

Knowledge Management

The presence of Knowledge Management theory in companies

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Chapter 1 Introduction

This chapter gives an introduction to our dissertation. Background, research problem, limitations and an outline of the dissertation will be presented.

1.1 Background

Since the mid 90's there has been an extensive increase in knowledge management literature. This is due to the growing importance of knowledge management in organizations. Knowledge is seen as the key resource to create a competitive advantage. “[A] Information Week survey indicated that 94% of companies consider knowledge management to be strategically important for their business” according to Kleindl (2003). With such an increase in literature one could assume that knowledge management would have become easy to understand and to implement.

However, Knowledge management is still a confusing field. Different companies have different views and definition of it. Implementation differs from company to company and theories contradict each other. A big question mark is if knowledge can even be managed. According to Rosset (2002), 70 % of the Knowledge management initiatives fail. One would suspect that somewhere there is a mismatch between theory and reality.

1.2. Research problem

There is an abundant literature and articles written on Knowledge Management which indicate that great deal of knowledge should apply into this field. In spite of the abundant literature, there are aspects of the understanding of the field that give rise to discussion. People who are responsible for Knowledge Management in companies should know how to manage knowledge in order to achieve satisfying results. Still, a majority of Knowledge Management initiatives fail to deliver expected results. Why is it so? An explanation to this question cannot be delivered without examining Knowledge Management theory and its core attributes. A Knowledge management initiative is the outcome of using Knowledge

Management. If Knowledge Management initiatives are failing, there have to be a gap between theoretical and practical Knowledge Management. Is theoretical Knowledge Management present in companies or do companies act differently than theory suggests regarding Knowledge Management, as we call theoretical Knowledge Management? Perhaps the high failure rate is connected to a certain type of company or an industry. Are certain types of companies more connected to theoretical approach of Knowledge Management considering the success or failure of initiatives?

1.3. Purpose

While knowledge has become an apparent factor in companies, it creates competitive advantages in today's competitive business markets. However, implementing a knowledge management program has become rather problematic and the term is yet not widely considered as accepted theory. The term is truly multifaceted whereas a great amount of theories and models exist within the field that creates ambiguity. The purpose of this dissertation was to investigate how the theoretical perspective of Knowledge Management is recognized in companies. Our main purpose was to further see whether companies are following the core principles within the theory of Knowledge Management. Further, to see if there is a certain type of companies that are more connected to theoretical Knowledge Management. Our purpose is not finding a solution to this very problematic area. However, it is vital to understand the very existence of that models create uncertainty implementing into companies.

1.4. Limitations

There are many theories existing in the subject of knowledge management that made us considering narrow the selection to bare minimum due to the time limit. A thorough research of every existing model is time consuming process which could affect our dissertation. We selected those theories under the scope of our research and thus extracted the elements that were found of great value. However, there is a possibility that more elements would be identified with a different selection of articles and literature. Thus we only focused on those that were crucial in our research and related to knowledge management.

1.5. Outline

The dissertation has the following outline:

- Chapter 1: Introduction
- Chapter 2: This chapter gives a presentation of the methodology and research approaches this dissertation has adopted.
- Chapter 3: Presentation of our theoretical framework. Introducing the field of knowledge management and knowledge explained generally. Further, issues in knowledge management and its models are discussed. At last we will present our hypothesis. In the first half of the theoretical framework will present the general information of knowledge management and its characteristics. In the second half of the theoretical framework, theories and models are critically evaluated which variables are identified in connection to the second part.
- Chapter 4: After concluding the theoretical framework, hypotheses are presented. The Knowledge Management elements are identified and explanations are provided for further understanding. Identification of elements in Knowledge Management and explanation is provided.
- Chapter 5: The empirical methodology is presented.
- Chapter 6: Analysis is made based on the results from the questionnaire and evaluation of hypotheses are presented and analyzed.
- Chapter 7: Concluding remarks are presented which summarize the dissertation as whole. Furthermore, future research and practical implications are provided in connection to this chapter.

Chapter 2

Methodology

The methodology chapter is presented, our choice of research philosophy, research approach, research method and data collection.

2.1. Research philosophy

Our dissertation aims to investigate employee's opinion about Knowledge Management elements. We can not determine whether the respondent's opinion is reliable in general or just for the respondent. In positivism, the research is executed in a value-free way and the "researcher is independent of and neither affects nor is affected by the subject of the research" (Saunders et al, 2007, p103). Since we conducted an e-mail based questionnaire, we could not influence the subject directly. It can be discussed how the questions itself affected the subject matter. The questionnaire contains positivistic statements and could perhaps influence the subject to agree. One of the problematic issues concerning the research philosophy is that the researcher(s) have to be independent in their research and not influence the subject matter by his or her nature of thinking. Further, the positivistic philosophy gives a law-like generalization of its result (Saunders et al, 2007). Our research, as said before, contains opinions and could change dependent on which employee who answer.

Realism is similar to positivism and is divided into two branches, direct and critical realism. Basically, realism explains how there is a "reality quite independent of the mind" (Saunders et al, 2007, p104). Knowledge management exists without people awareness. Even though one can not see Knowledge Management it exists.

Interpretivism is a philosophy which considers an individuals social role and opinion. As mention above, our empirical research contain opinions. These opinions can change with time as the role of the respondent change. Also, two employees can have different opinion of the same process in a company, depending on its preferences on what is good and bad.

Our dissertation is influenced by realism and interpretivism, but mostly by interpretivism. Knowledge Management exists without people can see it. Our research collect opinion and we have to consider the individuality of respondents and their different social roles affects the answers. Since Knowledge Management is highly connected with social interaction and can not exist without the human aspect and the human as the centre of Knowledge Management, interpretivism is highly present in this dissertation. All data has been collected and analyzed according to the nature of this research philosophy. However, all data collection has been done under the assumption that the collection been collected independently as much as possible without any external influence.

2.2. Choice of research approach

There are two different research approaches, deductive and inductive. Deductive can be summarized as “testing theory” and inductive as “building theory”. Our purpose is to investigate if the theoretical perspective is present in reality. This purpose is highly deductive. We test in what degree theory is present in reality. Further, the Knowledge Management element is deriving from theory. The inductive side would be that we build our Knowledge Management elements, but still they come from theory and our contribution is more putting them together rather than inventing them.

2.3. Research method

We have decided to apply a quantitative method to collect the information needed for our study. We intend to use a questionnaire with closed questions.

2.4. Data collection

2.4.1 Secondary data

Secondary data has been obtained from various scientific articles found on the Internet and literature on the subject of knowledge management. Although there is an amount of articles and books that have been written about this subject, we have tried to identify the authors most important for our research and literature that these authors refer to. The information collected was necessary to describe the characteristics of

knowledge management and its principles and also finding problems associated with existing models in knowledge management.

Our secondary data is collected from the most known researcher of the field. The most famous author Nonaka ("The Knowledge Creating Company, 1994) was the starting point. After that, we reviewed literature related to him or cited by Nonaka. There exist a lot of different authors with opinions of the field. Still, most authors acknowledge or partly acknowledge the views of Nonaka. Since the field is complex and contain different components, authors often take different perspective under the microscope allowing us to get a wide understanding. Nonaka presented the process of Knowledge Management and its components. Further, we reviewed different authors such as Krogh, Call, Politis etc. to get a modern perspective and a more microscopic view of the components of Knowledge Management.

2.4.2 Primary data

The primary data collection has been acquired through an e-mail based survey. The respondents were found through Xing and Europe500. The primary data collection has been acquired through an e-mail based survey. The respondents participated in this survey by submitting their answers through the questionnaire online.

2.4.3 Critical review

In our dissertation we present a critical perspective of the theories. The most prominent is that a lot of the research of former authors is done in Asia, with a different company culture than Europe. The core of our knowledge is based on Nonaka, which is Japanese. Even though we include European researcher we have to consider that there knowledge is too affected by the Asian knowledge management theories.

CHAPTER 3

Theoretical framework

3. Introduction

This chapter will present our theoretical framework. We will start by discussing what knowledge really is and the definition of it which enable the understanding the essence of this dissertation. This is followed by a thorough presentation of theories within the field of knowledge management and how it is managed. Firstly, we further provide existing definitions that enabling the understanding of these concepts. Secondly, the theoretical framework continues highlighting the area of knowledge management by introducing barriers that manifests itself in a Knowledge Management application, which gives us ideas on how to overcome these in order to have a successful Knowledge Management. Lastly, implementation problems within the field are viewed and presented from a practical perspective.

3.1 Knowledge

3.1.1 What is knowledge?

When discussing Knowledge Management, a definition of knowledge must be clarified and established. The knowledge as a phenomenon is highly regarded and recognized as a source of competencies and competitive advantages for organizations, which is the core element within the field of knowledge management. Managers and executives have realized that knowledge has become the single most important factor contributing to the organizations success in the 21th century. Drucker emphasizes that “...*knowledge is the only meaningful resource today*” (Drucker, 1993, p 38). Drucker (1993) also estimated that knowledge is the only resource of importance for all organizations with regards to achieving competitive advantage in their competing fields. Knowledge is an important asset for organizations but should definitely not be managed like other assets in terms of management of knowledge. The vital point

is to understand that knowledge requires a clearly defined structure and technology that it is not a self manageable entity. Drucker describes knowledge as a human resource which could not be obtained through information specifically only through the ability to apply information to work and performance. The question is how knowledge is obtained through knowledge management, whether knowledge is based on scientific data or socially constructed or a mixture of both (Richardson et al. 1987).

Much literature is frequently using the terms knowledge and information and a distinction between those have to be done. Therefore the chain of knowledge flow is visualized in the figure below. The model demonstrates the development of knowledge and resembles a chain where it comes to existence. Data is described as observations or facts that lack meaning (Zack, 1999). Information is achieved when putting data into a context thereby creating meaning (Zack, 1999). Knowledge as a belief is what people believing in and creates meaningful values and accumulation of information through experience and communication (Dretske, 1981; Lave, 1988). Information consists of data that could be interpreted and thus creating meaningful content for the perceiver (Davenport & Prusak, 1998; Bollinger & Smith, 2001). For knowledge to be understood it has to be adopted. At this stage of process, an individual processing takes place where knowledge is processed into its own individual awareness. Wisdom is acquired as individuals posses the ability to create new knowledge from previous experiences (Bollinger & Smith, 2001).



Fig 3.1The chain of knowledge; model based on: Bolinger & Smith (2001) p.9.

3.1.2 Definition of knowledge

It is rather difficult to explain knowledge management without elucidating knowledge itself. Huseman and Goodman (1998, p.107) define knowledge as “... information laden with experience, truth, judgment, intuition, and values; a unique combination that allows individuals and organizations to assess new situations and manage change” .However, definitions on knowledge are in great abundance which is followed by the statement of Huseman et al, which not entirely accurate but largely true in the description of this definition.

Knowledge is described as an entity invisible and contaminated with difficulties to observing it (Sveiby, 1997). How knowledge is adapted and developed by single individuals is a prolonged process. This is followed by analyzing impressions received. Thus, creating knowledge in the sense of individuals own values and how culture affecting it. Polanyi (cited by Sveiby, 1997) describes knowledge as “... an activity that would be better described as a process-of-knowing”. However, there are possibilities to see the effects of knowledge by the emergence of technological innovations. Davenport explains that knowledge should be considered a corporate asset that should be managed and invested in properly as the other tangible assets. Knowledge as an intangible asset functions as a competitive advantage for large scale companies’ survival in today’s competitive markets (Davenport & Prusak, 1998).

3.1.3 Why knowledge?

Many authors (Nonaka, 1994, 1998; Davenport, 1998) consider knowledge as an important asset in organizations in the knowledge economy. Prusak (1996, p. 6) expressed that “[T]he only thing that gives an organization a competitive edge- the only that is sustainable- is what it knows, how it uses what it knows and how fast it can know something new”. The citation made highlights that knowledge has become a critical factor affecting an organizations ability to remain competitive.

As knowledge is derived from individuals, understanding it will lead to improvements regarding better customer care, strategies needed to encounter competitors, acknowledging product development and production (for example as moving into the global economy) (Davenport & Prusak, 1998). Knowledge is hailed as the greatest among assets a company can possibly possess. How to maintain and nourish knowledge have become vital points for organizations. Although, the core of knowledge management consists of knowledge assets in companies, knowledge is regarded as the primary asset for business competitiveness, but there are no tools or methods for evaluating and managing knowledge assets. The reason alone why measurement of knowledge is difficult lies within that it is dynamic by nature. It is possessed by individuals and constitutes a part of the human complexity, which makes it difficult to explain in logical terms and converting it into tangible variables. In order to generate value from organization's knowledge assets, the organization has to identify its existing knowledge assets and manage these in order to become knowledge based organizations.

3.1.4 Tacit and explicit knowledge

To fully understand the complexity of knowledge, one has to understand the different forms of knowledge. There are mainly two kinds of knowledge, explicit knowledge and tacit knowledge (Nonaka & Takeuchi, 1995). Explicit knowledge can be expressed in a formal language and it can easily be transmitted between individuals. This kind of mode is dominant in the Western world (Nonaka et al, 1995). According to Takeuchi and Nonaka the "explicit knowledge can be expressed in words, numbers or sounds" (Takeuchi & Nonaka, 2004, p. 3) and you share the knowledge with others in the company in form of, for example, data and manuals. The authors further states that "explicit knowledge can be readily transmitted to individuals formally and systematically" (Nonaka et al, 2004, p 3).

Tacit knowledge on the other hand is hard to express in a formal language and it is also hard to transmit this kind of knowledge between individuals, this kind of knowledge is dominant in Japan (Nonaka et al, 1995). Nonaka and Takeuchi (1995)

further state that the “...tacit knowledge is an important source of Japanese companies’ competitiveness” (ibid. Preface viii-ix).

Further, the authors say that tacit knowledge is hard to express in words. It is very hard to formalize this type of knowledge and therefore it is hard to communicate or share this type of knowledge with others. “Tacit knowledge is deeply rooted in an individual’s actions and bodily experience as well as in the ideals, values or emotions that they embrace”. (Nonaka et al, 2004, p 3-4)

If the tacit knowledge is going to have a value in a company it must be converted into words or numbers and it is also very important that everyone in the organization can understand it and what it stands for. (Nonaka et al, 1995)

3.2 Knowledge management

After understanding the word knowledge, we combine it with the word management. We now have the word Knowledge Management, which basically means the theory about how to manage knowledge. Knowledge Management is a field of confusion even for people who are trying to manage knowledge. To make the field more clear we start by discussing it from the bottom. First, we discuss how to define it.

3.2.1 Knowledge Management: a definition

As mentioned earlier, knowledge is considered to be the most important resource for a company today. It is the key resource to get a competitive advantage. But talking about it is one thing. Manage and control it is another. Most managers today recognize knowledge management (as they interpret it) as something vital for the company. Still, a majority of the projects concerning the topic fail. This is an evidence of the complexity of the term knowledge management. There are many definitions of it as there are managers. Drucker (cited by Call, 2005) describes managing knowledge as a resource. By taking this view, knowledge is seen as an asset that is highly definable and measurable. An asset that can be used when there is a need. The tacit side of knowledge exists in the mind of the people and cannot be acquired or extracted on demand. It is an ongoing process without any definite results. McElroy and Firestone (2005, p. 191) mention knowledge management as a “set of processes to change the organizations

present patterns of knowledge processing”. The purpose is to enhance the process and its outcomes. The question here is referring to the management part. Instead of managing knowledge you try to enhance knowledge creation and enhance improvement of its processes. Gates (cited by Call, 2005) talks about information flows and how to get the right information to the right people at the right time so they can act on it. To have information you need knowledge to create information. By just managing information flows, one will forget the processes to create the information needed.

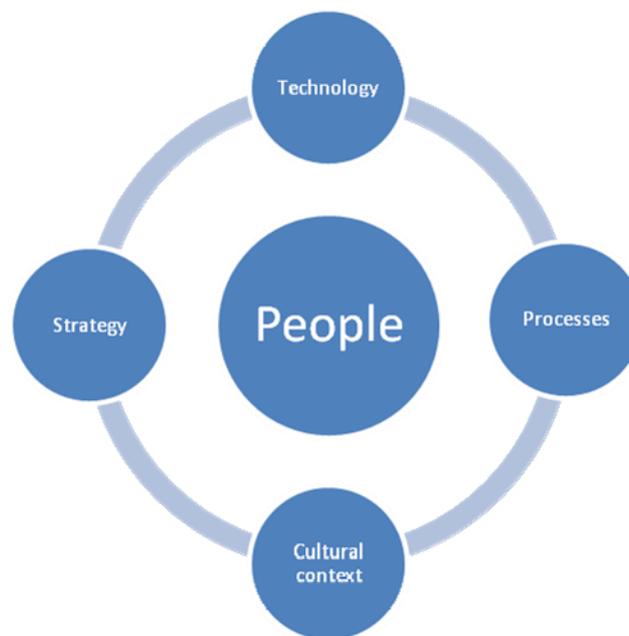


Figure 3.2 Key elements in knowledge management (based on: Ahmed, Kok & Loh, Learning through knowledge management, p.13, 2002)

The authors define Knowledge Management in different terms. The word knowledge in Knowledge Management is seen as resource, pattern and information flow. Management is processes, coordination and dissemination. Ahmed, Kok & Loh state that “[K]nowledge management is the coming together of organizational processes, information processes technology, organizational strategies and culture” (2002, pp. 12). Knowledge management is to manage those aforementioned elements to increase knowledge and learning.

It is important to recognize the human aspects of Knowledge Management. The model in figure 3.2 shows us how people are the very core of knowledge

management and the other aspects surrounds them. In previous chapter, distinctions between tacit and explicit knowledge have been made explaining that knowledge does not only exist in embodied forms. Knowledge exists both in people and in organizations.

This means there are two pools of knowledge that have to be managed, a tacit and an explicit pool of knowledge. Traditionally, western companies are better on managing the explicit part and Eastern better on the tacit part. According to Nonaka (1995) explains that the explicit part of knowledge is only the tip of the iceberg of the knowledge pool. Nonaka developed the SECI-model which describes how the interaction of these pools creates new knowledge. According to Nonaka, having a successful Knowledge Management, both tacit and explicit knowledge have to be managed. Also the processes of interaction between tacit and explicit information have to be managed. The SECI model will be discussed later.

3.2.2 What is Knowledge Management?

Earlier, the definition of Knowledge Management and its main components are discussed. But like it often is with theory, it does not give a clear picture of the practical side of Knowledge Management. What is Knowledge Management?

By taking a more practical scope when viewing literature, we search articles for more real examples of knowledge management, examples that you can connect directly to a company and examples that you can ask a manager about and he would most probable know how to answer.

To be able to accomplish knowledge management, the organization has to be adapted for it. The right norms for knowledge management have to be generally accepted in organization's culture. The TOTS-model (Learning through knowledge management, 2002) gives us traits as trust, openness and teamwork result in better sharing of knowledge. The article "The relation of various leadership styles to knowledge management" (Politis, 2001) discusses how effective leadership can help knowledge management to prosper, by introducing leaders who encourage, motivate and listen. Motivating and encouraging can be done either by the leaders interaction or as mentioned in "Knowledge

management benchmarks” (Chase, 1997) with the organization rewarding good ideas. Another role of the leader is to help adapting the organization itself and its atmosphere to creative, caring and free-thinking place. “It is the task of organizational leaders to install a culture and climate that nurtures and acknowledge knowledge at every level” (Ahmed, Kok & Loh, 2002, pp 71).

The term knowledge creation is often mentioned in both literature and theory. Create knowledge with the goal to increase the organizational knowledge. It is a process that occurs in our mind and cannot be controlled, but an organization can act to open the possibility for someone to learn. An obvious way of learning is courses and training. It can be performed in many ways. One example is how DuPont let new researcher work alongside with more experienced personnel (Davis, Subrahmanian & Westerberg, 2005). The goal with education can concern knowledge about customer, supplier and how do to business. It can also be education in how to do better knowledge management, with focus on educating people in how to use technology as a tool. A good IT system is useless if nobody can use it.

Another perspective of knowledge creation is to acquire knowledge internally or externally. Internal means that one section that has a “knowledge need” go to another section in the same organization to get knowledge. This is a procedure which relates to the fifth enabler in the book “Enabling Knowledge creation” (Krogh, Ichijo & Nonaka, 2000)”, Globalize local knowledge. By crossing geographical, organizational and cultural boundaries new knowledge can be found. To acquire knowledge externally could be done with a joint-venture for example. This cooperation gives two companies knowledge combined by the same goal. Another is hiring consultants that have expertise and are highly skilled.

Errors and mistakes are likely to occur in organizations and it is vital to recognize and learn from them. To have a system that detects these mistakes is vital. Also closely connected to organizational culture is to have an environment that allows people to do wrong and report it. If not, one could feel fair to report flaws and hinder a solution to it. Literature talks about single- and double-loop learning. Single-loop learning means that whenever a problem is discovered you

“add” to the organization to fix the problem. Basically you still have the problem but you add a solution. In Double-loop learning you change the way the organization “do”, creating a new pattern and fix so the problem does not exist anymore.

A common knowing in business is that one always has to improve and renew. Products and services must be invented or fitted to meet the new demands emerging. “Tacit knowledge management: the role of artifacts” (2002) describes knowledge managements role in new product development and how innovation is depending on new knowledge. Another important aspect is to be able to analyze what kind of needs that will appear on the market and strive to fulfill it.

To gain more efficiency and value of knowledge, one has to share it. There are several options to share ones knowledge and different options fits different knowledge.

Many organizations find that is the same as IT equals Knowledge management. It is wrong. IT is just a tool for sharing knowledge. It is people who operate it. If the people are not able to operate and use the technology, it will not by itself share knowledge. But implemented properly it is a great tool. In the article “Knowledge management benchmarks” Chase, (1997) shows a case where BP implemented video conferencing when building an off-shore oil-platform. This allowed them to share and spread information and knowledge instantly and they claim they got a 5-1 investment profit. Technologies give the opportunity for groupware and, as in the BP case mentioned, faster sharing.

To have the right people to talk to is important. To have a network of people with right skills and knowledge makes it easier to share. They have often easier to understand your language and have the need for your knowledge. Therefore, organizations should enhance and allow its employees to create and maintain their networks. “The diffusion of tacit knowledge” (Davis et. al, 2005) is greater in social network.

To interact face-to-face is a large part of knowledge management theory. When considering tacit knowledge, face-to-face communication is the main way to share such knowledge. To do this in theory is very simple; at a more practical

level it can be harder. A common way is to discuss with colleagues, gathering information about a problem as also mentioned in by Davis (2005). To make interaction easier is the organization's task, either by enhancing interaction in a more mental way, allowing people to speak or by creating opportunities to interact. Knowledge sharing events such as knowledge cafés or conferences allow people to speak in a controlled but more relaxed environment. This will decrease the implicitly of knowledge (Depres & Chauvel, 1999).

With explicit material we could relate to Gate's statement about the right information at the right time to the right people. Databases and documents are easier to use. Other place where more explicit knowledge is found is in best practices, which explains how a situation has been solved in the past in a good way. Best practices are growing in importance. Knowledge Management consultants develop best practices in specific industries and offer them to companies (Depres et al, 1999). Also as mentioned in "Knowledge management not rocket science" (Call, 2005) it doesn't have to be complicated. The Ritz Carlton hotel has a "green book" where they collect knowledge from top performers in every field from top to bottom.

It doesn't matter how much information you have if one can't find it. By doing information and knowledge maps it is possible to easier see where the knowledge is. Company's yellow pages contain a profile on every employee and their skills, making it easy to know who to talk with when knowledge is needed.

Storytelling is a way of promoting Knowledge Management. By telling "stories" of how useful it is and successes, one tries to "force" in a positivistic view of Knowledge Management. This will strengthen an individual's relationship towards Knowledge Management and increasing his willingness to using the tools necessary.

3.2.3 The SECI model

To further understand the importance of how tacit and explicit knowledge need to interact in Knowledge Management, one ought to understand the SECI-model.

In “The knowledge-creating company” (Nonaka & Takeuchi, 1995), a model of knowledge conversion is presented. This model has become very famous in the field of knowledge management. It is based on research in Japanese companies in the 80’s.

The SECI model explains how the interaction between individuals and between tacit and explicit knowledge goes through four different modes or processes. The result is a never ending spiral of knowledge creation adding to the knowledge pool of the company.

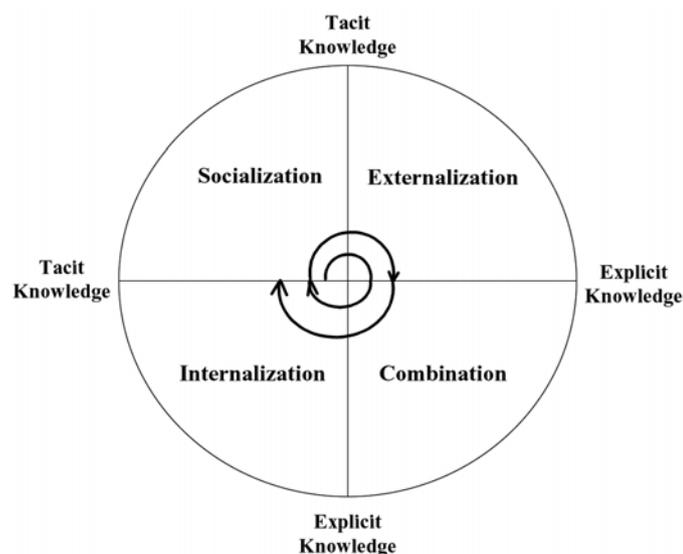


Figure 3.3 The SECI model based upon Nonaka (1995, p 71)

The four steps of knowledge

- *Socialization* (tacit to tacit): In this stage individuals share experiences. Tacit knowledge is passed between individuals. By communication and interaction individuals learn from each other, sometimes without a word spoken. Example is brainstorm camps or an apprentice is watching an expert. The tacit knowledge comes from the interaction between individuals and the outside world.

- *Externalization* (tacit to explicit): This is a process of “articulating tacit knowledge into explicit concepts” (Nonaka & Takeuchi, The knowledge creating company, p.64, 1995). An individual try to put their tacit knowledge into a concept or an image.
- *Combination* (Explicit to explicit): The third stage of knowledge conversion combines different explicit knowledge. Documents, meeting protocols etc are sorted and combined to create new explicit knowledge with “higher” value such as databases.
- *Internalization* (Explicit to tacit): “It is closely related to “learning by doing”” (Nonaka & Takeuchi, the knowledge-creating company, p.68, 1995). An individual takes the knowledge that resulted from the other processes and implement it in his work pattern.

The SECI model explains a process that is continuously going on in a company and all the time adding to the knowledge within the organization.

3.2.4 Some criticism against the SECI model

No model is perfect and will be exposed for criticism. The SECI model was developed in the mid 90’s and has been analyzed for a decade. In an article in Journal of Knowledge management (Vol. 7 nr 4 2003) by Meng Li and Fei Gao criticize the model.

Nonaka separates knowledge between tacit and explicit, taken from Polanyi’s work. The differences between these two are explained earlier. It is stated that the explicit knowledge is easier to share between individuals than tacit. Here is the problem. Meng li and Fei Gao would like to divide tacit knowledge even further. The authors name two attributes of tacit knowledge, tacitness and implicitness. Tacitness ”is such elusive and subjective knowing” of individual that cannot be articulated in words”. Implicitness is tacit knowledge that can be articulated in words but ”specific reasons under certain settings” restrain the individual to share its knowledge, e.g. organizational style.

To summarize the difference between the different tacit knowledges one could say that tacitness is difficult to share and implicitness is the unwillingness to

share. Polanyi even says that an activity for sharing tacit knowledge is useless in organizations with different levels of knowledge, but an activity to share the implicit is very useful.

The difference affects the models applicability in our dissertation. The SECI model is based on Japanese companies where they apply life-long-employment and an employment is a way of life. This means that the will to share its knowledge should be higher. When we use the model and its tacit knowledge we will assume that the reason for not sharing tacit knowledge is based on the tacitness. According to Li and Gao, when creating the SECI, Nonaka did not use the distinction between the two.

Another criticism is the importance of tacit knowledge. In manufacturing companies it is more used with practical knowing. The Japanese organization is mainly manufacturer. This makes tacit knowledge more generally important. The Japanese language is affecting the importance of tacit knowledge. Japanese are "excessively vague and imprecise." (Meng & Fei, 2003, p.9) This would make explicit knowledge less important and less useful.

Meng & Fei further discuss the existence of different managerial types in Japan, serves as exemplary models to modern organizations. Often they have middle-top-down management which means that the middle managers are more engaged in the organization and its action. In western companies it is more common with top-down management. In Western organizations it's normal with a more flat hierarchy providing middle management less influence. With the middle managers more active and "powerful" it would be easier with the externalization in companies, the middle managers being in the "center of the group" they can more easily promote the knowledge sharing (Meng & Fei, 2003).

Conclusive, the differences in organizational style and culture should affect the processes when the SECI model is applied in a western organization. Some steps of the model should be more important and some less important. Perhaps something should be added or changed.

3.3 Barriers existing in Knowledge Management

To be able to have a successful Knowledge Management, understanding its components and the words related to the field is not adequate. There are certain barriers to Knowledge Management that a company needs to overcome to be able to implement it into the organization. One have to understand that even though you have knowledge in the company and a knowledge about how to manage it, their exist factors who has to be considered before a company can reach their full potential of Knowledge Management. The environment has to be ready to accept the Knowledge Management.

3.3.1 The barriers

After having addressed the general concepts of Knowledge Management it also found crucial to address the critical aspects and problems that are most likely to occur in the implementation of different Knowledge Management programs. The characteristics of Knowledge Management have been previously addressed in this dissertation which surrounds primarily on the managerial and organizational aspects of knowledge management. This chapter is discussing the problems that might emerge through the implementation of Knowledge Management systems into organizations.

Drucker (1993) explains that knowledge management leverages organizations competitive advantage. It can help improving matters such as employee development, customer focus, training and creating business opportunities. Furthermore, as Knowledge Management is helping companies to improve its business focus, there are those who do not achieve immediate success and difficulties beginning to emerge. Many researchers believe that information technology is the key driver when applying knowledge management programs and as solution to many issues. There are others who are reluctant to the fact that information technology is inconsistent with the implementation of Knowledge Management. It is an issue related to management, culture and leadership that regard people as a key driver and not technology. It is the people who ensure the success of knowledge management (Drucker, 1993)

Many authors emphasize the importance of individuals. It contributes efficiency in knowledge creation and sharing of new knowledge through interaction between tacit and explicit knowledge (Nonaka & Takeuchi, 1995; Sveiby, 1997). The interaction between employees is a vital aspect of knowledge sharing and creation but there are many other factors involved which are likely to emerge to hinder an effective knowledge management. Organizations often rely upon employee's willingness to co-operate and share their knowledge freely with other coworkers in order to sustain an effective knowledge sharing. Riege (2005) and Bonfield (1999) discusses that companies have to identify and recognize barriers in knowledge management sharing which affects the immediate success of a knowledge management strategy. This part is important to realize in order of knowledge management implementation does not devolve and fail.

The literature found address that barriers exist on both individual and organizational levels of an organization (Meyer & Scholl). To have an effective knowledge sharing community, the search for it doesn't apply just within organization but also requiring acquisition from the outside the organizational environment (Walker). We can identify three areas as potential organizational barriers when implementing knowledge management programs. These are widely considered the central which hinder the effectiveness of knowledge sharing. These levels of barriers, as addressed below, addressing the difficulties related to sharing and transferring knowledge on individual, organizational and technological levels in an organization. The areas will be described individually from the findings of various researchers. These three groups of barriers are based upon the human nature which makes knowledge sharing difficult and are often caused by the individual and the environment individuals are working in (Lugger & Kraus, 2001). These groups of barriers are adopted from the findings of Argyris (1993), Riege (2005), Lugger & Kraus, Thoben & Wunram which all state that barriers are found within these groups and are likely connected to each other to dissatisfy the implementation of knowledge management.

- I. Individual level
- II. Organizational level
- III. Technological level

3.3.2 Barriers on individual level

The underlying issues that inhibit knowledge sharing in organizations are much due to the human factor where knowledge often involves individuals. Interaction that occurs between individuals will align effective knowledge sharing (Nonaka & Takeuchi, 1995). According to Riege (2005) achieving a successful knowledge management program, is highly dependable on how well it is managed by management and employees in information sharing.

Most of the problems that occur are often people related for example people's unwillingness to share their knowledge is much due to that it is regarded as a source of power and sharing it would signify a great loss (Huseman & Goodman, 1998). Individuals in organizations are not voluntarily sharing the knowledge they possess without compensation. Although, many organizations are offering various incentives to reward individuals to share their knowledge to others in organization but this is not more than an attempt to further improve knowledge sharing considering that many individualistic obstacles hinder the distribution.

People tend to not always share their individual knowledge due to knowledge constitutes as a source of the competitive advantage for employees and provide advancement opportunities within organizations. People's reluctance in knowledge sharing is considered being one of the main barriers within knowledge management all due to the notion of its consistence as a provider of competitive advantage and determines whether what knowledge is vital to sharing (Huseman & Goodman, 1998). People tend to feel fear when giving up their own individual knowledge considering competition among other employees in the work place. This kind of behavior is most likely to occur in groups or teams where team members' deficiency in sharing important information affects organizations from acquiring important information.

Many organizations are aware of the growing benefits knowledge contributed by individuals sharing experiences, skills with each other. However, knowledge is still individual and accessing it is important in order to create sustainable competitive

advantage. Riege (2002) states that organizations are likely to lose this knowledge if the employee leaves the workplace where employee skills and knowledge are apparent to an organization and creating new knowledge. Nonaka, Ichijo and Krogh imply knowledge is a part of personal identity and portrays it with highest regards. Learning new knowledge is seen as threat to ones "self-image" (Nonaka et.al 2000, p.21). This kind of resistance endangers the process of knowledge creation in highest degree when people avoid learning new technologies and social interaction with others.

Lugger & Kraus (2001) suggest some of the barriers existing on an individual level are prejudices, concerning other people's opinions, fear of criticism, lack of confidence in expressing their views and opinions etc. The authors claim that these individual barriers are integrated on an organizational level (p. 491).

3.3.3 Barriers on organizational level

McDermott and O'Dell (2001) define organizational culture as the underlying beliefs and assumptions of the organization, as the "key inhibitor of effective knowledge sharing" (p. 76). What many companies do wrong is that the culture in organizations remains unchanged to match the knowledge management initiatives (McDermott & O'Dell). It is primarily the culture of an organization that promotes effective knowledge sharing. The findings of McDermott and O'Dell show us that a knowledge management initiative has to fit the culture and not the opposite. This means that the culture is the core of an organization and changing its core values will create uncertainty of its survival in the future.

Another suggested barrier that is common within organizations is the language which is seen as an enabler in sharing knowledge with others. The problem occurs when people cannot express themselves verbally hence difficulties emerge in understanding each other (Haldin-Herrgard, 2000). Nonaka et al. (2000) also highlights the very importance of having a common language for the individual learning and sharing which limits the occurrence of misunderstandings.

Riege (2005) as many other researchers pinpoint that managerial direction and leadership can hinder knowledge sharing activities. The managers have the main responsibility to highlight the importance of knowledge management programs. They are responsible to create awareness and process it among departments by providing training and support to advocate the premises of a knowledge sharing environment. Luggar and Kraus (2001, pp. 488-497) contribute to the fact that management could lack understanding of the procedures of knowledge management and neglects the purpose of it which can create unawareness among individuals.

While culture not always promotes knowledge sharing activities within organization people tend to ignore the extra duties that often emerge in a Knowledge Management program. Information accumulation is also a barrier that emerges when information becomes abundant and resulting in information overload which can lead to demoralization among employees (Bolinger & Smith, 2000). This restrains employee's ability to take advantage of the proper techniques in terms of its usage.

3.3.4 Barriers on technological level

Drucker explains that knowledge has become the resource, rather than a resource, in the sense that it has become the main asset functioning in organization. He further explains: "The productivity of knowledge is going to be the determining factor in the competitive position of a company, an industry, an entire country. No country, industry or company has any natural advantage or disadvantage. The only advantage it can possess is the ability to exploit universally available knowledge" (Drucker, 1993).

As the aforementioned explanation, Knowledge Management is not solely a technology based concept which to only technology functions as a facilitator contributing into companies Knowledge Management strategy. Companies which embrace this view to fully must consider this as inadequate to assess the knowledge into organizations. The company's employees are important variables to emphasize to foster a knowledge sharing culture. Companies who overemphasize technology as the solution to become a competitive knowledge based organization may not succeed to achieve that.

There are different views on how knowledge should be handled within the field of knowledge management. At the same time various notions exist upon how technology should be emphasized in the implementation of knowledge management strategy. There are those who believe that knowledge management is an information technology issue (Bolinger & Smith, 2000 p. 10). Another group considers that Knowledge Management is rather a human resource issue and emphasizing the term “teamwork” of great importance in learning and creation of knowledge (Bolinger & Smith, 2000).

3.4 Implementing Knowledge Management in an organization

Barriers of Knowledge Management are very theoretical with its wide concepts that are presented. Next, we will discuss barriers on a more practical level. As said in the part of “Knowledge Management barriers”, there are problems existing that hinder the company’s need to become aware of successful Knowledge Management implementation. As follows, a discussion of impediments from a more practical side is provided below.

3.4.1 Management support

To have successful knowledge management the top management support is necessary. “Leaders have to share a vision on knowledge management...” (Cited in Plessis, 2007, pp 93).

Knowledge flow

Many organizations consist of divisions and departments. The units work independently and the flow of knowledge in the organization depends on the organization culture. (Arora, 2002) The transfer of knowledge between the units is insufficient in many organizations because it arise a competition between the different departments (Arora, 2002). The transfer of knowledge is insufficient for several other reasons. They can be willing to share knowledge between the units but they do not know what kind of knowledge the other units want. Therefore it’s important that people from different units meet each other and share their knowledge with each other. (Arora, 2007)

According to Arora, another reason can be that people are most focused on their own performance and not the team performance. Even though organizations have a team based structure has become a failure because “teams do not know what other teams are doing” (Arora, 2002, pp 241-242).

Another reason to the absence of knowledge flow can be the lack of team based activities amongst the different units, the employees do not have a forum where they can share their knowledge and learn from each other.

Arora states that one way to implement knowledge management can be with help from databases and intranet, the so called externalization process. In the database the employees share their experiences and what their failures and successes are.

A second way ,according to Arora, to increase the knowledge in the organization could be by communities of practice, the so called socialization process. To increase the value of this process is to have community meetings which will give a forum to the employees in the organization and they can share their best practise. The knowledge that is shared on these community meetings is mostly tacit.

3.4.2 Innovations

It is important for organizations to promote innovations and create new knowledge and this can be done in several ways.

It exist two types of innovations; small innovations and breakthrough innovations. The small innovations are made in one unit and it need to be spread to the rest of the organization. Important tools to spread this type of innovation to the rest of the organization are databases and communities (Arora, 2002). When it comes to breakthrough innovations this is often a result from cross functional teams (Arora, 2002).

To have the competitive advantage which the new innovations can create, the organizations must identify individuals with high potential and create groups. Also provide learning culture, infrastructure and the right incentives are important to create and spread knowledge threw the organization. (Arora, 2002)

Arora states that this has been done by many companies in form of communities of practice; this is when people in an organization “...come together to share their experiences and knowledge...” (Arora, 2002, pp. 244)

Communities of practice work best when people with different view on how a problem shall be solved and then “...forcing them to come up with a joint answer” (Arora, 2002, pp.244). This will give a much clearer picture from different perspectives. (Arora, 2002).

The meaning with the community is to gain insight but also to solve problems rapidly. Communities are helpful when an organization shall capture and create knowledge. But it is also important when it comes to exploration and innovation. (Arora, 2002).

Many experts are saying about the importance of establishing a reward incentive programme for employees for the creation and distribution of knowledge throughout organizations. It is not all organizations that prefer monetary rewards, whilst in some organizations are instead embedded knowledge management as a cultural norm (cited in Plessis, 2007).

3.4.3 Skill enhancement

It is important for organizations to enhance skills and other competences that people have. It is possible that people do not use the knowledge of others, but it is possible that they learn something from them, which can be useful later on in their work. When people learn from others it is possible that it will enhance the productivity but also reduce mistakes. (Arora, 2002)

Arora states that in many organizations the expertise is locally and “the knowledge gap in a hierarchy of experts is increasingly large” (Arora, 2002 pp. 245) and if the experts leave the company they may will suffer very much. To reduce this kind if problem it is important for the employees to have rotation in their work.

Arora further states that organizations put a lot of effort to make the employees to have higher knowledge and to reduce “...the knowledge gap in a hierarchy of experts” (Arora, 2002 pp. 245). To reduce this gap the organization must enhance the sharing of best practise because then the employee’s knowledge and productivity

become higher. Continuous learning is also a very important factor, which simply means that people meet and share their knowledge. The organizations can promote co operations by having for example discussion databases.

3.4.4 Measuring knowledge management

Many authors of knowledge management have different opinions when it comes to measuring and how shall be accomplished in the best way. But the authors of articles and literature which we have read, they agree that it is essential when it comes to knowledge management.

The most important thing that makes measuring so important according to us is that it must be possible for organizations to know what their failures and successes are, and this can be accomplished by measuring. But in which way the knowledge management shall be measured, depends how the organization look likes and in today's world it doesn't exist any universal measuring tool that can be applicable in all organizations.

3.5 Summary

This chapter presented knowledge, knowledge management and problems connected to the implementation process. The discussion is made both from a theoretical and a practical perspective. We can conclude that both knowledge and Knowledge Management are problematic fields and there exist different views on it. Still, we have an understanding of Knowledge Management, its components and the very essence of it, knowledge. With this understanding we know that knowledge is a resource like no other. It cannot even be managed as other resources. Since it is a resource that partly exists in peoples' minds, we can not have totally control over it. One could argue for that it cannot even be managed and that Knowledge Management is more about enhancing knowledge and give people opportunities to learn and spread their knowledge. Lastly, the problems of implementation are made, both theoretical and more practical. We obtain knowledge about hinders that exists in successful Knowledge Management and how people and organizations have to be able to change to receive the benefits of Knowledge Management.

CHAPTER 4

Identification of Knowledge Management elements

In this chapter we will identify Knowledge Management elements from the theory. A discussion of each element and its importance to Knowledge Management will be presented.

4.1 Knowledge Management elements

We reviewed theory and articles with a more practical scope, trying to find Knowledge Management actions that occur in companies regarding knowledge management. Actions that a manager ought to know whether they exist in the company. To be able to use these elements we have to sort them out. Our conclusion of the theory gives us three main processes of knowledge management. Adaption refers to how the company as a whole has to adapt to enhance the two other processes. There might be organizational barriers, as discussed earlier, which hinder a company to implement knowledge management. It is the patterns of the organization as a whole that create difficulties that slow down and stagnant the knowledge management. The second process is Knowledge creation. These are actions that add to the total knowledge pool of the company. Every time an individual learn something or the organization as a whole acquire knowledge the pool is growing. This is to get input to create competitive advantage, which can result in new products or more efficiency. The last process is knowledge sharing and refers to the process of dissemination the knowledge acquired throughout the company. The purpose is to get “individual knowledge” spread and for it to exist on an organizational level. One individual’s knowledge can be of great value for another individual in a way that no one knew. These three processes are continuously interacting. For example, on every company problems occur. By having an atmosphere where people are willing to help, an employee is not afraid to ask for help. When other employees share their knowledge and experience they might find a more suitable solution to the problem and the next time, the knowledge is already created to solve the problem.

When the variables were divided in to the three groups we looked at them more closely and found that different actions are connected. Some variable have the same purpose or were different ways to achieve the same thing. This resulted in further labeling and resulted in different KM-elements. The Knowledge Management-elements are actions or processes that a manager should be able to verify if they are present or not in the company. They are presented below, and categorized in the three different processes Adaption, Creation and Sharing.

4.1.1 Adaption

This deals with organizational patterns, structure and culture. To be able to create a good knowledge management, an organization has to be ready to embrace the knowledge it creates. If the organization cannot implement what it learns, why bother learning? The theoretical review gave us three areas in adaption which should be managed, namely:

1. Age
2. Individual freedom
3. Encouragement factors

Age

The spread of age in a company matters. One could assume that higher age equals to more experience. Looking at it from a knowledge perspective, the more experience the more tacit knowledge. The problem arises when the age of the employees is abnormally spread. Having a high percentage of older and more experienced employees (who possess a higher level of tacit knowledge) increase the risk of tacit knowledge going to waste when they retire, "... a erosion in the tacit knowledge base" (Davis, Subrahmanian & Westerberg, 2005, pp 109); there are not sufficient younger employees who can learn. On the other hand, having a too high segment of young people gives rise to the problem of not having so much tacit knowledge to share, or not sufficiently experienced staff that is able to share their knowledge.

Individual freedom

Theory often mentions how creative freedom is essential for an individual to be capable to share and create knowledge. If the organization itself does not allow people to think and share their ideas, they will not do it. Consider a manager who never has time and gets annoyed every time an employee tries to give ideas or when every idea is being put in stack of paper and never reviewed. Surely he or she will stop trying and feel suppressed. This could make one quit and knowledge is being lost. For example, in “Learning through knowledge management” (Ahmed, Kok & Lao,) it is discussed how employees need trust, openness and teamwork environment. Basically creating an environment employees are comfortable to actively participate.

Encouragement factors

As a follow up from individual freedom, an organization can encourage people to think, share and learn. By having managers that guide, help and motivate you to do so, an employee will to a higher grade share his knowledge with the company when he feels that his opinion matters. A company could also have reward systems for good ideas to further encourage people with various motivational factors such as monetary and non-monetary rewards. This was the case when ICL appointed a person responsible for knowledge management, one of the actions in the new knowledge management plan where to offer different incentives to the employees (Chase, 1997).

4.1.2 Creation

Knowledge creation is closely related to knowledge acquisition. It is the process where new knowledge is added to the company. Our dissertation discusses four points where knowledge creation is visible in a company:

1. External knowledge acquisition
2. Internal knowledge acquisition
3. Innovation
4. Education

External knowledge acquisition

Sometimes an organization does not have the resources or time to create knowledge that it needs. By a joint venture or merger two pools of knowledge are being connected. This enables new knowledge, using both companies' knowledge to be created. According to "The "global" and the "local" in knowledge management" (Davis et al, 2005), a joint venture is one of the places where knowledge is produced. External knowledge acquisition could also be consultants who bring in expertise to manage business operations the company itself does not have resources to manage.

Internal knowledge acquisition

Enabling employees looking for knowledge internally is often a good idea. By letting people from different departments cooperate and socialize, they could learn new things from each other. Also, when letting people work in different places in the company, they acquire knowledge. Learning from a new position added with the knowledge it already has can generate new knowledge. In the article "The "global" and "local" knowledge management" (Davis et al, 2005) the authors mention how knowledge who leads to new products is passing different departments.

Innovation

Good knowledge management means you can develop products/services that stand out. A company can see what will be needed and create the product to fill the need. A product can exist in an organizations mind but they cannot produce it. By sharing and creating knowledge they can find the means to create it. A product can need a modification that was not possible when it was created but now the company has the knowledge to meet the customers wish on a certain attribute. The knowledge creation that also occurs is when the company process knowledge and testing different solutions, during this process a lot of new knowledge is created. It is not always the knowledge that was set out to get, but it can be useful in the future. Kreiner's article "Tacit knowledge management: the role of artifacts" (2002) is describing this process. A result of good innovation is new patents and copyrights.

Education

With education and training employees can add to their own knowledge pool. By reading explicit material or by learning from a more experienced person, they acquire necessary information to make it their knowledge. Mentor programs are a good example. Today, a lot of technology is brought into the company. Intranet, the internet and email are examples of technology advancements that are common in companies today. But to have access to it does not mean one can use it. The more sophisticated technology used for knowledge management, the more education and training are necessary. Otherwise it is useless.

4.1.3 Sharing

Knowledge Management examines extensively with issues surrounding knowledge sharing. Passing on knowledge between employees is essential for succeeding knowledge management. By socializing and discuss actions in the company, employees can use what others have experienced, as long as they are willing to share. Different ways of sharing is discussed in theory. In our theoretical review we found different ways for people to share what they know.

1. IT-technology
2. Social network
3. Face-to-face (socialization)
4. Knowledge pool
5. Knowledge localization

Technology

Technology is generally believed as tool for sharing knowledge. In today's organizations managers often conceive technology as the same as knowledge management. But it is only a tool for connecting people-people and people-knowledge.. With too complicated systems comes a risk of people resenting it. It just takes too much time. Managed well, technology gives companies greater opportunities and forums for sharing their knowledge as was discussed before, the British Petroleum case (Chase, 1997) where they made a 5-1 investment return on video conferencing.

Social network

A network includes people with a mutual interest or goal. With people having this mutual interest, they feel more comfortable sharing their thoughts or ideas. The network can be a group of people that have meetings but it can also be an internet forum group. A community of practice is an example of this, where people with a similar task have a mutual forum. Organizations should enhance people to create and maintain networks. Most of the knowledge used in solving problems in the job, arises from working with real numbers and cases. An important source to gather information to solve this is coming from social networks (Davis et al, 2005). The difference between *social network* and *localization of knowledge* is not great. Even though both help you to localize knowledge, a network requires maintains and continuous human interaction.

Socialization

Socialization is considered as one of the most important processes of theoretical Knowledge Management. This element deals with the face-to-face interaction. An organization should motivate people to meet and socialize. It can be done by sponsoring events and creating opportunities where people can meet in person and discuss in a more inspiring environment. A lot of tacit knowledge is being shared here. In an open interaction one could learn in ways they do not know. Master-apprentice relationship is educative but also face-to-face is considered as efficient communicative tool. The apprentice learns from watching and asking while the master is using his skill. Basically, knowledge has to be communicated (Despres et al, 1999).

Knowledge pool

All the knowledge that an organization possess, has been collected from a knowledge pool, best practices, databases etc. It is important to know that this does not mean the tacit knowledge. The knowledge pool is only containing knowledge that the organization can use when it wants to. Best practices contain information about successful cases in the past, which an employee can use when he/she faces a situation and do not know how to act. It does not always have to

be a complicated source. Call (2005) mentions the “green book” where the experience of every top performer in a hotel chain is collected.

Localization of knowledge

Logically, an organization needs to localize its knowledge before sharing it. A list of what expertise people in the organizations have facilitates the localization of knowledge. Once knowledge is localized, then it is possible to extract it to departments within organization. By knowing the knowledge needed, people can easier make it available and see where they are needed. A company “yellow Pages” was another of the British Petroleum’s actions regarding Knowledge Management (Chase, 1997).

4.2 The research model

After having addressed the various aspects of knowledge management we found three groups of variables of great importance which influence KM with regards to knowledge sharing. The three groups of elements are shown in figure 4.2. We will primarily focus on the elements found in each category to highlight their connection to Knowledge Management sharing in organizations.

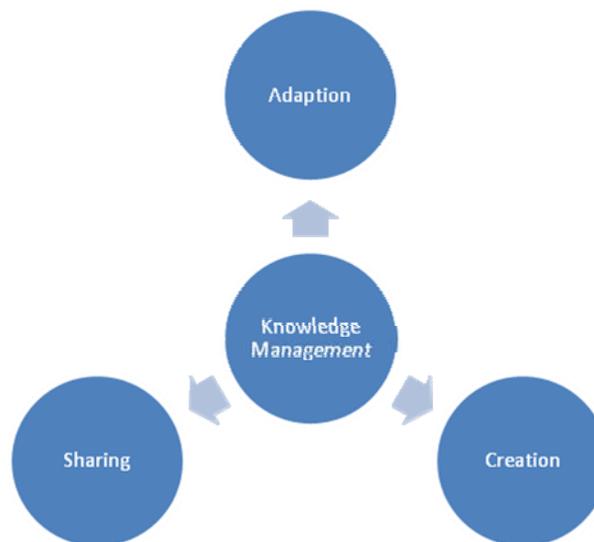


Figure 4.2: Groups of variables interconnected to KM

4.3 Hypotheses

The hypotheses are derived from the groups of variables identified from the theoretical framework, namely Knowledge Adaption, Knowledge Creation and Knowledge Sharing. The following hypotheses are addressed below, and later tested in an empirical study. We wanted to know if these elements have any connection to a company's size, choice of industry and country. Thus we can establish if correlations exist between the hypotheses.

H1: Knowledge Management variables are positively associated with organizational size.

H2: Knowledge Management variables are positively associated with organizational sector.

H3: Knowledge Management variables are positively associated to country.

H4. The service sector has the highest correlation to the Knowledge Management elements

H5. Large companies have the highest correlation to the Knowledge Management elements.

CHAPTER 5

Empirical Method

The empirical method is presented. Further explanation is provided upon the choice and the execution of the research.

5.1 Research strategy

The research strategy explains how the primary data was collected. Saunders (2007) presents different strategies to use. Each strategy fits differently dependable upon the choice of research method. The purpose with our dissertation is to collect data about the relation between Knowledge Management elements in theory and reality. We began to explore the theoretical perspective, which makes it a deductive research. Further, we wanted to reach a rather large population to be sure to include a sample with variety.

The research strategy chosen in our dissertation is a survey. According to Saunders, et al. (2007) this strategy allows us to reach a sizeable population at a reasonable economic cost. Our survey collects standardized data which makes it easier to compare (Saunders et al., 2007). To be able to answer our research questions in the best possible way, a survey would be the most appropriate research strategy.

5.2. Questionnaire

For the purpose of this study questionnaires are used as data collection method. The questionnaire has been electronically managed with the intention to send it to a number of designated representatives at organizations. The advantages of using questionnaires are several. Firstly, a larger population can be targeted through an internet based questionnaire whereas geographical and economic limitations are therefore minimized due to its low cost of nature. Secondly, by adopting closed-ended survey, comparisons of the responses are easier made. Lastly, the respondent will not be influenced by the researcher. The disadvantages are that misunderstandings could occur in regards to questions established. The response rate

on internet mediated questionnaires is usually very low which must be considered before establishing one (Saunders et al. 2007). Lastly, the questionnaire established for this dissertation is anonymous which makes it difficult to do follow-ups on the main sample target. Questionnaires were forwarded to Human Resource managers who are solely responsible for Knowledge Management activities and possess information surrounding the area of knowledge management. The capturing of this information will be achieved through providing closed-ended questionnaire where the respondents have responsibility to freely discuss and add the information they regard has important value when answering the questions.

The questionnaire was accompanied by a cover letter stating the purpose of the study in order to get the respondents to fill in the questionnaire. An explanation was given, stating that respondents would benefit from filling it out. The letter also contained a description of the overall purpose of the research study, the time concerned that would require filling the questionnaire, the background to the study and contact information with the researchers if necessary.

5.2.1 Design of the questionnaire

Having our interests in mind, a questionnaire was conducted with closed-ended questions forwarded to managers in various industries. Human Resource Managers who are our main target respondents represent the companies. The questionnaire will be forwarded to managers whose organizations have or were about to start knowledge management implementation and our interest is to capture the knowledge managers' possess.

The questionnaire constructed contains 15 questions. The questionnaire is comprised of two parts. The first part was to collect necessary data from the companies which concerns areas like industry, number of employees and country of origin. The second part engages questions with the groups of variables found and the factors that have an importance in knowledge management. The questions were closed questions which mean that the respondent was asked to choose among the provided alternatives. The questions are rating questions with the intention to capture the respondents' certain opinions whether he or she agrees or disagrees with the questions provided (Appendix B summarizes the overall content of the

questionnaire). This data is called “opinion” (Saunders et al., 1997). The technique used is known as Likert-style rating scale rating consisting of five different alternatives in the questionnaire, namely totally agree, agree-nor agree/nor disagree, disagree and totally disagree.

5.3. Sample Selection

The research has been conducted primarily in Europe and the U.S, aiming at internationally based corporations that promote knowledge management activities in their organizations. This approach was made in order to address the existence of any geographical indifference. The research was subdivided into two groups with existing similarities in size and the heterogeneity of business areas. The primary criterion for selecting respondents in group one is that the respondents are permanently employed in the human resource department of a company. These respondents were located through the network at www.Xing.com. The second group is comprised of companies that have a position on the Europe 500 list. These companies are the 500 companies that have grown the most in Europe. The list is available on www.europe500.com.

Our aim with this study was to collect data from the target group, namely currently employed human resource managers. We tried to focus mainly on corporations within the European Union and in the U.S. We have chosen 510 randomly picked companies to include in our survey. The questionnaire was an e-mail based survey which required obtaining email addresses of the companies chosen. The version that was sent is presented in Appendix B. The e-mail addresses were obtained through two different sources. The first source is from “Europe 500” listed companies who were eligible to our research and the addresses were obtainable at company websites. Our second approach was to search for eligible Human Resource managers currently employed in an organization and to send inquiries. We considered this choice of approach to be the most effective. This homepage was easily accessible for people with certain positions in an organization.

5.4 Limitations

The objective of this work was to develop a questionnaire measuring the elements of Knowledge Management. The questionnaire conducted is not entirely without limitations. Firstly, a pilot test was never performed to ensure that the questions were designed in a way that respondents interpret them as we wanted. Secondly, we did not send out any reminders or verify if they received the e-mail. We believe the approach that was used affected the outcome of the research and generated a low response rate. Thirdly, we targeted companies on the Europe500 list and individuals currently employed by companies were localized through Xing. One could make the assumption that this affects the result because:

- The network is a variable we ask about. Respondents using Xing are probably more likely to partake in networks.
- A place on the “Europe500” means companies that have grown across all business sectors. As knowledge is seen as a key success driver one could assume that these companies have a good Knowledge Management.

5.5. Response rate

The questionnaire was available online from the period of 5th November 2007 until 16th November 2007. In order to understand the various viewpoints on Knowledge Management, questionnaires were forwarded to human resource departments in different business sectors such as service, manufacturing, agricultural and finance.

A number of 510 questionnaires were sent out during the period, in total 29 valid responses have been retrieved while the survey was still operational. The survey was sent out primarily by e-mail, with a response rate at 5.7% which is low. This low response rate was rather problematic since there is a greater risk for biases. We were aware that such usage of e-mail surveys could generate lower response rate, and this survey was not any exception. However, additional techniques such as follow-ups were not used to increase the response rate and for a longer period of time the response rate would be appropriate in connection to the follow ups. Although, the survey generated a low response rate and the outcome could be improved by common methods associated with surveys. A higher response rate would have impacted the dissertation to a larger extent. A reason for not using follow-ups

immediately after the survey was a time issue. To preserve the anonymity of the respondents in the best way possible, the questionnaires were, therefore, not codified thus eliminating the risks of participant identification and the company is anonymous. We believe this approach to be reliable in order to receive valid responses acquired from respondents and not feel intimidated by that their responses may affect their situation in the company. This was to increase participant involvement and that follow-up letters would not be necessary.

5.6. Validity

The validity of a research is highly dependent upon that the researchers' findings are accurately reflecting the appearance of the content (Saunders et al, 2007). The validity of our project concerns many of the established questions in the survey might have an ambiguity of sorts misleading the respondents. How the questions were formulated and if they do possess language indifferences, might lead to errors. In order to overcome these differences, pilot tests would be much appropriate to test the relevance of the questions and the level of understanding. However, pilot tests were not conducted considering the time limits. The occurrence of misunderstandings could not be avoided completely and there would always be biases.

5.7. Reliability

Reliability is how true the result is. "Reliability refers to the extent to which your data collection techniques or analysis procedure will yield consistent findings" (Saunders et al, 2007). As mentioned earlier, Knowledge Management is a very elusive field and the content problematic to measure. We made statements in our questionnaire and the respondents are to measure on a scale how much they agree or not agree, there could be a potential threat to the reliability. Further, it is important for our research that the respondent is updated on knowledge management issues in the company so that when respondent disagrees or agrees it is based on knowledge and not on beliefs. Also, as always when performing a questionnaire, there is a risk that the respondent does not interpret the question as intended. To increase the reliability, the research was investigated in two non-related groups. The purpose was

to be able to compare the result. If the findings in both groups are similar it would increase the reliability.

5.8. Generalization

According to Saunders et.al (2007), generalization occurs when the findings may be equally applicable to other research settings. Once sufficient amount of information has been collected, the results are therefore subjected to generalization to similar circumstances. We targeted various companies in various sectors through the Internet and communities. Other potential companies that have not been selected are not represented in this dissertation due to our scope of research. This research lacks the ability to generalize its findings to a large population due the low response rate from the retrieval of 29 questionnaires from Human Resource managers alone, which is regarded as an insufficient amount of information in order to generalize. Not receiving a large response rate creates difficulties in reaching this approach. Therefore, we do not believe that any further generalization can be made from the information acquired.

5.9 Operationalization

Our intention was to investigate the presence of elements extracted from theory in a company and how different company characteristics affect it. We made statements in our questionnaire with the intention to capture the essence of the Knowledge management elements.

Questions 1-3

These first three questions in the questionnaire, concern the fundamental characteristics of a company in which the questions will provide adequate information. We asked about the location of companies, business sector and the number of employees. This gives us characteristics to compare the answers between.

Question 4: *Your Company emphasizes the importance of mentorship programs for entrants, professional training and coaching*

This question is intended to capture the element “age”. We assume, that a company which has a strong relation, continuously employ people. A mentorship program and

coaching is normally a relation between entrants and more experienced ones. Conclusively, a strong relation on this question would suggest that the company has a dispersed age distribution among employees.

Question 5: *Your company has procedures to include and involve all employees in the decision making process of the business strategy*

Question 5 captures the element “freedom of individuals”. It is highly important for companies to stress human independence and importance of individual contribution into the business. Companies should allow individuals to think freely and approach thinking outside the box principle whereas allowing looking problems from a new perspective, therefore he/she needs to feel that his/her matters of opinion are valued and encouraged by the organization. Including everyone’s opinion in the business strategy and therefore giving them a chance to have an impact on the future of the business. This will lead to those employees to feel like they are allowed to think and that the company enhances them to think and give ideas.

Question 6: *Our employees who are involved in activities improving the company are rewarded for theory contribution in terms of different incentives (e.g. bonus rewards, motivation factor for individual development etc.) which foster further participation in such activities*

This question was established in order to investigate the element “Encouragement factors”. Even though it is related to question 4, this question rewards good ideas. This is to further give people an incentive to think and a method to further enhance ideas. When a company offers rewards or other incentives, employees will try to get their ideas into the organization in a higher degree to collect the reward.

Question 7: *Your Company hires experts and/or consultants externally for guiding or monitoring certain business operations*

This question is about the element “External Knowledge Acquisition”. By hiring outside help to monitor business operations or to get guidance, a company is reaching outside (externally) the company for knowledge. The company “creates” new knowledge by acquiring it from an external source.

Question 8: *Your Company encourages employees from different departments to work in groups with projects, etc. where experiences and knowledge are shared with each other freely.*

When a company enhances people from different departments to collaborate with projects, unsuspected solution and knowledge can be created. Different departments have different perspectives and skills. When people from different departments form groups and collaborate, they can acquire knowledge from each other about a particular area. Since they have a common task, they can more easily know what kind of knowledge that is required. The individual then takes this knowledge back to the department and can use it in other occasions. This means that the company is seeking knowledge internally and question 8 intends to find companies' relation to the element "Internal Knowledge Acquisition."

Question 9: *Your Company emphasizes on product/service development to constantly create new competitive advantages*

The element "Innovation" is investigated by question 9. A Company who continuously try to create a new competitive advantage needs to create and elaborate with the knowledge the organization has. They use their innovation ability. When trying to get improvements or new products, a company works with the knowledge they have, they will combine knowledge that already exists and create new knowledge. The company will not always get the knowledge they suspected but even though, the knowledge can be used in the future.

Question 10: *Your Company has a policy to continuously educate its employees to become more efficient and valuable for the company. This can be achieved by e.g. courses, training and manuals.*

This question revolves around the element "education". The concept of continuous learning through educative tools means that companies who educate its employees by providing courses, training and manuals in order to improve the understanding of the business environment. This will create a learning process where new knowledge can be acquired. Further, by increasing the employee knowledge, new knowledge can be created based upon the knowledge they acquired from education.

Question 11: *Your Company gives its employees access to a wide range of communication tools such as intranet, groupware, e-mail, internet and telephone (IT-tools) for sharing their knowledge.*

The element “Technology” regards the availability of IT-tools that exist in the company. The establishment of question 11, we noticed to what extent employees have access to IT-technology. This can be seen as a tool to share the knowledge employees possess.

Question 12: *Your Company motivates and supports employees to engage in social networks to be able to communicate with competent people, which they can acquire relevant knowledge from.*

The element “Social network” is captured by question 12. Social networking is highly important, whereas group belonging is a concept of interest here. To become a member in a group who talks the same language to same terms and conditions. They can interact more easily and share their experiences in a forum with likeminded associates. Companies should motivate its employees to engage in social networks to obtain knowledge. In question 12 the employee answers how well their company engage individuals into social networks.

Question 13: *Your Company gives its employees access to “best practice” information, where they can learn from successful cases in the past.*

The knowledge pool contains information which employees can use to improve their work and can access it whenever needed. A “best practice” data base contains successful cases from the past. It gives information on how to behave in situations when problems occur in the organization. Question 13 investigates if employees at the company have access to a database which contains such information and further, the presence of element “knowledge pool” is present in the company.

Question 14: *Your Company is sponsoring knowledge sharing events such as conferences and knowledge cafés where employees can interact outside the physical workplace.*

The element “socialization” is about face-to-face interaction. In a more relaxed environment people tend to be more open and less intimidated to ventilate their

thoughts. The output of conversations becomes satisfying when companies offer its employees opportunity to interact outside the physical workplace. Such activities that can promote interaction are conferences and knowledge cafes.

Question 15: *Your Company has profiles on employees regarding their background, skills and education (company “yellow pages”) with the purpose to make it easier to find who has the knowledge required in certain area.*

Question 15 it investigates employees accessibility to databases. “Knowledge localization” is an element which makes it easier for people to find the right people to talk to when knowledge is needed. A database or register where peoples level of skills and education are registered thus allow finding eligible individuals who possess certain degree of knowledge. An example is a company “yellow pages”, where people can search.

CHAPTER 6

Analysis

6.1 Introduction

This following chapter will present an analysis of the data obtained from 29 responses. First, the results of each element are presented. We will show how the different characteristics of the company have affected the result. After that, we summarize and analyze the material from three different perspectives:

- Knowledge Management elements independently from each other. We analyze the material without regard to the impact of characteristic variables.
- The variable “Company sector” and its impact on the Knowledge Management elements
- The variable “Company size” and its impact on the Knowledge Management elements

We decided not to investigate question 3 and its impact on Knowledge Management elements since it had a great variation in its answers. The answers were too spread and many alternatives had only one respondent.

The response scale used was a Lickert-style scaling, which the respondents were provided with following alternatives:

1. Totally Agree
2. Agree
3. Nor Agree / Nor disagree
4. Disagree
5. Totally Disagree

The computer program Statistical Product Service Solutions (SPSS) was used in order to conduct the descriptive analysis. The answers were coded in SPSS in order to determine the means of the questions related to the four elements. The values were

given for Totally Agree as 1.00, Agree 2.00. Nor Agree / Nor Disagree 3.00, Disagree 4.00 and Totally Disagree 5.00.

6.2 Descriptive analysis

This part will discuss the outcome of our findings and results obtained from various companies. The first three questions are questions of characteristic nature directed to companies. The purposes with these questions were to get the basic characteristics of the companies, which are the number of employees and the industry which company belongs to and the company's location. Questions 4-15 are investigating different Knowledge Management elements.

6.2.1 Characteristics of companies

Question 1

The basic information of the companies is described by figure 6.1 and table 6.1 below. Both illustrations show that the majority of respondents belong to the service sector comprised of 19 companies (65.5 per cent), whereas about 10.3 per cent belong to the manufacturing industry. The agricultural industry was without any responses (response rate of 0 per cent) and therefore it was excluded from the study. A minority of only 3.4 per cent considered themselves in retail industry or one response and another 20.7 per cent position themselves in neither of the categories. The average response rate of this study was rather low. In the "other" sector we found that majority (4 out of 6) of these were IT companies. Constructing the questionnaire, we made the assumption that IT companies were service orientated. We have used the same selection of companies as the "Europe500" survey used. Some of the assumptions made during the research process, was that we anticipated the study would generate a higher response rate.

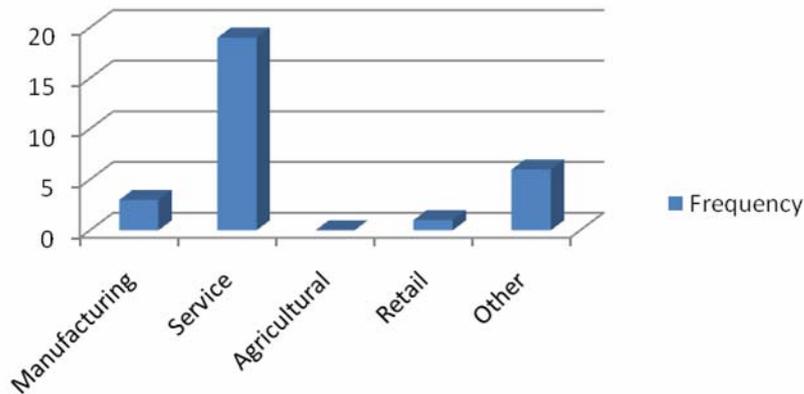


Table 6.1 Frequency and percentage for question 1

The illustrations in figure 6.1 and table 6.2 show us that majority of the companies belong to the service industry, and one fifth belongs to “others” which fails to give any further information if the companies belong to an industry from the industries that were available. Another 10.3 percent belong to the manufacturing industry whereas retail constitutes only 3.4 per cent of the responses and finally no companies position themselves in the agricultural sector and thus that sector is excluded from the analysis.

	Frequency	Percent	Cumulative percent
Manufacturing	3	10.3	10.3
Service	19	65.5	75.9
Retail	1	3.4	79.3
Other	6	20.7	100
Total	29	100.00	

Figure 6.1 Overview of business sectors of companies represented.

Question 2 Company size

A large number of companies employ more than 1000 people. As shown in table 6.2, 44.8 % are large companies and 34.5 % employ less than 249 people. The results showed that 44.8 % of the companies had 1000 employees and above and 34.5 % had less than 249 employees, 17.2 % were in the range 250-499 and 3.4 % had more than

750-999, these statistics are shown in table 6.2. No company had employees in the range 500-749 and therefore it is eliminated consider; from the study due to lack of responses in this category.

	Frequency	Percent	Cumulative percent
<249	10	34.5	34.5
250-499	5	17.2	51.7
500-749	0	0	
750-999	1	3.4	55.2
>1000	13	44.8	100
Total	29	100	

Table 6.2 Distribution on number of employees.

The remaining companies located between first and last columns are affected by a gap, also called companies of extremes. As can be noticed in figure 6.2 below, the frequency of the answers are widely dispersed in companies with fewer than 249 employees and those higher than 1000 employees. The middle section of figure 6.2 comprises an employee rate of 500-749; this alternative is excluded since no company has positioned itself in that range. Those companies who responded to the survey are smaller and medium sized enterprises.

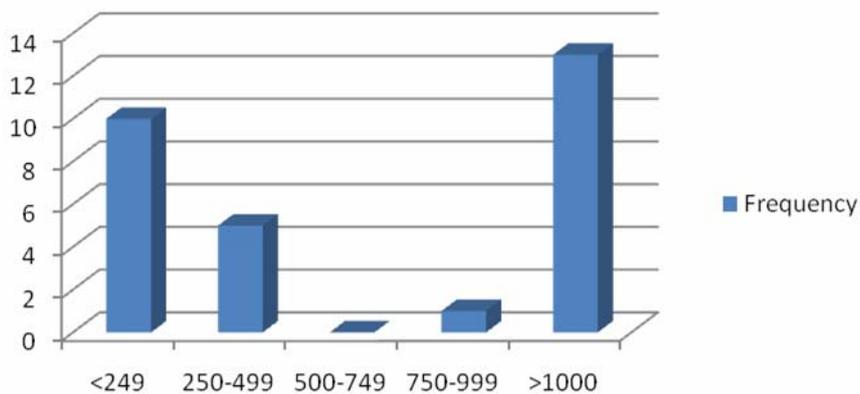


Figure 6.2 Number of employees of the sample companies.

Question 3

Question 3 was conducted in order to classify the countries the companies are located in, primarily by the country where the human resource manager is located. However, the responses given were so dispersed so that any given country was not assured to out rule another, therefore, we excluded this part of question from analysis.

6.1.2 Descriptive analysis of knowledge management Elements

Adaption

Question 4: Element age

Your company emphasizes the importance of mentorship programs for entrants, professional training and coaching

This element is captured by the statement “Your Company emphasizes the importance of mentorship programs for entrants, professional training and coaching”. A company, who has strong relations to this statement, engages its organization in mentorship programs, training and coaching activities must continuously employ new people. If the company emphasizes on mentorship and professional training, one could assume that younger and inexperienced individuals enter the organization. The mean on this element is 2.03 which mean the current population agrees (2.0) with the statement. The results indicate the presence of support programs and coaching in companies.

Table 6.3 provides the mean value of question 4 in each individual business sector. There we can see that sector belonging is a matter of importance. The service sector along with other sector is closely situated to agree with a mean value of 2.0. The retail sector reveals a slightly higher value than other existing sectors in this category; we must however consider the single response which may affect the actual results. The manufacturing sector has a mean value of 1.67. We assume manufacturing companies are often dependable upon skills and expertise of employees. In order to extract tacit knowledge which is found within employees and integrated with its skills and experience, it becomes necessary to acknowledge the importance of increased learning in the workplace. Therefore companies who belong

to the manufacturing sector focus more than others on mentorship and coaching. The element is generally accepted by the entire population except in the retail. Because there is only one answer in this sector and is therefore not representative. We assume from the results received, companies who belong in the retail sector require less expert skills, reduced understanding, and are more dependent on individuals' ability to retain information required.

Table 6.3: Mean values in each individual business sector

Business sector	Mean	N
Manufacturing	1,67	3
Service	1,95	19
Retail	4,00	1
Other	2,17	6
Total	2,03	29

Table 6.4 below illustrates a chart, which considers the company size (by size we mean the number of employees working at the company). If only a single respondent has positioned itself in the category of 750-999 employees, the response is considered not to be representative however we believe a relation could be found. One could assume that the more employees the company has, the more the focus is on mentorship and coaching. In the very beginning of the analysis of the theoretical framework a discussion was made revolving that tacit knowledge is possessed by those companies who employ experienced individuals. Our research indicates that large size companies emphasize further on mentorship and coaching. Companies have realized the importance of reusing large quantities of tacit knowledge in a company.

The weakest relation to this exists in companies with less than 249 employees and we assume that it has its natural causes. It does not have to be a result of bad knowledge management. Smaller companies probably have lower resources and do not employ new people in the same pace as larger companies. Still, the mean is closer to agree than nor agree /disagree and it shows that they are aware of the benefits of mentorships and coaching. Considering business sector the weakest

relation is in the other (where IT companies is overrepresented). All business sectors (If not considering one answer in retail representative) agree on the importance of mentorship and coaching. Large manufacturing company focuses mostly on mentorship programs.

Table 6.4: Mean values on distribution of number of employees.

Number of employees	Mean	N
<249	2,40	10
250-499	2.20	5
750-999	1,00	1
>1000	1,77	13
Total	2,03	29

Question 5: Element individual freedom

Your company has procedures to include and involve all employees in the decision making process of the business strategy.

This statement is meant to capture if the company tries to collect the thoughts and ideas that employees have about the company, which could have an impact on the business strategy of the company. Encouraging employees to think individually and share ideas is a pertinent stage for organizations which contributes to reshape the future of the organization. We have to consider the mean value of 3.00 represent the choice of Nor agree/Nor disagree on the number scale. The mean value calculated for this element is 2.93 which are situated near the 3.00 on the scale.

The value does not seem to provide further understanding on this element; the results convey that many companies are cautious towards this question. This statement is pending in the results where majority of companies do not focus to include employees in the business strategy. Employees have accumulated knowledge about the environment that the company is operating in and assessing their opinion could be of great value. The cause for a high mean value of this element could be various difficulties embedded in the process and tasks time consuming to let everyone have

an impact on the business strategy. On the other hand, the process does not usually guarantee immediate employee participation and is likely not to affect the business strategy. If companies do not validate employee opinion to be integrated into the business strategy, then procedures would not be developed in order to gather employee opinion.

The results depicted in Table 6.5 below, compares the means acquired from business sectors. At this level, almost all sectors had made their selection upon “Nor Disagree/Nor agree” with the statement. A distinction is noticeable in the manufacturing sector with the mean value of (3.33), which provides further understanding how these companies are more reluctant to include employee opinion in the business strategy. The “other” category was the group that large number of companies agreed to this statement. Companies in the manufacturing sector assumingly have more people at the “bottom floor” since there are extensive production departments. This principle is believed to influence the result, whereas workers at the bottom floor are probably an effective workforce within an organization perhaps do not assumed their interest in partaking administrative role in the company.

Table 6.5: Mean values in each individual business sector

Business sector	Mean	N
Manufacturing	3,33	3
Service	3,00	19
Retail	3,00	1
Other	2,50	6
Total	2,93	29

In the table 6.6 below, interesting results are to be found. One would have to assume that small size companies would benefit the most by agreeing to this element to a larger extent than large size companies. The results depicted in table 6.6 inform us companies with less than 250 employees have a mean value of 3.10, which is slightly higher than the total average of 2.93 and furthermore higher than the mean of 2.92 for companies with more than 1000 employees. One possibility could be that small sized companies contain a pyramid shaped hierarchy where management are solely

responsible for the decision making process in organizations. Yet both groups are moderately close to “Nor agree/Nor disagree” which is constituted by the value of 3.00. However, the single response in the category of 750-999 deviates from the remainders agrees with the statement.

Table 6.6: Mean values on distribution of number of employees.

Number of employees	Mean	N
<249	3,10	10
250-499	2,80	5
750-999	2,00	1
>1000	2,92	13
Total	2,93	29

The company size does not seem to have an impact on the effect employees have on the business strategy. Thus, we could not confirm the presence of this specific element in companies. The results acquired tell us essentially large sized companies belonging to the service sector are more engaged to involve its employees in the business strategy. If the low responses are not considered, it would be mainly mid and large sized companies who are positively associated with this element.

Question 6: Encouragement factors

Our employees who are involved in activities improving the company are rewarded for their contribution in terms of different incentives (e.g. bonus rewards, motivation factor for individual development etc.) which foster further participation in such activities.

This question intends to measure to what extent companies offer incentives to its employees in order to engage them improving the work environment. The mean value for this question is 2.17, which is considered as “agree”. In order the term “agree” become valid it is constituted with the value of 2.00. Further, we intend to investigate the relation to business sectors. The mean value for the manufacturing sector is 2.67, which is closely situated to “Nor agree / Nor disagree” (3.00) than

“Agree” (2.00). The service and other sectors are closer to “agree” as the total mean value for the whole population. The results are caused by various elements. One alternative option is that people at the bottom floor in a production department are more static in their role in the work place.

Table 6.7: Mean values in each individual business sector

Business sector	Mean	N
Manufacturing	2,67	3
Service	2,11	19
Retail	3,00	1
Other	2,00	6
Total	2,17	29

The element encouragement factor is embedded in this question which extends the motives of participation of employees from company perspective. We found small sized companies weak relation toward incentives and the appliance of core incentives into organization. Companies with less than 250 employees have a mean value of 2.50, which is situated between Agree (2.00) and “Nor agree / Nor disagree” (3.00). Considering the value of 1.92 suggest large sized companies have some sort of initiated incentive program in the organization. Whereas small sized companies have limited resources in applying an incentive program for the business or are perhaps in developing phase where inquires for incentive programs are indefinite. Companies prioritize business improvement with expectancy to forward the company.

Table 6.8: Mean values on distribution of number of employees.

Number of employees	Mean	N
<249	2,50	10
250-499	2,40	5
750-999	1,00	1
>1000	1,92	13
Total	2,17	29

The conclusion we can draw from these figures is that service oriented companies (other sector represented by a majority of IT companies which is a kind of service) who have more than 1000 employees, are more likely to have this element present in the organization. Prior to earlier discussions, large sized companies have additional resources in the appliance of various programs but have great difficulty to reorganize due to the redundant nature of the organization, thus the need for incentives might be greater for that category of companies.

Creation

Question 7: External knowledge acquisition

Your company hires experts and/or consultants externally for guiding or monitoring certain business operations.

This question intends to investigate companies' external acquisition for professional consulting. When knowledge becomes inadequate within a company, sometimes certain skills are required into projects and the solution might be to seek knowledge outside the physical workplace of a company. The mean value for this question is 2.52 which is slightly nearer to "Nor agree/Nor Disagree". Considering the results, it should be noted that companies' main focus of interest on this element is very limited however awareness of the importance of this element is not a complete rejection. A higher mean value for this element was expected. The consultancy services in today's business world show great tendency to attract new clients. The total mean value of 2.52 would suggest that companies prefer to do business in-house.

The table 6.9 depicts all current mean values are higher than two. The manufacturing (2.33) and service (2.47) sectors still agree but are close to the break-point between "Agree" and "Nor agree/ Nor disagree" at 2.50. The other sector has a mean value of 2.50 on the break-point. The single response in the retail sector has the accumulated value of 2.52 and a general opinion at "Nor agree / Nor disagree". Here we cannot recognize any patterns on which sector affects the "element encouragement factors".

Table 6.9: Mean values in each individual business sector

Business sector	Mean	N
Manufacturing	2,33	3
Service	2,47	19
Retail	4,00	1
Other	2,5	6
Total	2,52	29

Considering company size at table 6.10 has a variance in response. In companies with 250-499 employees the mean value is 3.40 which is close to the break point between “Nor agree /nor disagree” and “Disagree”. The other companies in various sizes are within the area of agree. One could believe that small sized companies are lacking the resources required to manage everything in-house. Even though our survey shows that large sized companies with more than 1000 employees are the ones who seek assistance outside the company.

Table 6.10: Mean values on distribution of number of employees.

Number of employees	Mean	N
<249	2,40	10
250-499	3,40	5
750-999	2,00	1
>1000	2,31	13
Total	2,52	29

Those companies who have the strongest relation to this element are mostly large companies with more than 1000 employees and belonging to the manufacturing sector. As mentioned before, one could assume that small sized companies have inadequate resources and should have greater need for looking assistance externally. Manufacturing companies show a greater tendency to seek help externally, the reason may be that external assistance is sought mostly by service providing companies, e.g. accounting. Further, this means that service oriented companies are

offering services and therefore have a diminished relation to acquire external knowledge.

Question 8: Internal knowledge acquisition

Your company encourages employees from different departments to work in groups with projects, etc. where experiences and knowledge are shared with each other freely.

This question provides us further understanding if collaborations occur between different departments within the company itself and if it is manifested to other department in terms of sharing recent experiences and knowledge. This is however an important question to ask Human Resource Managers whether this behavior is co existed in eclectic social environments. This question was also established to receive information on companies' encouragement interchanges occurring in the physical work place in order to assess the effectiveness in departments. This encouragement factor is of great importance to what extent managers regard this particular question and if this behavior is encouraged by a company.

Table 6.11 Mean values in each individual business sector.

Business sector	Mean	N
Manufacturing	2,00	3
Service	1,79	19
Retail	2,00	1
Other	2,17	6
Total	1,90	29

The results in table 6.11 illustrate that most of companies encourage employees working in project groups in order to share their experiences and knowledge extensively through departments, hence the mean value of 1.9. The results indicate that participating companies agree on that these values are important factors for companies. The participation to work in groups seems to have great importance in a company and sharing their knowledge becomes apparent in the need for a company. We have to consider the very low response rate in the survey may provide wrongful assumptions of this question. Therefore, the table below illustrates the question in connection to industry belonging. The majority of respondents are companies

belonging to the service industry and the results indicate that their answers pending between totally agree and agree with mean value of 1.79. This sector emphasizes the importance of this matter in their organizations. There are striking similarities in the response rate in this particular question, where all much agreed to this question despite industry belonging. However, this concurs with theory that different sectors realize the very importance in encouraging employees working to share their knowledge with others and nurture the creation of a knowledge sharing environment.

Table 6.12 Mean values on distribution of number of employees.

Number of employees	Mean	N
<249	2,10	10
250-499	2,00	5
750-999	2,00	1
>1000	1,69	13
Total	1,90	29

Looking at the results in Table 6.12 above indicates that companies despite their size agree and not much change is noticeable in responses between. What is rather peculiar are the results between companies lesser than 249 employees and larger than 1000 employees sharing the same views on this question. The responses acquired from large sized companies (larger than 1000 employees), is constituted by the mean value of 1.69 which is located between totally agree and agree if not closer to the latter. This indicates that organizations, despite their company size, encouraging knowledge sharing events in organizations.

Question 9: Innovation

Your company emphasizes on product/service development to constantly create new competitive advantages.

This question was conducted in order to understand how companies regard their potential to create competitive advantages either through product or service development. Importantly, this also allows us to capture the aspect on how companies acknowledge their competitive environment and the establishment of products/services to create sustainable competitive advantage. Table 6.13 indicates that product and service development is a rather vital issue for participating companies. The mean value of 1.79 shows us that this factor is perceived as equally important for every single business sector. The result becomes apparent that companies applying product/service creating tools in their industries to create sustainable competitive advantage.

Table 6.13 Mean values in each individual business sector.

Business sector	Mean	N
Manufacturing	1,67	3
Service	1,79	19
Retail	2,00	1
Other	1,83	6
Total	1,79	29

Table 6.14 provides further information on belonging to industry in connection to question 8. The mean values provided, indicate that companies, despite industry belonging, agree that it is important developing their own products or services in order to become competitive in markets they operating in.

Table 6.14 Mean values on distribution of number of employees.

Number of employees	Mean	N
<249	1,80	10
250-499	2,40	5
750-999	2,00	1
>1000	1,54	13
Total	1,79	29

This gives a good indication that majority of participants reveal strong connections exist in the development in every sector available. The mean values of each single company size have positioned themselves either as totally agree or agree only, whereas large companies (>1000) however had a mean value of 1.54 which reveals their level of development is highly sustainable than other company sizes.

A majority of participants responded either totally agree or only agree, which illuminates the awareness to create advantages, whereas the only remaining percentage of participants regarded it of lesser value or discarded its relevance. However, the majority of companies regard this being of great relevance whereas only a smaller percentage of companies claim this question of being less relevant.

Question 10

Your company has a policy to continuously educate its employees to become more efficient and valuable for the company. This can be achieved by e.g. courses, training and manuals.

This question was developed to investigate to what extent companies provide various courses, training and instruction manuals to their employees in order to becoming more efficient and therefore more valuable for the company when assessing new knowledge. By providing means to educate their employees, the company itself could achieve a competitive advantage when having educated employees. However, this question is addressing whether companies believe in these tools and the value of it.

The results acquired from question 10 show a mean value of 1.93, this indicates that companies do provide various courses; training etc. for the employees within organizations and efficiency is an important value for these to a much larger extent than it was expected. This solution provides further employee education which is seen from companies' point of view as rather crucial to involve their skills into practice to further development to occur.

Table 6.15 Mean values in each individual business sector.

Business sector	Mean	N
Manufacturing	2,00	3
Service	1,74	19
Retail	1,00	1
Other	2,67	6
Total	1,93	29

The companies belonging to the service sector have responded with a mean value of 1.74 and being service orientated businesses imply that offering various courses and training for employees are of great importance of retaining the skills every employee possess which is seen critical as competitive advantage. As service businesses are highly dependent on employee skills which results in successful performance in the workplace. Therefore it is important to keep employees involved by providing training that can beat the challenges a job presents.

Table 6.16 Mean values on distribution of number of employees.

Number of employees	Mean	N
<249	2,20	10
250-499	2,60	5
750-999	1,00	1
>1000	1,54	13
Total	1,93	29

While those companies who are categorized in the other sector, the results are closer to nor agree / nor disagree presenting that the existence of courses and training perhaps are not seen of any value to organizations. Only one single company belonging to the retail business have answered that the content of this question was highly important for that company. This single answer provides no further information and thus no general conclusion can be made from it.

The results in Table 6.16 reveal that the lower the mean value is, the more important are the factor(s) imbedded in the question. The mean value for the larger companies, who employ more than 1000, is 1.54 which indicates a lower mean value that suggests the larger the company is, the implication of training, courses and manuals occurring to a larger extent. Companies, who employ less than 249, partially agree on this question that education is important factor for these.

A majority of the participants responded this question totally agree and agree and considering the high positive response rate confirming the importance of providing training programs into organizations. Also having in mind, the response alternative “totally disagree” was the only alternative that was not chosen. The essence of question 10 is important for employees in the working environment and relationship with other to help them evolving their skills.

Sharing

Question 11

Your company gives its employees access to a wide range of communication tools such as intranet, groupware, e-mail, internet and telephone (IT-tools) for sharing their knowledge.

The mean value as presented in table 6.17 below, 1.55, highly indicates that information technology is imperative for the modern organization. This question was conducted in order to understand to what extent companies', regardless size and sector allowing their employees to use communication tools in the daily work. It was also important to emphasize that tools improve the communication in the organization between departments and employees. Utilization of intranet, groupware etc. is highly dependent on how much and often these tools are used to indicate the usage of these applications. Furthermore, our intention was to emphasize the notion of having technologies available in an organization doesn't imply that usability is going to be higher (employees are capable using these tools). The response alternatives “disagree” and “totally disagree” were the alternatives that were not chosen which elucidates higher usage frequency occurs in companies.

Table 6.17 Mean values in each individual business sector.

Business sector	Mean	N
Manufacturing	1,67	3
Service	1,53	19
Retail	3,00	1
Other	1,33	6
Total	1,55	29

When looking at the results in table 6.17 above, indicate that companies within the service sector is heavily dependent on and perhaps relying themselves to intranet, groupware etc to function and distribute knowledge through departments within organizations. The mean value of the service sector is 1.53. The participants responded between the given alternatives “totally agree” and “agree” considering its relevance playing a vital role in this matter. What is rather peculiar is that companies belonging to other industries have a mean value of 1.33 with 6 responses on that question. The value extracted from the table elucidates that the usage of communication tools are important to other industries as well.

Table 6.18 Mean values on distribution of number of employees.

Number of employees	Mean	N
<249	1,50	10
250-499	1,80	5
750-999	1,00	1
>1000	1,54	13
Total	1,55	29

The results as shown in table 6.18, all of these results are below the value of 2 which seems like every business sector have high values on this particular question. With an average mean of 1.55, communication tools are available for employees and access to those. Companies who employ less than 249, have an average rate of 1.50 strongly encouraging their employees in terms of providing them wide range of communication tools to make it easier to share the knowledge. The IT enhances

knowledge sharing to a higher level however the question only indicates the usage and the companies' ability providing these. The results also show that smaller companies provide communication tools to their employees in almost to the same extent as large companies (1.54). Indeed is this tool of great importance for companies in general sense, to use IT as a tool to a better knowledge sharing and make it available to employees.

Question 12: Social network

Your company motivates and supports employees to engage in social networks to be able to communicate with competent people, which they can acquire relevant knowledge from.

A social network is a forum consisted of groups of like-minded people that have the opportunity to discuss their thoughts. These social networks are surrounded by people who communicate through same basis of tools or technology which expands the capability of the lingual understanding and communication by talking the same language and thus not limited to a national language but in terms of usage of words.

The total mean value given for this question is 2.24, which means that companies positioned themselves on left side of the scale, where respondents tended to agree with the statement "the company motivates and supports employees to engage in social networks". Most of the companies acknowledge that motivating and supporting employees are important factors to gain an advantageous position in current business markets.

The sum of the results in table 6.19 below, reveal a total mean value for various company size categories deviate in responses acquired from respondents in connection to this question whether motivational and engaging employees into social networks are occurring. We recognize from the results extracted, that large sized companies with an employment rate of more than 1000 employees, have a lower mean value than small sized companies. The second category consistent of companies with an employment rate of 750-999 employees has adopted a higher mean value from the other remaining categories and the retrieval of single response has to be considered which may imply faulty estimation of the end results. A fundamental assumption that can be made is that companies who have a higher

employee rate emphasize more on supporting and motivating employees as a result of company interests to engage individuals into social networks. Another aspect of interest concerns companies with employment rate of 250-499 responded “nor agree/nor disagree” hence the mean value of 2.80 furthermore responses made by small sized companies were on the left scale range in which we can interpret this as a positive response rate agreeing to this question with the mean value 2.30. The reason for this development can be explained that a higher response rate was retrieved predominantly from small sized companies between 1 and 249 employees, then from companies that have between 250 and 499 employees.

Table 6.19 Mean values on distribution of number of employees.

Number of employees	Mean	N
<249	2,30	10
250-499	2,80	5
750-999	3,00	1
>1000	1,92	13
Total	2,24	29

When we are looking at table 6.20 below, we can see companies belonging to the service sector have the lowest mean value provided by 2.00, which means that they agree to this question and the retail sector had the highest value by 3.00 which indicates that the alternative agree/nor disagree was prioritized by these companies in connection to this question. Any variation in answers could not be noticeable to larger extent due to the sector belonging. The service sector had the lowest mean value and the reason for this can be that people who operate in the service sector special skills are required which they shall possess whereby this is affiliated to their customers and stress how highly important this question is for them.

The retail sector had the highest mean value of 3.00, (this section was discussed in previous paragraphs) which means that the selected group had chosen the alternative nor agree or nor disagree in relation to this question. A reasonable explanation

provided for this situation is that individuals in the retail sector do not need to develop their already existing skills level and therefore it is not necessary for them to engage in social networks. The single response retrieved belonging to the retail sector that has answered to the question and therefore no further assumptions can be made and the outcome that reflects the reality in retail companies.

Table 6.20 Mean values in each individual business sector.

Business sector	Mean	N
Manufacturing	2,23	3
Service	2,00	19
Retail	3,00	1
Other	2,83	6
Total	2,24	29

Question 13: Knowledge pool

Your company gives its employees access to “best practice” information, where they can learn from successful cases in the past.

Access to information about successful cases from past makes it possible for an employee to face different situations and define procedures for solving problems efficiently. The employee can obtain the information necessary from a knowledge pool and on how to act and solve occurring problems in different situations.

The mean value for this question is 2.07 which is perceived as agree. This indicates that most of the companies agree to the question where employees are offered access advantage to best practises. The table 6.21 below indicate that employee size is not the deciding factor for the implementation of best practices in companies. Companies who have an employee rate of 750-999 had lower mean value whereas merely one company response has been retrieved in relation to this question that has employees in the interval and therefore further conclusions are not feasible to be made. If we exclude the company in that interval, we can see that large companies have the second

lower value 1.85, which means that they agree to this statement. Companies who have a rate of 250 and 499 employees had the highest value of 2.80, which means that they have elected the alternative agree/nor disagree to this question. This result is indicated by large sized companies higher rate of employees are gradually more likely to implement best practices in their organization. The reason for this is that, large sized companies are more likely to have operated in their business area of choice for a longer time period than their equivalent smaller sized companies and another reason can be that they have more business initiatives and therefore they have to possess the level of knowledge to know what kind of operations that were successful.

Table 6.21 Mean values on distribution of number of employees.

Number of employees	Mean	N
<249	2,10	10
250-499	2,80	5
750-999	1,00	1
>1000	1,85	13
Total	2,07	29

When we are looking at table 6.22 below, we can see that the service sector had the lowest value represented by 1.74 which means that they agree to this question and the highest value was obtained by the retail sector represented by the value of 4.00 meaning that they have disagreed to the statement. The variety in the response rate is rather large when looking at section of industry belonging. If we choose not to consider the retail sector, due to the low response rate obtained from that sector the gap existing between the lower and the higher values is relatively insignificant. The industry categorized as other had the highest value of 2.67 which means that companies responded either agree or disagree in relation to this question. Prior to previous discussions companies belong to the service sector had lower mean value of 1.74 which means that they concur to elements in this question. The reason for this outcome can be that “best practices” has become an important tool in the business environment of organizations. It is important for companies to have the knowledge upon what kind of operations that was successful and also operations that was not so

successful, in order to eliminating the mistakes of future projects. The service sector is implementing “best practices” in their organization to larger extent than other companies and the reason for this can be that they must develop higher skill level than other sectors.

Table 6.22 Mean values in each individual business sector.

Business sector	Mean	N
Manufacturing	2,23	3
Service	1,74	19
Retail	4,00	1
Other	2,67	6
Total	2,07	29

Question 14: Socialization

Your company is sponsoring knowledge sharing events such as conferences and knowledge cafés where employees can interact outside the physical workplace.

When a company is offering its employees a social meeting point where business activities can be discussed in a more relaxed environment, they will receive more out of the discussion. The mean value of question is 2.59, where companies have situated themselves between agree and nor agree/nor disagree. These companies generally do not agree that this question is of any greater importance for their business operations.

In the table 6.23 below, we can see that the mean values differ accordingly to company size. The category of companies that have a rate between 750-999 employees was excluded due to the low answer rate retrieved from organization in that interval. The lowest mean value had companies that have over 1000 employees which mean that they concur with this statement. The highest rate had companies with an employee rate between 1 and 499 employees, which means that they have situated themselves to nor agree/nor disagree to question 14.

According to the results, large companies are sponsoring knowledge sharing events more than companies that have lesser than 1000 employees. The reason for this

outcome can be that larger sized companies have to capture the knowledge that exists in larger scale; considering the number of employees and because of having several departments involved in the process

Table 6.23 Mean values on distribution of number of employees.

Number of employees	Mean	N
<249	3,00	10
250-499	3,00	5
750-999	2,00	1
>1000	2,15	13
Total	2,59	29

When we are looking at table 6.24 below, we can see that the other sector had the lowest value among other existing sectors with a mean value of 2.50 which means companies situated themselves between agree and nor agree/nor disagree. The manufacturing and service sectors had the highest mean values with a result of 3.00, which means that they nor agree/nor disagree to the statement. The reason for this result can be that service and “other” industries are offering skills and expertise to their customers and therefore it is more important for those companies to sponsor knowledge sharing events to try to capture the knowledge the employees’ posses, as skills are regarded as tacit knowledge.

Table 6.24 Mean values in each individual business sector.

Business sector	Mean	N
Manufacturing	3,00	3
Service	2,53	19
retail	3,00	1
Other	2,50	6
Total	2,59	29

Question 15: Knowledge localization

Your company has profiles on employees regarding their background, skills and education (company “yellow pages”) with the purpose to make it easier to find who has the knowledge required in certain areas.

When an employee considers that there is a certain need to acquire knowledge or skill to a task specific and the individual can encounter great difficulties finding it. A database or a register contain information about skills and level of education of the employees makes it easier to know who to talk with, a so called company “yellow pages”. When looking at table 6.25 below, we can notice variance in the responses. The lowest is indicated by the number of one representing totally agree and the highest is indicated by five represented by totally disagree. The total mean value for this question is 2.55. The average company in this research has answered either between agree or nor agree/nor disagree to the statement of the usability of company yellow pages.

In table 6.25 below, we can see that companies with an employee rate of between 250 and 499 employees had the highest mean value of 3.00 which means that they have selected nor agree/nor disagree on this particular question. The lowest value had large companies with an employee rate of larger than 1000 employees. Therefore we are going to exclude the company that has between 250 and 499 employees because of the low answering frequency in this research.

The large sized companies with greater than 1000 employees are using the yellow pages more than other companies; the reason may be that knowledge is harder to locate in organizations and its size which creates difficulties in reaching to the right person who has the most value from certain knowledge attributes.

Table 6.25 Mean values on distribution of number of employees

Number of employees	Mean	N
<249	2,70	10
250-499	3,00	5
750-999	1,00	1

>1000	2,38	13
Total	2,55	29

In the table which is shown below, we can see that the retail sector has the highest mean value which is excluded by previous provided reason. We can notice that the service sector had the highest mean value of 2.63 and followed the manufacturing sector by a value of 2.00.

Table 6.26 Mean values in each individual business sector

Business sector	Mean	N
Manufacturing	2,00	3
Service	2,63	19
retail	4,00	1
Other	2,33	6
Total	2,55	29

6.2 Evaluation of hypotheses

Those factors that are previously discussed include company size and company sector. The following findings illustrate whether organizational structure of various industries had any effect on the presence of these variables and if any correlation exists between the variables, sector belonging and company size. The hypotheses will be evaluated in this upcoming chapter.

6.2.1 Summary of company sectors impact on Knowledge Management

This paragraph will discuss if any difference exists in companies belonging to various business sectors relation to the Knowledge Management elements that we extracted from theory.

For this part of the analysis our assumptions are presented. Firstly, we believe that IT-companies and consultant firms are more knowledge intensive organizations. Their markets are rapidly changing and they always have to be updated on the latest information of their markets. Secondly, the manufacturing industry acts slower

towards impact of change. Changes in the manufacturing processes are more costly and needs more preparation. This makes the manufacturing industry less dynamic. Therefore, they do not change instantaneously alongside other existing business industries. Furthermore, they do not have to be dependable on having information and knowledge just as immediate as the other sectors. Since we considered IT-companies and consultants to be in the service sector, our hypothesis is that the service sector would have a higher relation to the Knowledge Management elements and thus having a higher number of the elements present in their companies.

Assumption: The service sector has the highest correlation to the Knowledge Management elements

We can not see any statistic significance in how business sector is affecting the Knowledge Management elements. A Kruskal & Wallis test was made to test the significance between business sector and the Knowledge Management elements. Each and every element had a significance value between .121 - .743. To illustrate any statistical significance the significance value has to be below 0.05. There are two possibilities to the result of the significance value. Firstly, there might not be any correlation between business sector and the Knowledge management elements. Secondly, it could be that our sample is too small and the answers too narrow to show any statistical level of significance.

By looking at the mean values from each of the elements when divided into business sector we can confirm that there does not seem to be any large differences. Although, there are some small differences. To have an element present in a business sector, the mean values have to be below 2.5. Both the service and the manufacturing sectors have 9 elements present in their companies. The “other” sector had six elements present. A note here is that in this sector there were 3 variables that had a mean of 2.50. Since every element to be present in a company it is therefore required to be below 2.50 otherwise these elements were not accepted and therefore rejected for further notice. Nevertheless, these elements have potential to be present and then the “other” sector would also have nine elements present. Since there only was one single respondent in the retail sector we therefore do not include that sector.

The differences regarding business sectors impact on the Knowledge Management elements are:

- The service sector is the only sector where encouragement factors are present.
- The manufacturing sector are the only sector who use company yellow pages or similar to localize knowledge.

Considering our assumption on how the service sector should have the highest relation to the Knowledge Management elements we can conclude that the assumption was not correctly estimated in its entirety. The service sector had the strongest correlation with four out of twelve elements were present.

6.2.2 Summary of company size impact on Knowledge Management

Large sized companies with a rate of 1000 employees and above have additional resources to invest into the variety of Knowledge Management elements. We assume that excessive skills and knowledge exist in large sized companies, much due to the company size in terms of employee rate and therefore there are key reasons to implement Knowledge Management programme in their organizations.

Assumption: A large company is assumed to fulfil more elements than a small and medium sized company.

The questionnaire was answered by a smaller number of organizations and therefore the results extracted from the responses are not statistically significant. A Kruskal & Wallis test was completed which indicated that responses were not statistically significant; the values were between 0.170-0.793. In order for a value to classify as significant the required value must not exceed the value 0.05 and beyond.

The single company with a rate between of 750 and 999 employees is going to be excluded from the analysis due to the low response rate. We have analysed the mean values for each of the belonging Knowledge Management elements belonging to company size, we can distinguish some differences between companies on how many questions they have fulfilled, the requirement of a question to be fulfilled it has to have a mean value below 2.50; the results below this document illustrate the statements fulfilled.

Employee size	Response rate	Statements fulfilled
<249	10	8
250-499	5	5
750-999	1	11
>1000	13	11

According to the figure above, large companies fulfil more questions than any other company in that category (750-999 excluded). The reason for this outcome can be like we previously manifested in our assumptions, that large sized companies have extensive resources to invest on Knowledge Management elements and that they possess skills and knowledge to a certain extent by company size. They are required to implement these Knowledge Management elements if they want to nourish the already existing knowledge in the company.

The small sized companies with less than 250 employees have fulfilled eight statements. If the response rate the category of companies with 250 and 499 employees were higher in this research, we assume that they would have more statements fulfilled even more than companies that have less than 250 employees.

The conclusion we can draw from this, is that there seems to be an insignificant connection between company size and Knowledge Management elements even though we can not prove it statistically.

The question that none of the company sizes did “not agree” to, except the category 750-999 with only one answer, was question number five; *Your company has procedures to include and involve all employees in the decision making process of the business strategy.*

Conclusively, our assumptions seemed to be correct. We cannot prove it statistically, but interpreting the mean values show us a tendency that company size impact Knowledge Management. With a higher response rate, we believe that we could have proved it statistically.

6.2.3 Summary of Knowledge Management elements

Referring to previous discussions in the dissertation, Knowledge Management is recognized as a vital area for a great majority of companies (Call, 2005). Still, as we mentioned in our problem discussion, as many as 70 % of Knowledge Management projects fail. There are two major field possibilities on why countless projects fail. Firstly, the most likely explanation is that existing theories are not reviewed thoroughly or companies do not recognize the benefits. This would mean that there is not adequate amount of knowledge about how to manage knowledge, which means that companies are not capable of exercising Knowledge Management. Secondly, it could be that theory is just not applicable in reality. It is a rather theoretical field which is hard to implement and the reality of Knowledge Management and its components looks diverse.

One could assume that a majority of Knowledge Management elements would be present in the companies. Since majority of companies consider Knowledge Management important, there should be a relation between reality and theory. After conducting the survey, we can confirm the fact that the components of Knowledge Management, as it is described in theory, are present in the companies. As we can see in the table below, nine out of the twelve elements have a mean value between 1.50 and 2.50. In our response scale this is regarded as agree represented by a value of 2.00, since a mean value above than 2.49 is considered closer to “Nor agree/Nor disagree” with a value of 3.00.

The element which had low presence in companies is individual freedom with a mean value of 2.93, which is regarded as disagree. We investigated this by asking about employee’s involvement in the business strategy. One reason why this element is least present could be that the validity of the research conducted and the means of investigation lacked sufficient credibility. From the perspective of the researchers, found employees feel they are having an impact on the business strategy they will be more connected to the company. There might exist other ways for a company to build a trusted and compassionate environment for company employees. To involve everyone in the decision making process can be time and resource consuming for a company. Furthermore, it is not definite that all employees’ posses’ pertinent knowledge to make a relevant contribution or even the will of contribution into the business strategy may be deficient. These factors could have contributed a weaker

relation evolving with the element than it is in reality. Even though it can be that companies do not allow or enhance people to provide ideas and opinions. The companies in our sample are stricter and having cultures that tie down everyone in their work role. Then we can confirm the existence of the barriers previously mentioned in the theoretical chapter, where a culture could thwart knowledge management. There were two other elements remaining which were not acknowledged. Firstly, socialization was captured by asking whether companies were sponsoring knowledge events in their organizations. Knowledge events could be accomplished by organizing knowledge cafes and conferences. It was a astonishing that this element was not present. An explanation can be that the respondents assumed that their companies needed to sponsor knowledge cafes to be able to agree. Conferences seem to be ordinary phenomena, when talking to people in the business world. Secondly, the group of element external knowledge acquisition was rejected and not present in the companies. Companies prefer solving their problems and knowledge need in-house. It can be expensive to acquire external help in the long-run. When a company reaches outside the company for help, it might be for a very short time. This will lead to that the respondents do not feel that the company generally use external help and there for not agree.

We found the strongest relation in the element “IT technology”, which had a mean of 1.55. A mean below 1.50 would mean that is more close to “Totally Agree” (1.00) but since the mean is just over 1.50 we have to consider this elements presence as “Agree”(2.00). As we entered the information age, computers and IT is a very common concept today. One would expect that every company give its employees access to IT-tools. A company would not even survive if they did not provide IT-tools to their employees. Therefore it is not a surprise that this element have the strongest correlation. The element “IT-technology” is also strongly connected to a knowledge management barrier, the bar the technological level.

6.3. Knowledge enhancing

To have the weakest mean “Individual freedom” and the strongest mean “IT-technology” closely connected to barriers (Krogh et al. 2000) opens an interesting possibility about the field of Knowledge Management. Earlier in the dissertation, we discussed the question if knowledge even can be managed. If not, the field

Knowledge Management as it is seen by many does not exist. Instead we offered the possibility that knowledge management is about creating opportunities for people to learn and share their knowledge. A term like “Knowledge enhancing” would perhaps be the more correct term of knowledge management. Knowledge Management is perhaps not about managing knowledge but instead trying to overcome barriers to successful use of knowledge. When a company successfully has overcome a barrier it is no longer a problem, which would result in a low mean for the element that relates to the barrier. Further, companies which have not overcome the barrier, face a lot of problems with the element that relates to the barrier, which would result in a high mean. Some authors have argued for that a lot of processes concerning Knowledge management exist in the company even without a focus on Knowledge Management. Further, elements connected to a barrier should be one of the highest or lowest mean. The rest of the elements should have mean which we can consider “Agree” and accept its presence in the company.

CHAPTER 7 Conclusion

7.1. Summary of the dissertation

Knowledge is a key resource in today's market. Many researchers argue that it is the key resource to create a competitive advantage. Still, it differs itself from ordinary resources. Knowledge cannot be quantified and counted to see how much knowledge a company contains. Also, companies cannot have totally control over what kind of knowledge that will occur when trying to extract it from employees. Knowledge Management is the field which presents a way to manage the valuable resource of knowledge. By implement processes and actions in a company, it will obtain a control over the knowledge in the company. In our dissertation, we present different definitions of Knowledge Management. By investigating the components of these definitions, we see that different authors have different views on what Knowledge Management really is in theory. When reviewing theory, one could question the validity of the word Management in Knowledge Management. What theory is mention as management is often more about enhancing. By looking at the element we extracted from theory, this becomes even clearer. Neither of the element have an outcome that is 100 % predictable. Theory emphasize on the tacit side of knowledge, which exist in peoples mind. This side of knowledge cannot be forced or measured. Different people learn in different ways. When implementing Knowledge Management, a company creates opportunities for people to learn and share their knowledge. Perhaps the field of Knowledge Management should be re-defined.

The purpose of our dissertation is to investigate if theoretical knowledge management exists in companies. The highest relations to companies were found in the element "IT-technology". Companies today are offering their employees access to technology, which further are making it easier to share knowledge throughout the company. The weakest relation was found in element "Individual freedom". This element was captured by asking about the involvement in the business strategy. Our research shows that 9 out of 12 elements were present in the companies. There was not found any large variance between different types of companies. Theoretical Knowledge Management can be found in all types of company regardless of type. We draw the conclusion that theoretical Knowledge Management exist in companies. Still, a majority of all knowledge management projects fail. So if theory is present in

companies but still the failure rate is so high, one would assume that theory is not perfect. It shows the difficulty of controlling knowledge and the outcomes Knowledge Management.

7.2. Practical implications

Our dissertation can give companies information about knowledge management. To see what theory identify as Knowledge Management and what they should focus on regarding Knowledge Management. Further, a company can identify factors that need to be considered before implementation. The result of survey presents the companies' relation to Knowledge Elements. We found elements that are not present in companies but still, according to theory, they are important. This is a warning signal to companies, presenting areas in Knowledge Management that is generally emphasized and needs attention.

7.3. Future research

For a possible future research, conducting a large scale research would be interesting approach that focuses on several elements associated with Knowledge Management. Since the sample was small, we cannot statistically confirm that different company characteristics have an impact on Knowledge Management elements. A survey with a higher response rate could possibly show the significance of responses received.

Our research is based on elements extracted from theory. We investigated the companies' relation to these elements. It would be interesting to investigate what companies do focus on regarding Knowledge Management and then compare it to what theory say is Knowledge Management.

One of the main hypotheses could not be investigated much due to the sample size of the research conducted, and thus discarded from the analysis. Although discarded, we believe hypothesis number three: ... could be further investigated in a large scale research approach.

We believe the elements extracted from theory were found sufficient to explain Knowledge Management and appropriate examination of the field. The elements created possibilities to understand the field; however the study had biases imbedded in the questions which improvement is needed. For a plausible future research,

including several elements associated with Knowledge Management would enhance our understanding of the field.

Appendices

Appendix A. Cover letter

Dear Sir or Madam,

We are three students studying at Kristianstad University in Sweden, currently writing our bachelor dissertation in Business Administration about knowledge management in companies. The purpose of our dissertation is to identify and analyze variables having great importance in implementation of knowledge management strategy. Knowledge management refers to all activities in a company with the aim to create, document and store employees knowledge, experience in manuals, databases or workstations in order to allow other people access this information and applying this knowledge in daily operations. We are therefore conducting a survey to capture the aforementioned elements which are of great importance for our research. Your expertise and experience in the field of knowledge management in the company you are working for are greatly sought for the research we are conducting.

Your participation would be of great value for our research project. We are asking you to complete an on-line survey that should take a couple of minutes of your time. The survey will only take a few minutes to respond and your answers will be treated with anonymity as well as the name of the company you are working for and the respondent will not be stated in our dissertation. We can ensure that the information acquired from participants and company is anonymous. The on-line survey does not involve participant identification and no other risks involved in the participation of this study.

In response for your participation we would like therefore to offer a summary of our findings and if you are interested please send us an e-mail in which a document will be sent. If you have any further questions or need additional information please feel free to write to one of the researchers: Mustafa.mehmed0001@stud.hkr.se.

To access the survey, please click on the site as provided below or copy the actual website into the browser to access. If knowledge management is not your area of expertise please forward this letter either to a human resource manager or to those who have similar job content in the company.

-----LINK-----

Thank you in advance,

Yours sincerely

Mustafa Mehmed, Martin Werner and Philip Centrén

Appendix B. the questionnaire

The questionnaire

The following three questions are related to basic data of corporations

Q1: Which business sector does your company belong to?

- A. Manufacturing
- B. Service
- C. Agricultural
- D. Retail
- E. Other

Q2: How many people are employed in the company?

1. <249 2. 250-499 3. 500-749 4. 750-999 5. >1000

Q3: Please select the country where your company is located (Various alternatives were available for participants)

The following questions are related to Knowledge Management elements.

Q4: Your Company emphasizes the importance of mentorship programs for entrants, professional training and coaching.

1. Totally agree 2. Agree 3. Nor agree/Nor disagree 4. Disagree
5. Totally disagree

Q5: Your company has procedures to include and involve all employees in the decision making process of the business strategy.

1. Totally agree 2. Agree 3. Nor agree/Nor disagree 4. Disagree
5. Totally disagree

Q6: Our employees who are involved in activities improving the company are rewarded for their contribution in terms of different incentives (e.g. bonus rewards, motivation factor for individual development etc.) which foster further participation in such activities.

1. Totally agree 2. Agree 3. Nor agree/Nor disagree 4. Disagree
5. Totally disagree

Q7: Your Company hires experts and/or consultants externally for guiding or monitoring certain business operations.

1. Totally agree 2. Agree 3. Nor agree/Nor disagree 4. Disagree
5. otally disagree

Q8: Your Company encourages employees from different departments to work in groups with projects etc. where they can share each other's experiences and knowledge freely.

1. Totally agree 2. Agree 3. Nor agree/Nor disagree 4. Disagree
5. Totally disagree

Q9: Your Company emphasizes on product/service development to constantly create new competitive advantages.

1. Totally agree 2. Agree 3. Nor agree/Nor disagree 4. Disagree
5. Totally disagree

Q10: Your Company has a policy to continuously educate its employees to be more efficient and valuable for the company. This can be achieved by e.g. courses, training and manuals.

1. Totally agree 2. Agree 3. Nor agree/Nor disagree 4. Disagree
5. Totally disagree

Q11: Your Company gives its employees access to a wide range of communication tools such as intranet, groupware, e-mail, internet and telephone for sharing their knowledge.

1. Totally agree 2. Agree 3. Nor agree/Nor disagree 4. Disagree
5. Totally disagree

Q12: Your Company motivates and supports employees to engage in social networks to be able to communicate with competent people, which they can acquire relevant knowledge from.

1. Totally agree 2. Agree 3. Nor agree/Nor disagree 4. Disagree
5. Totally disagree

Q13: Your company gives its employees access to "best practice" information where they can learn from successful cases in the past.

1. Totally agree 2. Agree 3. Nor agree/Nor disagree 4. Disagree
5. Totally disagree

Q14: Your Company is sponsoring knowledge sharing events such as conferences and knowledge cafés, where employees can interact outside the physical workplace.

1. Totally agree 2. Agree 3. Nor agree/Nor disagree 4. Disagree
5. Totally disagree

Q15: Your Company has profiles on employees regarding their background, skills and education (company "Yellow pages") with the purpose to make it easier to find who has the knowledge required in a certain area.

1. Totally agree 2. Agree 3. Nor agree/Nor disagree 4. Disagree
5. Totally disagree

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