the line between formal and informal sharing. Networks can be formal if it was created and managed by the firm in which consultants is employed. On the other hand, networks can be considered to be informal if it was created outside the firm boundaries. However, based on the respondent’s formal professional networks mostly lead informal sharing. This finding supports Awazu (2004) claim that informal network sharing is one of the most forms of informal sharing. Donnelly (2008) also supports this view and points out that network sharing is one of the important mechanisms of sharing knowledge in consultancy firms. Moreover, the respondents motive to use the network is to get greater access to knowledge pool and increase their competence is in agreement with Sharma et al., (2012) who argued that networks encourage sharing.

These findings suggest that consultancy firms should consider putting more focus on the personalization approach (Hansen et al, 1999) or pluralistic approach (Powell & Ambrosini, 2012) with the availability of KMS to support the explicit knowledge transfer. Consultants are more likely to participate social interactions and informal activities rather than using the systems. Therefore, most KS will occur in an informal setting even if firms try to avoid it. Knowledge sharing is a process that cannot be completely controlled. IT consulting firms who pursue this goal and want to structure all KS will probably decrease the KS and kill the potential it holds. Another implication of the results is that even formal networks are used in an informal way. This happens when consultants use their personal relations to share knowledge with people inside the network and outside the firm boundaries. This distinction is important to make for a very important reason. It is not only enough for consultancy firms to help in building or providing access to formal networks to its consultants. Firms must realise that most sharing in the networks will also happen in an informal way. Therefore, providing formal mechanisms for networks and encouraging informal communication is crucial if they want to sustain a network. Furthermore, for consultants to have access to big networks is viewed as power and advantage. Consultants try to grow and improve their networks in order to have access and
opportunities for KS. This means that consultancy firms should encourage their consultants to grow their networks if it extends outside the firm boundaries.

5.2 Consultancy

5.2.1 Environment and culture
Prior studies have noted the importance of organisational culture on KS. The results of this study show that the culture and environment in consultancy firms create the context for social interactions which determines the effectiveness and efficiency of KS since a large part of KS happens in an informal way. Providing a supporting culture with a focus on transparency and goal oriented firms are crucial for KS sharing to exist between consultants. These attributes along with their identity as a consultant will create a shift in mindset to sharing ideas rather than hoarding them (Desouza & Paquette, 2011). The results of this study consistent with David and Fahey (2000) results that organisational culture can shape the employee's assumptions about knowledge and KS. Consultants use the culture to build their assumptions about the firm and the expectations from them. It also agrees with Gold and Malhotra (2001) that organisational capabilities, especially culture, affect the KS and that management should provide necessary enabling an environment for the KS (Collison & Parcel, 2001). Consultants are more willing to be in a culture that promotes sharing. This is because consultants who choose not to share knowledge will be stuck only with their own knowledge and their knowledge pool will not grow as fast as others. This is what slow career death means for a consultant. If consultants did not find that in the firm, they will leave and then their whole knowledge will go out with them.

Another important finding is that the size of the firm or the workplace has a positive relationship with KS environment. This is in agreement with Wong and Aspinwall (2004) that small firms have the advantage of sharing knowledge. Moreover, previous studies have reported that trust is one of the important attributes in organizational culture. Trust between co-workers have been argued to have a strong influence over knowledge sharing (Gupta & Govindarajan, 2000) so it's critical to build a high level of trust between individuals. Contrary to expectations, the findings of the current study did not support level of trust as a concern as in the previous research in KM. This does not mean that trust have no role in KS, but trust is not a concern for consultants inside the firm. Based on the results, consultants trust their colleagues inside the company, there is no doubt in the loyalty of the people inside the company. Trust did not affect the knowledge sharing as long as the knowledge was going to the right person and was perceived to be valuable. However, a possible explanation for this might be Von Krough et al. (2000) claim that trust is a precondition for KS and small consultancy firms had high levels of trust in the first place. An implication of this is that small workplace has higher levels of trust. This provide the small consultancy firms with a big advantage since they do not have to work on creating and building trust inside the company as much as sustaining and improving it.

5.2.2 Knowledge market
It is interesting to note that in all six cases of this study, there were hints about a knowledge market which affects how and why consultants share. These findings further support the idea
of knowledge market by several researchers (Grover & Davenport, 2001; Davenport & Pruzak, 1998), where they suggested that individuals realise the value of knowledge they hold and they need to receive something in exchange for it. Supporting Werr and Stjernberg (2003) argument, results show that consultants value each other experience and experience. One motivation for consultants to share is that they want access to others knowledge and therefore, they are willing to share their own knowledge. However, these studies (Werr & Stjernberg, 2003; Grover & Davenport, 2001; Davenport & Pruzak, 1998) did not mention the intensity and the expectations of consultants when they share. Previous studies have reported that there are several reasons that increase individuals motivation to share knowledge such as reputation, monetary rewards, etc. (Bartol & Srivastava, 2002). This finding supports previous research that discussed that knowledge self-efficacy and enjoyment of helping others enhances the mechanisms of KS (Lin, 2007; kankanhalli, 2005). However, this study has been unable to demonstrate that any financial rewards such as an increase in salary or promotions affect consultants initiative to share. A possible explanation for this might be that the researcher did not specifically ask about such attributes. One unanticipated finding, especially in a sector like a consultancy sector, was that even when knowledge is considered as power, sharing does not mean power or influence loss like some of the research claimed (Dunford, 2000). However, this finding is in agreement with kankanhalli (2005) claim that power and knowledge loss had no impact on the motivation to share.

This finding has important implications for knowledge sharing mechanisms in consultancy firms. First, that consultants actions are based on their efforts to place and market themselves in this market. Consultants perceive consultancy sector as a market where they can show and offer their knowledge. Of course, this perception is based on the fact consultancy firms sell their knowledge as their product. However, this market is not only exclusive to customers and consultancy firms and how they perceive consultants. It involves how consultants see and assess each other as a source of knowledge. The results of this study show that consultants want to share knowledge because they believe they will always get something in return and benefit even if in the long run. These benefits can be many things such as being valued, appreciation, marketing themselves, the opportunity to share knowledge in the future, and/or keep good social relationships. Consultants believe that the most famous or popular consultants are the ones who share the most and sharing with more people gives the opportunity for them to grow and expand their opportunities of getting knowledge. Especially in small cities like Umea where it is easy to do that. Therefore, firms should work on providing more opportunities to share and the right environment in order to utilise and exploit this attitude.

5.3 Limitations of the study and further research

There is a huge amount of literature regarding knowledge and knowledge management mechanisms for the author to read, grasp and consider in this short time span. The author stucked to what was believed according to his own personal opinion as the basis of knowledge management and knowledge sharing constructs. This could have affected the data generated by limiting the focus areas and mechanisms investigated. Moreover, it is important to note that the size of the research sample makes it hard to generalise the results on the whole consultancy
industry or even small firms or branch offices in this industry. The study also explored small IT consultancy firms and small branch offices in Umeå. However, the focus on either of them could have provided different data. Even knowledge sharing depends and differ from each person to another. Therefore, consultants could adopt different sharing techniques although they are in the same firm. All respondents in this study are senior consultants or manager positions. Senior consultants could have a different way of communication and sharing than juniors. An example of that was the apprentice mode, which was not mentioned by any of the respondents since they were asked about their own ways of sharing knowledge.

This research can serve as a base for future studies and explore different aspects of knowledge sharing in IT consultancy firms. Further research might investigate different aspects of informal sharing like networks and how consultants benefit from it. Moreover, further research can explore the knowledge market and focus specifically on the consultant's motivations to share. Research can also confirm the findings by exploring different firms from different places in Umeå. More broadly, research is also needed to determine the barriers of KS in IT consultancy firm in order to help for better management. Another interesting view is to explore is different age generations if they share differently.

6. Conclusion

The purpose of this thesis was to explore the knowledge sharing mechanisms in small IT consultancy firms or offices. Conducting qualitative research methodology on six case studies approached the research question. One of the more significant findings to emerge from this study is that the size of the firms has a positive effect on knowledge sharing. The smaller the size of the firm, the more advantage they have in building culture and environment that facilitates the KS. It was also shown that most of the knowledge sharing mechanisms in IT consultancy firms occur in an informal setting. IT consultants are demotivated to use knowledge systems and prefer to verbally communicate in an informal way. Consultants use networks in an informal setting to connect to other consultants who share the same interest and would help them in their future career. The current findings add substantially to our understanding of the knowledge sharing mechanisms in IT consultancy firms and its relationship with the firm size. The second major finding was that the concept of knowledge market strongly exists in IT consultancy firms and especially in a small city like Umeå. It contributes to understanding the knowledge market and the consultant's motivations to share knowledge.
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Collison, C., & Parcell, G. (2001). Learning to fly: Practical lessons from one of the world’s leading knowledge companies. Capstone Ltd.


Appendix 1: Interview guide

**General questions**
Tell me a bit about yourself. What is your job title, previous experience and experience in consultancy? Did you work in specific Industry or certain types of projects? Do you work projects simultaneously and if you only work with specific project size.

**Knowledge management and KMS**
- Does the company use any knowledge management software and your opinion about it?
- What does this system give you access to?
- Is the system linked to external systems or networks?
- Do you think it makes a difference in your work?
- What system (or how was the process) before and do you feel the difference?
- What is the codification strategy that you follow?

**Knowledge transfer and sharing**
- In general, do you think knowledge can be transferred?
- How does knowledge transfer process look in the firm?
  - Codified vs uncodified
  - Formal vs informal?
- Is there a formalised process for tacit knowledge? If not, do you believe there should be one?
- How do you codify tacit knowledge?
- What are your personal sources for knowledge? The one you depend most on.
  - Do you know who have knowledge and can you reach them if needed
- What is the best way to transfer knowledge in your opinion?
- What strategies do you use to share or obtain knowledge?
- How does company environment encourage knowledge sharing?
  - How does it help you in creating or expanding your networks?
- Do you share knowledge by yourself or do you have to be asked?
- Do you share on regular basis?
- What would motivate you to share more?
- Do you share knowledge in general or limited to specific people?
  - Does it depend on the person you share with (amount and type of K), personal relationship social ties in company
- Should consultants it is not advised to share knowledge?
  - Does sharing reduce your unique and value in the company
  - Do other consultants feel less willing to share internal and external
- How do you overcome people not sharing? Especially if you know they have knowledge.
- What role does trust play in KS
- Does seniority or the position or experience affect knowledge sharing?
- Why do you share knowledge? Get value, for the organization, for personal relation, etc.
  - Do you expect any rewards? or benefits back
- What limits you from sharing knowledge
Appendix 1: Interview guide

- Time, person, yourself, rules
  - What professional groups or community do you belong to? internal or external
  - Do you think sharing knowledge is part of your job? Especially internally with other consultants.
  - How you share knowledge from other firm branches, national or global?
  - How does the size of the company affect your sharing?
  - How does the firm structure affect your sharing?
  - Do you share knowledge even when you feel it is not useful or irrelevant?
  - Do you judge your knowledge and does it affect sharing?
  - What do you think is the negative aspect or consequences for sharing knowledge?
  - Do you feel that the knowledge transfer in the company is good enough?
  - What is the perfect environment for sharing?
  - When consultant decides to leave, is there a specific process he or she have to go through. Meetings, writing reports, etc.

❖ Anything you would like to add ideas, thoughts
### Appendix 2 & 3

<table>
<thead>
<tr>
<th>Themes</th>
<th>Categories</th>
<th>Sub-categories</th>
<th>Codes</th>
</tr>
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<tbody>
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<td>Popularity</td>
<td></td>
<td></td>
<td>I would say that people that share most are the most popular, so something we try to tell our employees also that when we come here that this is important.</td>
</tr>
<tr>
<td>Career death</td>
<td></td>
<td></td>
<td>Well if they don't share, then no one will share with them and their CVs will be cold so they will die a slow death on the market.</td>
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**Appendix 2: Line by line open coding example**

<table>
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<td>Consultant Identity</td>
<td>Individual value; mindset; personal initiative; personality; social; helpful</td>
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<td>Motivation</td>
<td>Appreciation; career death; future career; negative sharing; sharing value; showing skills; popularity; long term; development</td>
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<tr>
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**Appendix 3: Example of the Selective coding**