Knowledge sharing in a multi-cultural setting

Abstract

National culture has a direct and indirect influence on both organizational culture and knowledge sharing. Previous frameworks are mostly limited to either organizational or national culture´s influence. This study proposes a framework encompassing both these culture's impact on knowledge sharing and its related factors. The research is based on interviews conducted in a Danish multinational company with a diverse set of employees.

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Introduction

Neas Energy A/S has been acquired by a British firm, Centrica Energy Limited in 2016, and since it has been integrated into the Centrica group, changing its name and adopting processes from its parent company. At first, there was limited friction due to this, however as more changes have been made and other problems arose, people started leaving the company in greater numbers in 2019 and especially in 2020 when a new competitor appeared and offered better deals to people. The size of the firm is around 400 employees, and during the first half of 2020, around 80 people left. This means people from all business areas with a lot of experience and expertise, even including most of the top management.

This leads to having to hire a lot of new employees, who come from different backgrounds, both from different nations and different companies. One of the strengths stated by management is the diversity of the company. There are employees from over 30 different countries, including from other continents. This means people with different values and cultures, which means they all have a different view and attitude towards knowledge management. As the core function of the business is energy trading, most other departments are focused on supplementing the trading functions, e.g. with analysis, infrastructure etc., so sharing knowledge between these departments is impervious. This means that there should be a strong culture of knowledge sharing within the organization.

Knowledge has always been crucial to keeping a competitive advantage. The past couple of decades it attracted more focus due to business structures and processes becoming more complex. Knowledge management is a systematic way to utilize existing knowledge, which means knowledge is now being treated as a resource and its use is being explained and examined scientifically (Keller and Kastrup, 2009). It has gained reputation as a practical strategic initiative and it is considered as a key to creating opportunities for companies to improve their own processes and methods (North, 2005). This also relates to identifying core competencies in the firm and retaining them.

Many companies successfully identify the importance of knowledge management and implement methods to manage it, usually with a focus on information technology and a top-to-bottom approach. This leads to a low level of acceptance of these tools in the target group, making it less effective (Richter, 2008).

Researchers realised that there is a need for a structured knowledge management strategy, which made them describe methods and tools that can elicit knowledge management and organise it. Despite their efforts, it is still considered by some as an academic discipline and thus it only has a limited impact on businesses. It is more of a "nice to have" part of the strategy rather than a core function. And in cases where it was part of the business plan, it often failed due to being only a corporate mandate, and therefore it was removed from the reality of the target community. They were often focused on rigid techniques and did not place relevance on individuals´ skills and competencies. These ignored the human impacts and potential resistance of the utilisation on the target group (Friedman & Barkai, 2008).

Research problem

The issues of knowledge sharing are prevalent in two situations: people leaving and people joining the organization. In this situation, people need to be able to join and fit in their new teams and learn their processes and how they operate. And when people leave, there should be a system which gathers and retains their knowledge and can teach new employees. As it is a core part of operations to share knowledge, it should be examined how people adapt to the knowledge sharing culture of the organization, from their previous views, which could stem from their national culture of their previous experience from another organization. Their original views – when presented in a new corporate culture – might influence how they adapt and view knowledge sharing. Therefore, it should be examined how people´s national culture and the organizational culture of Centrica Energy Trading A/S relates to knowledge sharing. The proposed research question is:

How does national and organizational culture impact knowledge sharing?

As sub-questions, it should be investigated **what are the factors influencing knowledge sharing?**

After these factors are discovered it should be investigated **how does the organizational culture of Centrica Energy Trading A/S incorporate these factors?**

When these are made clear, it can be seen how people with different national backgrounds view these factors and how they align themselves with these values.

Justification

There have been many articles which study the impact of national and organizational culture on knowledge sharing. However, there are limited studies which contrast the impact both these

cultures simultaneously have on knowledge sharing in a company. A company´s culture usually aligns with its host countries' national culture. But as globalization grows, more firms are becoming international, both in the sense of being present in multiple countries and having people from multiple countries in the same office.

In practice, Centrica Energy Trading A/S, the company chosen for this research does not produce or consume any tangible resources. Its business is to optimize power flow and prices in countries that it has access to and to optimize the income of its customers, mainly power plants. Their activities are limited to Europe. In this optimization process they use arbitrages, which are price differences, to make money. As their main resource is the knowledge of employees trading the markets and the employees who support them – as well as their IT infrastructure – it is imperative that they utilize this knowledge to the full extent to outperform competitors. This challenge has been increased recently, as the Covid-19 pandemic forced people to work remotely, and a competitor started taking many employees from the firm. In a previous research with this firm, people stated that not being able to physically be in the same place as their co-workers, everyday chats where information was transferred decreased and thus knowledge was not shared effectively. The other issue is simply an increased employee turnover, where people had left the company with short notice, and many people had to be hired, who might not share the same values as the current employees. As an example, new hires from southern Europe were observed to be more ashamed when they made mistakes and therefore were not as open to admitting and therefore learning from them. This contrasts with another employee from the same country who has been with the company for several years and demonstrated a completely opposite attitude, despite admittedly starting out the same way.

Scope and limitations

This project is aimed at interpersonal relations and processes. This is due to the firm not having a clearly outlined policy regarding knowledge sharing and management. The sub-group being researched will be traders and trade support, as they are at the centre of operations, and have the most turnover and day-to-day interactions with others. They are also the most diverse team in the company, and the most reliant on effective knowledge sharing, both within their team and with other departments who support them with tools and information. In a sense, they are the core function of the business, around which everything else is built.

Definitions

These are the definitions of terms used in this paper, to make the writers views clear to the reader. These terms will be expanded upon in the literature review chapter.

What is knowledge management? Different organisations and individuals define it in different ways. As a first step, the terms "knowledge" and "management" should be defined. Using these basic terms can lead to misunderstandings which alter the discussion about knowledge management (Keller and Kastrup, 2009). Therefore, it is crucial to clearly define these terms first, even though they seem simple.

Knowledge management as a term is hard to conceptualise as it has many different meanings. The goal of knowledge-oriented management is to generate and retain knowledge and utilise it as a competitive advantage, which can be measured in the success of the business (North, 2005). In this way, the fundamental terms can be taken from North´s "knowledge step", which is a model that tries to show all elements in their context. Keller and Kastrup interpret this model as comprised of several building blocks that make up a process. In this, the smallest parts are symbols which – through defined rules – become data. Data becomes information when they are linked with relation to something. This means information is data represented in a context, which can be used for decisions (North 2005, p. 32.).

Knowledge in this context originates from processing information with awareness. This interpretation is affected by individual experiences. Probst et al. (2006, p. 22.) describe knowledge as: *"Knowledge is the entirety of proficiency and skills that individuals use for problem-solving. That means all theoretical skills, as well as rules on how to act. Knowledge uses data and information but is always connected to individuals. Knowledge is developed from individuals and represents the expectations about cause-and-effect relations."* It should be considered that knowledge is a combination of tacit and explicit knowledge. Skills, competences, experiences are examples of tacit knowledge, documents, processes, routines are considered explicit knowledge.

The next step from simple knowledge is organizational knowledge. The chosen definition for this comes from the Carnegie Bosch Institute: *"Knowledge is the entirety of proficiency and skills that individuals use for problem-solving. That means all theoretical skills, as well as rules on how to act. Knowledge uses data and information but is always connected to individuals. Knowledge is developed from individuals and represents the expectations about cause-and-effect relations."*

As can be seen, North´s model is focused on the human elements of the process. Information needs to be interpreted for it to become knowledge and that is how knowledge is created (Keller and Kastrup, 2009). The value of knowledge is shown to the company when it reaches the final step and becomes competitiveness. It happens when individuals can translate their knowledge into practical steps towards gaining knowledge and skills (North, 2005).

Knowledge transfer can be defined as "*Knowledge transfer is about identifying (accessible) knowledge that already exists, acquiring it and subsequently applying this knowledge to develop new ideas or enhance the existing ideas to make a process/action faster, better or safer than they would have otherwise been. So, basically knowledge transfer is not only about exploiting accessible resources, i.e. knowledge, but also about how to acquire and absorb it well to make things more efficient and effective.*" (Liyanage et al., 2009, p.122). This means that knowledge transfer is a one-way process. It should be considered from both the view of the source and the receivers´ experience. It is a mechanical process whereas knowledge is taken from one place and formally implemented in another way.

Knowledge sharing is differentiated from knowledge transfer in the sense that it is done consciously and unconsciously in a two-way process. A definition can be found in Azudin et. Al., 2009 as follows: "*the process by which individuals collectively and iteratively refine a thought, an idea or a suggestion in the light of experience*". Therefore, it is part of the knowledge transfer process. For this paper, it is comprised of the movement of knowledge from sharer to receiver and also the feedback from the receiver. Therefore, the backwards movement is also included in the definition.

Organizational culture is described in the literature in many ways, but for this paper, the definition will be Myatt´s (2014): '*Culture is a construct that must be embedded into the very fabric of the corporate identity. It must be part of the ethos that describes why the enterprise exists, what and who it values, and how it will behave. But it must also be much more than that— it must embody the pulse of the business—it must be a living, breathing heartbeat that leaders, employees, customers, and other stakeholders can visibly feel. More important, culture must be something they want to identify with and be a part of. Culture is the sum of all organizational parts.*

In the same spirit, national culture is also defined as behavioral patterns which are developed over time and passed on through social interactions.

Structure outline

Chapter 1 – Introduction: A description of the research problem and its justification, and a description of the case company and its current situation. Also, definitions of the most commonly used phrases in this paper.

Chapter 2 – Methodology: An explanation of what perspective the author takes in this project, as well as the methods used for collecting the data, its pros and cons. Finally, how the collected data will be analyzed.

Chapter 3 – Theoretical framework: A summary of existing literature, starting with an explanation of knowledge and differentiating between different types of knowledge management, with an emphasis on knowledge sharing, and its influencing factors. Then an explanation of national and organizational culture, and their implications on individuals. In the end a summary of the concepts that will be used.

Chapter 4 – Empirical findings: The organizational culture will be described based on the findings of the participatory observations. Then the themes of the interviews will be outlined and presented and analyzed based on the theoretical framework.

Chapter 5 – Discussion: The implications of the analysis will be discussed, and theories might be established about the interaction of national and organizational culture on knowledge sharing. Then a conclusion will be presented.

Methodology

Philosophy of science

Something that only one person knows is called tacit knowledge. Communicating it to the rest of the organization is a complex issue because it is rooted in individual experiences and involves personal perspectives and values, such as which part of a process is the most important according to a person. Explicit knowledge is which can be shared, coded and stored in certain ways.

Ontology

The main purpose of ontology is to say "*whether social entities can and should be considered objective entities that have a reality external to social actors, or whether they can and should be considered social constructions build up from the perceptions and actions of social actors*" (Bryman & Bell, 2011, p. 20). Companies can be considered social entities made up of the

perceptions of their employees - i.e. their social actors. These connections can be seen in the organization giving tasks to employees and rewarding them for completing them.

Based on this we can consider reality as a social construct which is dynamic and continuously changing. This is called constructivism (Bryman & Bell, 2011). Therefore, knowledge sharing and knowledge, in general, is dependent on how people perceive it. Asking people to define it would probably yield a wide array of definitions and insights, and so it should be an aim to understand how people understand and perceive knowledge sharing. From this, we can possibly see how a knowledge sharing policy impacts people´s motivation to share knowledge consciously or possibly hinders it. Knowledge sharing can be considered a phenomenon that does not exist on its own, only through people´s interactions, and thus it will also be impacted when researchers try to understand it, meaning they cannot remain fully neutral in the process (Bryman & Bell, 2011). For this thesis, taking a constructivist standpoint supposes that the focus will be on trying to interpret people´s perceptions to understand the phenomenon from their point of view.

Epistemology

The question epistemology is meant to answer is whether the "*social world can and should be studied according to the same principles, procedure, and ethos as the natural sciences*" (Bryman & Bell, 2011, p. 15). Since previously it was decided that employees are social actors within a firm, it should be understood how they interpret reality and give meaning to situations. To understand what might motivate or block people from participating in a knowledge sharing policy, first, it should be understood how they perceive it and what influences them.

This view is called interpretivism, which states that there is a difference between researching objects and humans. Humans are dependent on their perceptions and therefore require different research approaches than those used in natural sciences (Bryman & Bell, 2011). Business and management research cases are considered highly complex, since there are several different circumstances for each individual, who come together in a certain point in time of the research, and therefore it is appropriate to use this view. The researchers have to understand motivations and intentions behind actions and more importantly to interpret these in a meaningful way (Saunders et al. 2012). It is also a consideration that all data will be interpreted by the researcher who also has different filters based on their background and understanding, and these will influence the conclusions. Therefore, the relationship between the researcher and the subjects being investigated should be explained and considered.

Research approach

This is an exploratory research. This should be used when the researcher is trying to look for new information or bring new insights into a phenomenon (Yin, 2009). This starts with gathering existing literature so the researcher can become familiar with what is already known about the topic and understand it. Also, it helps recognize what is new in the topic being investigated, so new knowledge can be produced instead of reiterating already existing knowledge.

First, a theoretical framework should be established, which explains the importance of knowledge management from the company´s perspective and lists the factors which have been already identified from the individual´s perspective that impact knowledge sharing.

Whether this should be done in an inductive or deductive way, Bryman & Bell describe that qualitative research usually entails an inductive strategy, and "*not only does much qualitative research not generate theory, but also theory is often used as a background to qualitative investigations*" (Bryman & Bell, 2011, p. 13-14). This is also the case here, where research question and also the interview questions and design are based on the theories explained in the theoretical framework. So, it can be said that the theoretical framework described is the perspective from which the author will take on the research topic. So, besides helping in guiding information collection and analysis, it is also made it possible to define some presumptions on what factors influence knowledge sharing and knowledge sharing policies. The goal is to develop a theory based on the findings; therefore, it is considered an inductive approach.

Case study

According to Yin (2009) case studies are preferred when the investigator has little control over events and happenings and the focus is on a real-time event within a real-life context and the research question is phrased as "How" or "Why". In his view that there are many variables of interest, and such there is a need for data points to converge in a triangular fashion. This type of research allows the retention of the meaning of real-life events, in this case, changes and adaptation in organizational culture, which is a continuous everyday process. The research question is very important as it guides the researcher through the study. It should be prepared by doing a literature review, to be able to pose more insightful questions based on existing literature.

Case studies can be hard to generalize since they are meant to be understood in their own temporary context, but theories can be still drawn from them as a means to generalize.

In this study, the aim is to observe and learn how and why people view knowledge sharing differently based on their national cultures, which is a real-time, real-life phenomenon dependent on its context which is the firm and its many new employees.

Research design

A research design is the blueprint of research, the logical sequence connecting the research question to its conclusions. It can be either implicit or explicit, but all research has it. Making it explicit helps to see what to research, what data is important and relevant, how to collect it and how to analyse it (Philliber, Schwab, & Samsloss, 1980). It constitutes of five parts: the research question, proposition, unit of analysis, linking data and proposition, criteria for interpretation.

As this is an exploratory research which intends to gather information, qualitative methods will be used.

Qualitative data is data which is not numerical or information which is not quantified. It is also more complex. "*Qualitative data are associated with such concepts and are characterized by their richness and fullness based on your opportunity to explore a subject in as real a manner as is possible.*" (Saunders et al., 2009, p. 482). This means that qualitative data and qualitative research are richer and more complex and need to be summarized and restructured to be analyzable. It is also important that all analysis of this data is based on the interpretation of it, therefore the researcher needs to pay attention to the individual´s perceptions and integrate them into the analysis, so a meaningful conclusion can be made. According to Morse (1994) researchers need to go through several steps in qualitative research. First, they need to gather all previous relevant literature, to comprehend the topic and to know what new knowledge is. The second step is to collect the data and synthesize it to outline some patterns of the data and behaviors of the subjects. The third step is theorizing, where conclusions are drawn from the data, patterns and topics are explained and made into schemes. The last step is recognizing, where theories are drawn from said schemes. This thesis will follow these steps. The following chapter will describe the theoretical framework, after which the data collected will be shown and analyzed. Then conclusions will be drawn from comparing the result of the analysis with the literature.

This qualitative research will be done in a specific contest, namely within a single company. This will allow focusing on individual interactions and what influences them. While case studies, such as this have their limitations, it is chosen as this allows to see the connection of the research with reality, and whether the practical application of this research his doable.

Data collection

The chosen data collection method is semi-structured interviews in person with an aim to understand how employees perceive knowledge sharing. It will be supplemented by participatory observation, as I work within the company, and thus have an insight into how people interact daily versus what they say in the interviews. For the interviews, a list of themes is prepared to be used as a guide.

Saunders et al. (2012) describe that in semi-structured interviews, researchers have a prepared list of themes and questions. The formulation and order of these questions give context and flow to the interviews. As the aim is to understand the opinions of the subjects, there should be some room to expand on their responses, therefore a semi-structured interview is the most appropriate (Saunders et al., 2012, p.378). It also has the benefit of having a personal contact with the participants, therefore they might be willing and able to give more in-depth answers.

The theoretical assumptions outlined beforehand will influence the interpretation of the data, which means the framework provided, the descriptions and definitions such as knowledge management, knowledge sharing etc. are important in the interview process since they can be considered the viewpoint of the researcher.

Participatory observation

The goal of participatory observation in this study is first to establish how the employees view the organizational culture and knowledge sharing in the firm. Through casual talks, it can be confirmed whether they feel like pre-defined factors are present in the current culture or not. Therefore, the aim is to ask people about the degree of the presence of the factors defined in the literature review chapter. It will be done through the whole company to see the broad picture and see whether there are differences between departments. It will also support answers through personally seeing how people act and interact when they do not know they are being observed. As I am a part of the company, there is potential for bias and/or lack of objectivity, which should be considered. There are also moral and ethical questions, as this might be deceiving for people being observed without them knowing about it.

During and after the interviews, it will be used to confirm whether the opinions of individuals are shared by others (if necessary).

Selection of interviewees

As the aim is to investigate the culture and interpersonal relations in the trading teams, people will be chosen from both the Trading department and the Trade support department, as to see knowledge sharing in both within a team and between two closely related teams. The subjects will all have different national backgrounds, and there should be at least one Danish person as a control group. The different nationalities selected will be Hungarian, Slovakian, Estonian, Icelandic and Danish. The interviews will be anonymous so that participants might be more honest in their answers.

Developing the interview guide

As all subject are colleagues of the researcher, the introduction of the guideline does not need to be formal. However, the questions themselves should be formal in order to gain credibility with the subjects, as they should feel that they are part of a serious research. The questions should be made in a neutral way as to not influence the answers from the participants (Saunders et al, 2012). As it is an international company, there are people from many different countries, however, all people speak English well, so language barriers should not be a problem. The questions should be in a logical order and cover the areas that should be explored.

The first questions aim at introducing subjects to the topic as it should not be assumed that they are all familiar with the terms relating to the topic. It should also establish what this topic can be practically used for, so they can understand what they participate in.

After they are familiar with the terminology, their views on it should be explored, as per the interpretivist viewpoint. As it is made of different terms like knowledge management, sharing, transfer, barriers and motivators, it was broken down into sub-questions. It was also an aim to make these into open-ended questions, so subjects could expand on their answers in a way they want to, which stems from their own perceptions. Grounding these questions with practical examples, such as relating it to their daily work and rituals also made the subjects more focused and interested in answering.

Since it was stated that employees are considered as social actors, it can be also assumed that interpersonal relationships between employees and managers are an influencing factor in knowledge sharing. Sage and Small (2005/2006) and Wickramasinghe and Widyaratne (2012) argue that the role of the managers and their relationships with their subordinates influence

how an employee views their own role. As the group of respondents consists of both managers and employees, this is relevant as the managers are middle managers, meaning they also have someone to report to, so it is assumed they are also influenced by this. It can also be assumed that this group has a dynamic which can influence sharing. Sage and Small (2005/2006) also argue that the culture of an organization also influences knowledge sharing to a high degree. Therefore, it should be asked whether employees feel that there is such a culture in place to facilitate this.

There will be a question on how they view their own national culture, and what are the biggest contrasts they have with the organization´s culture. This will also be grounded in practical examples, such as barriers which they needed to overcome, or norms that seemed strange to them at first. These will be based on the influencing factors found in the theoretical framework.

Then it will be explored how they adapted to these changes. These might uncover new information, as adapting to a new culture is part of that culture – as adopting a culture happens through knowledge sharing.

Validity and reliability

A case study's quality is measured in four measurements: construct validity, internal validity, external validity and reliability. Construct validity comes from data collection methods, the number of sources used and establishing a chain of evidence. Internal validity measures whether there were alternative causes for observations considered. External validity is based on the research design and whether the study can be generalized. Reliability measures whether the same study would produce the same results if it were done in a different place or time.

As evidence was drawn to support the findings for the research question from multiple sources, the construct validity of this research should be quite high.

The internal validity, which is whether alternative causes were considered and explored, can be questionable, as people´s attitude towards different factors described could be a result of their personalities and not their culture, which was not explored during interviews.

External validity, which shows if the findings can be generalized is hard to say. Since this is a single company case study in a relatively short period, it might not be generalizable to other companies with different cultures or business models. However meaningful information and possible synergies can be drawn from the findings, which can help other firms or researchers.

Reliability is the measure of the research design in terms of whether it would produce the same results in a different time and space? As culture is constantly changing, and employees come and leave, they might not have the same values and views in the future or the past. Also, as people in different cultures have different values, they might place importance on certain actors differently. However, while the specifics of each factor and their connections might differ in a different time or space, the factors themselves are most likely constant as they can be found in other articles from different times and spaces.

Theoretical framework

This chapter will contain a review of existing literature in the knowledge management, knowledge sharing fields. As a starting point, the resource-based view of knowledge will be used, which means that knowledge is considered a resource for firms. As there are tangible and intangible resources it is assumed that knowledge is intangible.

Strategic management and strategic resource

Strategic management is explained by Harrison & St. John (2011), as a way that helps companies learn from their internal and external environments and thus adapt to them, by choosing new directions based on their goals and their dynamic environment, as well as help them execute appropriate strategies to achieve them. An appropriate knowledge management strategy is considered a way to build competitive advantages for the long-term and thus differentiate from competitors (Mahdi et.al, 2011). They mention two factors of knowledge management that give sustainable advantage: it can enhance the knowledge transformation from tacit to explicit, and from individual to organizational. The second is that knowledge is dynamic and has its own life cycle, therefore it is important to keep it up to date.

From a strategic perspective, knowledge is considered a strategic resource, crucial to competitiveness (Mahdi et.al, 2011). Harrison & St. John (2011) proposed the idea of a resource-based view of companies concerning strategic management. It is assumed that the manager's task is to acquire and manage resources to achieve competitive advantages. "*If a resource that a firm possesses has value in allowing a firm to take advantage of opportunities or neutralize threats, if only a small number of firms process it, if the organization is aware of the value of the resource and is taking advantage of it, and if it is difficult to imitate, either by direct imitation or substitution for another resource, then it may lead to sustainable competitive advantage.*" (Harrison & St. John, 2010, p.11). This is based on the assumption that different companies have different resources. These are categorized as financial, physical, human,

organizational – also tangible and intangible. These should be valuable, rare, imperfectly imitable and non-substitutable. These are used by Greco et.al. (2013), who introduces the theory of Value Drivers in strategic management. They also divide value drivers into tangible and intangible. Tangible are infrastructure and equipment, etc. while intangible are relationships and knowledge. Relationships describe interactions within the company, where participants are not necessarily on the same level of the hierarchy, and also relationships with external stakeholders.

Knowledge deals with tacit and explicit knowledge, which will be now explained, in order to be able to proceed to knowledge management and transfer. There is a differentiation between knowledge information and data, which is necessary to understand.

Knowledge

Most definitions of knowledge, according to critics, does not differentiate between data and information.

Data is described as unorganized and static. It does not have motivation or experiences behind it, just observable facts. (Awad & Ghaziri, 2001).

They describe information as a collection of data, that is used to make decisions. It is made from processing data into facts and figures. It has relations and meanings which can be understood, which means it already has been analyzed and reorganized and thus "*meaning or value is added*" (Awad & Ghaziri, 2001, p.36-37).
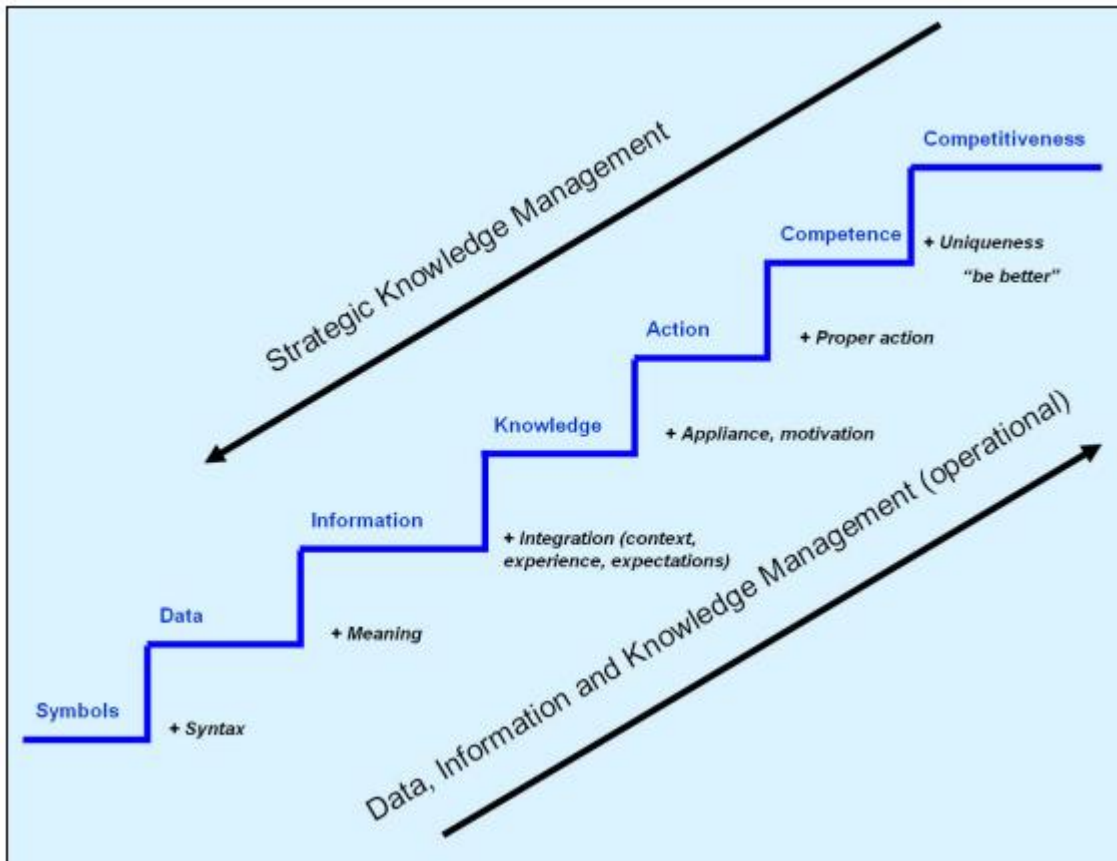
As mentioned before, North's knowledge step explains that knowledge is a dynamic concept, which comes from information, which in turn comes from data. The work of an individual is to process data to information to knowledge. Depending on how important data is to a specific area, and how well it is processed, it can lead to competitive advantage. Based on all this Awad & Ghaziri (2001) define knowledge as "*human understanding of a specialized field of interest that has been acquired through study and experience*" (p. 37).

There are several ways to approach the topic of knowledge, but from the point of competitive advantage, usually the tacit and explicit knowledge approach is used. These will now be specifically explained.

Tacit and explicit knowledge

Explicit knowledge is codified and categorized, for example, books, reports, processes etc. It is easy to identify since it is usually a physical entity which can be distributed to employees. There are many ways to store it and access it easily, and therefore uses and reuse it in decision processes (Awad & Ghaziri, 2011, p. 47). This can be considered the traditional approach of knowledge management, where knowledge is already articulated in some form.

Tacit knowledge is gained from experiences, reflections, individual talents. Its sharing is difficult in terms of space and time (Awad & Ghaziri, 2011, p. 47). As it is stored in non-verbal form, people are often not aware of its existence. Corrigan et al. (2012) argue that it is hard for people to express something, which to them seems natural or obvious. They consider tacit knowledge as the source of a sustainable competitive advantage. Effectively managing the sharing of tacit knowledge can prevent loss of knowledge, which naturally occurs from employee turnover.

This challenge can be faced with two strategies: technology and people. From a technological view, knowledge management systems can be made, such as an internal wiki, where people can describe their processes and such. This thesis will focus more on the human side of this strategy, even though the two need to go together to be successful.

This strategy should, if done correctly, facilitate sharing employees´ experiences, know-how and other expertise, all of which cannot be effectively stored in documents. It should facilitate transforming knowledge, from tacit to explicit, from a one-off interaction to useful knowledge. This is necessary to see how knowledge is created and how already existing knowledge can be used. Organization need to acquire capabilities which are necessary for this, such structures, processes and systems, which can codify and articulate knowledge into a language that is easily understood by others (Corrigan et al., 2012, p. 829). They describe that there are several challenges in this process and argue that a precise methodology is needed which can measure the extent of benefits gained from knowledge management.

Knowledge management

Knowledge management has been defined many times by different scholars, but there is no agreed consensus about its exact characteristics. Hislop (2009. p. 59.) defines it as "*an umbrella term which refers to any deliberate efforts to manage the knowledge of an organization's workforce, which can be achieved via a wide range of methods including directly, through the use of particular types of ICT, or more indirectly through the management of social processes, the structuring of organizations in particular ways or via the use of particular culture and people management practices*." Knowledge management is important as innovation and developing new products achieve a competitive advantage, and the know-how of the employees is what makes this possible (Shankar et al., 2013). The special knowledge of important employees is hard to imitate, and thus their departure from a firm is hard to cope with. When such an employee quits or retires, the knowledge literally walks out the door if it was not

consciously shared with others and the firm might lose a driving force of its business (Sharma et al., 2012, p.38).

Massingham (2010) studies the impact of knowledge management on the economic aspects and found that loss of knowledge leads to problems in the functioning of the organization or can decrease the motivation of other employees. The impact of an employee leaving would not be so critical on the human capital, because optimally the company would prepare someone else to fill the role, with a similar level of experience. On the productivity level, however, it could potentially decrease it if there are no people available with similar expertise. If there are other experts available, they are less dependent on the leaving employee. In terms of social capital, they found that there are nodes within the social network, people who others rely on. Generating new nodes could lessen the impact, if an existing one leaves.

Murphy and Verma (2008) describe the characteristics of companies where knowledge management succeeded and argue that it needed a change of perspective which allowed to formulate ideal conditions for successful implementation. These characteristics are:

- Continuous commitment supported by executive recognition and sponsorship
- Developing a culture of knowledge management through encouraging innovation and participation among the employees
- A well-defined knowledge management framework as part of the IT architecture and business model
- Performance measurements that measure how knowledge management contributes to business goals
- Transparent incentives and accountability of all participants
- Constant communication with an emphasis on promoting changes and actively listening to feedback and suggestions.

Knowledge transfer

Knowledge transfer is described by Christensen (2003) as *"Knowledge transfer is about identifying (accessible) knowledge that already exists, acquiring it and subsequently applying this knowledge to develop new ideas or enhance the existing ideas to make a process/action faster, better or safer than they would have otherwise been. So, basically knowledge transfer is not only about exploiting accessible resources, i.e. knowledge, but also about how to acquire and absorb it well to make things more efficient and effective."*

As can be seen, this describes a one-way process, where knowledge is acquired at one end and then transferred and applied in another end. However, it should also be considered what the knowledge sharer gets out of this process. This can be seen in the concept by Chen et. al. (2012): *"the sharing of potentially useful information by the source; the feedback of relevant and useful information from the receiver to the source"*. This means that acquiring information and getting feedback on it are two interdependent processes which enhance knowledge transfer. This also ties in with the interpretivist view, whereas the transmitted knowledge needs to be interpreted by the receiver. Also, the source can observe how it is interpreted and assimilated by the receiver. This feedback then can refine the givers own knowledge. Here the receiver should fulfil the requirements needed to understand the knowledge, to be able to understand it as it was intended (Leppälä, 2012). A way to measure this is seeing how the receiver's knowledge and/or performance has changed.

Nonaka & Takeuchi (1995) describe knowledge transfer in a matrix depending on whether the origin and the result is tacit or explicit knowledge.
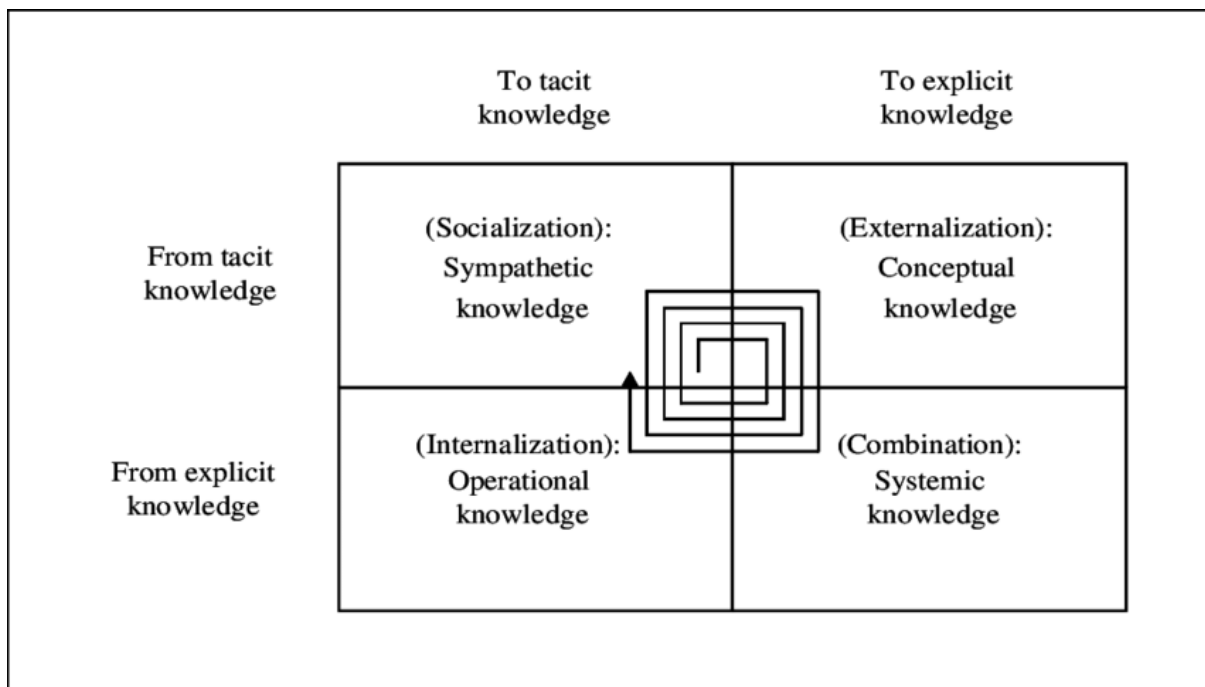

Figure 2 Knowledge transfer matrix (Nonaka and Takeuchi, 1995)

Internalization is done by learning and repeating specific tasks frequently. Socialization can only be done by dialogue between persons, usually experts and beginners. Knowledge transfer as discussed deals with how it is transmitted to the receiver. Knowledge sharing supplements this process by seeing how it spreads more naturally, and therefore it is also an important part.

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Knowledge sharing

As discussed, knowledge transfer is a technical process of moving knowledge from one location to another. No change occurs in the properties of knowledge. Knowledge sharing is a generic exchange described as knowledge flow. When people are engaged in this process, they reshape, improve the existing knowledge, or generate new knowledge, which then they utilize together or separately (Collins and Hitt 2006; Ensign and Hébert 2009). It can be both formal and informal, whereas transfer is only formal. Both can occur between individuals, groups or across organizations.

Cabrera and Cabrera (2002) argue that the value of knowledge increases when it is shared. As it grows, the benefits are usually bigger than anticipated. "*As one shares knowledge with other units, not only do those units gain information (linear growth) they share it with others and feedback questions, amplifications, and modifications that add further value to the original sender, creating exponential total growth. Proper leveraging through external knowledge bases, especially those of specialized firms, customers, and suppliers, can create even steeper exponentials*" (Quinn et al. 1996, 277).

Knowledge sharing barriers

Since knowledge is derived from a specific personal and organizational context, it is unique, history-based and socially determined. Thus, scholars called it **sticky**, which makes it hard to imitate. This can be a market asset for the company, but within it, can be a drawback for knowledge sharing. Stickiness is bigger if the source or the receiver lacks experience or motivation in their actions. Knowledge can be tacit or context-specific, which limits transferability. It can be hard to codify due to ambiguity or complexity. The source can be found unreliable or their knowledge undesirable, and the receiver might not have the necessary capacity to absorb and store it (Joshi and Sarker 2003).

Apart from these issues arising from stickiness, **social barriers** can also hinder knowledge sharing. These can be employees not seeing any benefit to it, or not having the time to exchange ideas or experiences. They might not have the necessary communication skills or might not want to lose control over personal assets and autonomy that they developed. Top management`s lack of support to knowledge sharing can also restrain the process (Joshi and Sarker 2003).

Some scholars describe social dilemma as a knowledge-sharing barrier. This means a contradictory situation where rational individuals try to maximize their own benefits, and as a result, cause collective irrationality. One type is the resource dilemma, where an individual's

consumption of resources leads to diminishing future resources, as they are not developed simultaneously. As knowledge is a resource that cannot deplete in the process people are open to benefit from its use. This leads to another problem, which is referred to as a public good dilemma, where individuals can free ride. This strategy yields people "*immediate positive returns to any participant, at any time during the interaction, regardless of the actions of other participants*" (Cabrera and Cabrera 2002, 693). The outcome of these dilemmas is an individualistic pursuit of benefits and a narrow scope of expertise for employees.

All the mentioned barriers cause challenges, especially in knowledge-intensive organizations. Therefore, it should be seen what factors can mitigate these challenges on different levels.

Knowledge sharing motivators

Small and Sage (2006) argue that knowledge sharing relies both on organizational and individual factors. These factors are all part of knowledge sharing and knowledge diffusion in an organization. These are trust, communication, change readiness and network density.

When employees are able to trust their coworkers, they can transform mistakes into learning tools and their readiness for risk-taking increases (Costigan et al. 1998). Trust in the decisions of top management also decreases people´s readiness to leave the firm, which can prevent tacit knowledge loss. Apart from trusting people, it is also necessary to trust their competency. It is a hard task to find people with useful knowledge and make them share it with others.

Informal face-to-face communication is one of the best ways of sharing tacit knowledge. Giving a chance to discuss issues directly, without pressure can create trust and willingness to face issues and cooperate on solutions (Laupase, 2003, Cabrera and Cabrera, 2002).

Apart from informal communication, individual relationships are factors, which shape a firm´s social structure. They are both parts of a group identity, they increase individual and cooperative commitment. They also increase the frequency of interactions and form a basis of expectations towards other people. (Cabrera and Cabrera, 2002).

Droege and Hoobler (2003) put forward social network density as a factor, which increases knowledge distribution and sharing. This involves networking and participation, which lead to the creation of new knowledge. The weaker the professional and personal ties, the harder it is to transfer knowledge. "F*irms with an optimal mix of weak and strong ties will experience greater tacit knowledge diffusion than firms which do not possess this optimal mix*" (Droege and Hoobler 2003). If there are not enough participants, the individual cost of sharing can be

too high to trigger action, thus a "critical mass" of knowledge sharing contributors needs to be a norm (Cabrera and Cabrera, 2002). The higher the density, the higher the likeliness of this critical mass being present.

Reid (2003) states that developing a culture where knowledge sharing is prevalent should be the focus of knowledge sharing policy. This would enhance trust between employees, as there is a positive correlation between trust and sharing behaviors. Employees could also be leveraged to share knowledge with a reward system, which could either be monetary or other.

Culture

National culture

The most common definition of national culture is the "*values, beliefs, norms and behavioral patterns of a group*" (Leung et al 2005).

The cornerstone of the national culture research area is Hofstede´s (1980) dimensions. He used these to quantify differences between different cultures on a few dimensions. His original dimensions were power distance, uncertainty avoidance, individualism vs collectivism, and masculinity vs femininity. He later added long vs short term orientation and indulgence versus restraint.

Power distance or closeness shows whether people reject or appreciate hierarchies. Uncertainty avoidance or acceptance measure whether people need to work in predictable and organized situations or if they can improvise and adapt easily to new situations. Collectivism or individualism shows if people see themselves as individuals or more as part of a group. Masculinity vs femininity shows whether the emphasis is on caring and cooperating with other (feminine) or success and competition (masculine). Long vs short term: long-term oriented people can focus on the future and can delay instant gratification for their efforts in exchange for perceived long-term goals. Short-term oriented countries have a "here and now" attitude. Indulgence vs restraint explains whether people express emotions and enjoy things or suppress emotions and rely on discipline and rules.

Organizational culture

To define organizational culture, first, it should be defined what an organization is. The Oxford dictionary defines it as "*An organized group of people with a particular purpose, such as a business or government department".* Since the 1960´s there is a vast amount of research on organizational culture. The early works refer to the organization as hierarchies of bosses and

workers, while modern works find that organizations now realize that the skills and knowledge of workers are crucial for success, and business focus is shifting towards people from profit. For this paper, the definition of organizational culture was given in the begging. "*Culture is the sum of all organizational parts."* It includes all the people, working within a system of written and unwritten rules, who all want to achieve the same, common goal.

As globalization is increasing, more businesses become international, where people from different nations work together. As it was explained before, people from different nations have different values, which might cause frictions among employees. However, Fleming and Sturdy (2011) argue, based on their research in a call center, that there is a "homogenization" of employees' culture, through management control systems. In his classic paper, Morgan (1986) uses eight metaphors to describe organizations as organisms, machines, brains, political systems, psychic prisons, as flux and transformation, instruments of domination and as cultures.

While there is a considerable amount of research on organizational culture, there is also a large variation in definitions and explanations, due to a difference in approach and confusion of paradigms. (Schneider et al, 2013). Wu (2008) argues that defining culture appears to be the weakest link in research despite the long timeframe of its study. He describes the organizational culture in two different ways. First, it is the individual's choices accumulated into a critical mass over time. Secondly, the interactions between individuals and their choices, which have the capacity to wield influence over others, both in the long and short term.

It has been likened to a group´s personality (Myatt, 2014), a process (Parker, 2000), a mindset (Baumgartner, 2009). Since this study is from an interpretivist perspective, Schein (2011) should be considered, who describes it as dependent on the environmental context, with considerations of national, religious, and global macro cultures as influencing factors on the development of organizational culture. He describes three levels of organizational culture, based on their visibility:

- Artefacts – phenomena that can be seen, heard or felt when encountering a new group
- Espoused values – beliefs, values, rules and prohibitions on which artefacts are based
- Underlying assumptions – unconscious, invisible assumptions of individuals

As for a framework on how to measure organizational culture, the competing values framework, developed by Kim Cameron and Robert Quinn can be used, which has four dimensions in it: clan, adhocracy, hierarchy and market.

Figure 3 Competing values framework (Cameron and Quinn, 1996)

Framework summary

Knowledge sharing has been found to be an excellent way to share tacit knowledge, and its controlling variables have been collected from various studies. These are trust, communication, information systems, reward systems and organizational structure on the positive side. On the negative side is the lack of information systems and possibilities of knowledge sharing, inadequate management support, and personal barriers. These are embedded in different ways in the organizational culture.

However, the national culture of individuals also impacts how these are viewed, for example, a person from a country where individual success is highly valued might not engage in knowledge sharing, even in the right organizational environment. Since there are many nationalities in the target firm, their background and views can shape these factors while they are adapting to the organizational culture.

In the next chapter, the current culture of the firm will be described, based on the results of participatory observation, then the results and themes of the interviews will be outlined.

Empirical findings

Current organizational culture of Centrica Energy Trading A/S

In the competing values framework, the most suitable description would be the "clan" for the current environment. Of the 20 people asked in informal conversations, 17 of them indicated that from their experience, teamwork and autonomy was the aim of their teams and managers. 19 said that personal responsibility was a baseline for their everyday work and as such, they could make decisions without needing explicit permission from managers.

On the topic of knowledge sharing, most people felt knowledge sharing was a must in their line of work, saying that the complexity of information necessary for their task cannot be handled alone.

As an aftermath of the Covid-19 lockdown, people described that "not being able to meet with colleagues for a coffee severely lowered information sharing". As for the reason, most agreed that they only talked with colleagues through formal meetings and project-related work through online methods. Another seemingly important ritual, the "Friday beer" for many teams was a way to casually talk and build relationships and trust. In a contrast, one IT team continued this tradition via Teams, while the trading team did not. As a result, the trading team members said they became more rigid as a team and shared less personal news. While it was stated in the literature that face-to-face, impersonal chats, and space was necessary for tacit knowledge sharing, it seems like there is also a need for some way of facilitation for these to happen.

This organizational culture is in line with the values of the Danish culture, as it was, in the beginning a Danish firm, which evolved into a multinational firm.

Interview summaries

From the interviews, a connection between national culture and knowledge sharing can be established. This comes in the form of influencing factors, which impact the process. It can be seen within the contexts of trust, willingness, tools and organization.

Below is the orientation of the five participants on the Hofstede model. Iceland was excluded as it is very similar to Denmark. As it can be seen within power distance, there is Denmark-Iceland as very low, Estonia-Hungary as medium and Slovakia as very high. In levels of

individualism, Denmark-Iceland-Hungary are relatively high, while Estonia-Slovakia are more medium. In masculinity, there is Denmark-Iceland-Estonia with very feminine societies and Hungary-Slovakia as very masculine. These drivers should be considered when analyzing the views of people, as their background might help explain their answers better. In total 7 interviews were made, one with every five participants (D1, I1, E1, H1, S1), indicated by the first letters of their nationality. With two participants there were follow up questions where clarifications were needed (H2, D2).
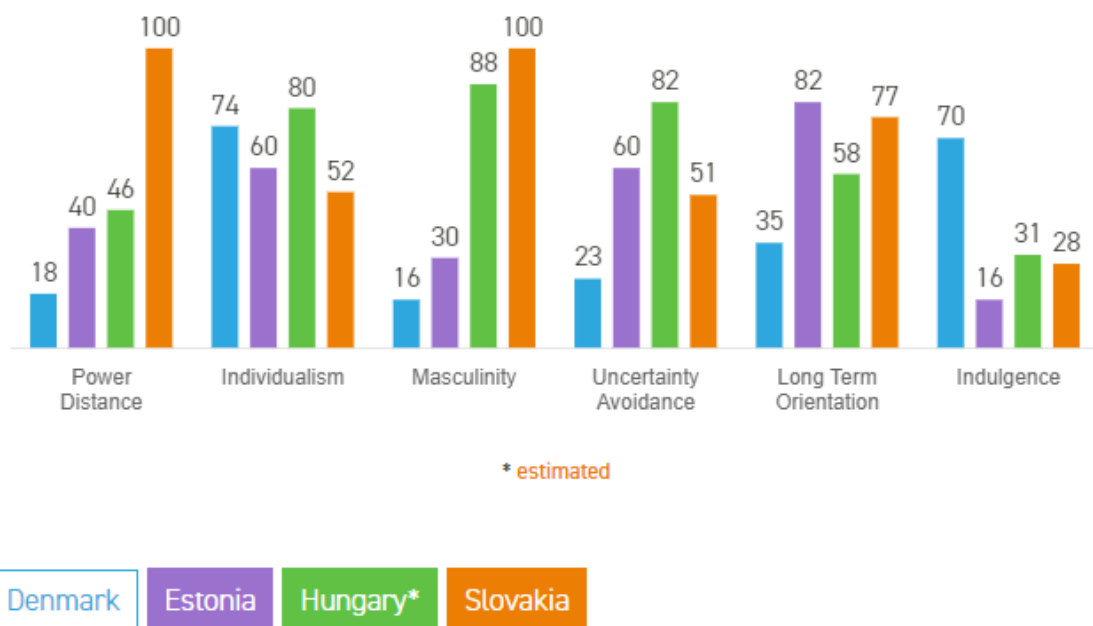

Figure 4 National culture graph of the participants, taken from https://www.hofstede-insights.com/

Cultural aspects: From Hofstede´s model we can see that all cultures interviewed have a high level of **individualism**. All interviewees agreed that the organizational culture also encourages autonomy: "When you face a problem, you are expected to solve it, however, you find it most efficient". They also feel that autonomous people are appreciated "If you are proactive in learning and sharing the environment will acknowledge your efforts, as a person and as a colleague". This individualistic aspect also enables people to talk directly and almost bluntly as one interviewee stated, who was from a less individualistic country (Slovakia).

This contrast but also synergizes with Danish society being a **feminine** society, which is reflected on the organizational culture: "if you make a mistake you should learn from it instead of being embarrassed about it, which was difficult to get used to". Subjects from Denmark and Iceland were more used to cooperation, while others were more focused on results and

achievements, at least in the beginning. This can be seen in the Danish subject, saying he does things without expecting something in return, while others said they could not share at first without having an explicit reason for it.

Power distance also seemed to be a large influence for different reasons. As a Danish organization, **power distance** is very small, which is reflected in the relatively flat organizational structure. For the Danish and Icelandic subject, it was the view that "our boss is just another coworker, who we can always ask and even question", while others agreed that "what managers say should be followed". Here a contrast emerges, as it might be easier to share knowledge when "the boss is just another coworker", but the Hungarian subject stated that: "since our manager told us to share knowledge, with the tools we have available, it seemed natural that knowledge sharing should be a part of everyday happenings". It seems like knowledge flow in a vertical direction (managers – employees) happens easier in a lower power distance setting, horizontal flow (employees – employees) might be more significant if it is encouraged or influenced by leaders.

Individual aspects: all subjects agreed that in **communication**, enforcing English as a team language increased knowledge sharing, especially after learning all the terms related to the everyday activities of the company. The Danish participant stated that "having a level playing field in the language is good as most people need to learn the practical terms. I don´t even know most of these terms in Danish." The Hungarian participant said a similar thing: "at first when you lack vocabulary you can´t really communicate effectively, but after a while, you can´t imagine talking about these things in Hungarian, as I don´t know how they are called in Hungarian". Similar comments were made by the other participants as well, one of them even saying it lowers the number of mistakes. "You need to really make sure they (referring to colleagues) mean the same thing as you, so we go the extra mile to clarifying terms and meanings".

In terms of fluency all agreed that colleagues have a good grasp of the English language and that it was a prerequisite to learning technical terms and everyday processes.

Relating to communication, it was asked in follow up questions after the interviews whether people had issues communicating with people from other cultures. It was agreed that in general there were no problems due to the cultural difference between those who were from "Western" cultures. There was one instance of miscommunication between a "Western" and "Eastern" culture person, due to different presumptions regarding deadline importance.

The next theme was **trust**. In this subject all agreed that it is an important factor, however, there were differences between the basis for trust and the direction of trust. The difference in the basis of the trust was established as a knowledge-based trust and personal trust. Danish subject states, that "trust needs to go both ways for sharing to work, I won´t accept knowledge from someone I don´t think is competent, and I´m not keen on talking when people can´t comprehend what I say". A different view from the Hungarian subject is that he will likely share his knowledge even if it falls on deaf ears and will listen to someone, he doesn´t trust, but with a great degree of caution. "If I don´t trust the person I will still share my knowledge, but I would not ask them to help me with things and would not trust them with tasks".

He also expands on this with "I assume if you work here, you have the basic understanding and competence". From this, there were follow-up questions made to other interviewees, whether they trust people from the first moment, or only after they earn their trust. The Danish and Icelandic persons were accepting from the beginning like "welcoming someone to the family", while others needed time to have their trust earned. "You are likely to get swindled if you blindly trust people in eastern Europe" stated the Hungarian participant in the follow-up interview, which later the other two eastern Europeans agreed with.

Organizational aspect: the first inquiry was regarding an explicit strategy or policy for knowledge sharing. All subjects said they did not know of any strategies or policies laid out by top-management regarding this. However, most agreed there was influence regarding this coming from their direct leader. It was also the view of three people that there was no need for such a thing, as sharing is a necessary and unavoidable part of this business.

As there is a lack of strategy, there is also no stated incentives in form of rewards or measurements in this regard. However, there is also no need for this, as "I share information, as I expect others to do it as well. If I don´t share why would others?", and "Just by interacting with colleagues, I learned how and why decisions are made, and thus absorbed new concepts". There is also a general agreement that by engaging in knowledge sharing can increase the persons own understanding. There was a difference, however, whether this is through reflections, which was the perception of the Dane and the Icelander, or by feedback from others, which was the view of the other three participants. As they stated, this also differentiated their preference for the tools for knowledge sharing, which will be described a bit later. Before that, there was another incentive which they thought help facilitate knowledge sharing, which was

having a common goal, that can be measured and achieved. For traders, this was making as much money as possible, for trade support this was minimizing and eliminating mistakes.

They agreed, that learning from their mistakes, and identifying shortfalls and correcting them is the most efficient way of achieving these goals. For this to happen, there need to be several **tools** in place, which enable this process. However, there were different views on the extent of usefulness of these. "Online tools, like the internal wiki, and "opsreports" are good for documentation of processes, and potential pitfalls, but in-depth knowledge only comes from face-to-face talks" said the Danish person. "You can write down the how and why, but the why will always make people have more questions".

An interesting observation came from the Hungarian and the Estonian subjects, who described the knowledge sharing in this organization as a "let´s go for a coffee" culture. They noted that coffee breaks were more frequent in Denmark, and people liked to go with other people, and as a result, they talked about the daily happenings and "there are always bits and pieces from their tasks and their view on the work of others".

This relates to the statements regarding channels and tools of sharing knowledge. As stated before, the firm has an internal sharing platform – a wiki – where processes and tasks are described by each team. Information on tasks is available to all employees if they are interested. However, all interviewees said they only read pages related to their own departments: "since I don´t know why they do it, I also don´t care how they do it". Within the trade support team, there is another tool, called "opsreport", where new information about everyday work is recorded when someone learns new information. It is described like "an ongoing conversation", as new information is posted almost on a daily basis. A new tool was introduced with the Covid-19 lockdown: Microsoft Teams, which "helps communicate with people who work from home but needs harder initiative". When asked to explain further, it was discovered that people use it differently, only calling people to ask specific questions, rather than have casual discussions. This also had slight variations from people, but not on the level of different nationalities, rather than different personality types. Two of the interviewees who described themselves as introverted stated that they are less likely to chat with people, they would only ask about what they want to know.

Another aspect is the willingness to share. As described before, people agreed that trusting co-workers enhances the willingness to share, it only differed whether trust is given or earned. Secondly, incentives were also required for willingness. It seems like people with a background

of lower power-distance were keen on sharing knowledge without explicit orders, whereas higher power distance meant that positive influence from their leaders made them adapt to knowledge sharing. Third, people seemed to agree regardless of background that sharing is easier within their own department, or with people who acted as support functions, than co-workers, from unrelated departments. As to whether it was even necessary to learn from distant (in function) departments, the Danish and Icelandic subject stated that it would be worthwhile: "you could go over there, and learn about CRM, which would probably make you understand the whole business better", stated the Danish participant. This could stem from the low-power distance or the femininity of the national culture. The other three participants agreed that they would share their knowledge with people outside their group, they were more reserved about receiving knowledge: "in broad strokes, it would be good to know what happens elsewhere, but it might not be that relevant" stated the Slovakian participant.

Discussion and proposed framework

From the interviews and the participatory observation, there are factors that are influenced by national culture directly and indirectly. This chapter aims to make these relations clear based on the evidence from the findings of the previous chapter and propose a framework. This will consist of larger blocks such as national culture, organizational and individual aspects and the detailed attributes, which are found to have an overall impact on knowledge sharing.

These factors are mostly similar to those found in the theoretical framework, however, there are slight variations both in their influencing attributes and their relationships with one another.

As a start, the national cultural factors identified as most important are power distance, individualism and masculinity vs femininity. Power distance indicates whether the organizational structure is vertical or horizontal and therefore the direction of the information flow. As the Danish culture and therefore the organization´s culture is horizontal, employees can act more freely and without the constant need of approvals for managers. Inserting people with a vertical – or large power distance – background into this can be beneficial as they react positively towards influence from managers when they are encouraged to share knowledge. As all participant were on the higher end of the individualism scale, they also acted autonomously which synergizes well with a flat structure. Previous studies suggest that collectivist leaning cultures function better in knowledge sharing. In this case study, participants suggested they engaged more in knowledge sharing when they had to seek out knowledge to solve problems. In terms of masculinity vs. femininity, people with a higher score were keener on receiving

knowledge, while lower score backgrounds preferred sharing and helping others. It is important to distinguish that the more masculine group also adapted to being knowledge sharers rather than only absorbers with time. This was previously described as organizational culture homogenizing people (Fleming and Sturdy, 2011).

In individual factors, the language was a key influencer in knowledge sharing. It seems like in an organization the most important language is the one in which all people know the necessary technical terms. Having a common language and on a high level of fluency has a positive impact on knowledge sharing. As indicated by the participants, teaching people the language of the company was a prerequisite of adopting to the organizational culture and sharing implicit knowledge. Another individual factor proposed in literature was the cultural distance. In this study there were reports of 2 instances of conflicts due to this, however, they were not made clear enough to support any hypothesis. This might be one of the faults, that only people with relatively low distance (only people from Europe) were interviewed. Incentives, which are thought of as organizational factors also shifted into personal factors, which will be described in the next paragraph.

Within organizational factors incentives, manager influence, formal strategies and common goals were discussed in the interviews. In literature, incentives are usually a controversial topic, both financial and other forms. However, it was indicated there are no incentives in any form from managers to share knowledge. Rather it was personal incentives, such as learning from reflection and feedbacks and simply feeling good and acknowledged from helping others. Having and achieving a common goal within a department was also reported as an incentive to proactively share knowledge, however, there was no indication of a broader companywide goal, which might explain the indifference towards interdepartmental knowledge sharing.

The managerial influence was indicated by the Hungarian, Estonian and Slovakian subject, that they were encouraged to share knowledge by their direct leader, while the Danish and Icelandic subject said they did not feel any particular influence. During a follow-up conversation, it was established by participants that certain people might need explicit encouragement, while others might engage without it. As a focal point, learning from mistakes was brought up, contrasting people´s attitude towards it. It seems like the more feminine background people had no problems admitting to and learning from mistakes, while more masculine backgrounds felt embarrassed and as a result, had to learn it consciously.

Formal strategies were less discussed as they were more processes relating to tools so they will be discussed there.

Trust was a major factor for all participants, however in different ways. Two different types were established from the interviews: personal and competency trust. There was also a differentiation, whether trust is given or earned, i.e. if people trust others from the beginning, or only after they know them. In the first matter, there was no clear divide based on national culture. In the second point, "eastern European" participants seemed to doubt people at first, while the Danish and Icelandic participants trusted people from the beginning. While it might be easier to share knowledge when people trust each other from the beginning, it could also enhance the quality of knowledge if it is being questioned by the receivers. The third point of interest was the direction of trust. All participants agreed that they are willing to share their knowledge with co-workers regardless of trust, but they will not accept knowledge from them unless they trust them regarding their knowledge. There was an indication from the Slovakian participant that they will verify the knowledge received if they do not trust the giver on a personal level.

Regarding tools and formal strategies, there was an internal wiki, a shift report and an "opsreport" tool identified, which people are instructed to use on a daily basis. These were all online tools. Besides tools, informal channels were identified such as casual conversations and learning sessions. A newer channel was discussed, Microsoft Teams. As a contrast between these channels, it seemed like most preferred informal conversations to Microsoft Teams which people used more as a formal channel to ask specific questions and get information, rather than to talk casually. It seemed that besides a channel to communicate, people needed an enabler factor for casual conversations. There was also no indication that different national cultures preferred different channels or tools. However, there was consensus among the eastern European group that regardless of tools, they want to know where the information originates from, which indicates that trust indirectly affects tools.

The last factor was the willingness to share. It was clear that people were more comfortable sharing within their own department and with people they knew. This is more based on the trust factor rather than the culture factor in this case. Previous research indicates that more collectivistic societies have a higher tendency to share outside of their own groups, however as all participants were from individualistic societies, this cannot be investigated here. Other influencers of willingness were the language differences, where it was stated that a lack of

fluency in English might make people reluctant to share their knowledge. Within a department, willingness was increased by having a common goal for the department.

Based on this discussion the following effects are established in this case:

| Influencing factors	Influencing attributes	Influenced factor
National culture	Power distance Individualism Masculinity vs. femininity	Organizational culture Individual factors Trust
Organizational culture	Manager influence Common goals	Trust Knowledge sharing Tools Willingness
Individual factors	Language fluency Self-motivated incentives	Knowledge sharing
Trust	Technical/competency trust Personal trust Direction of trust Given vs. earned trust	Tools Willingness
Tools	Formal strategies Channels Enablers	Knowledge sharing Willingness
Willingness	Inside vs. outside of the group	Knowledge sharing

Figure 5 Framwork factors, own made
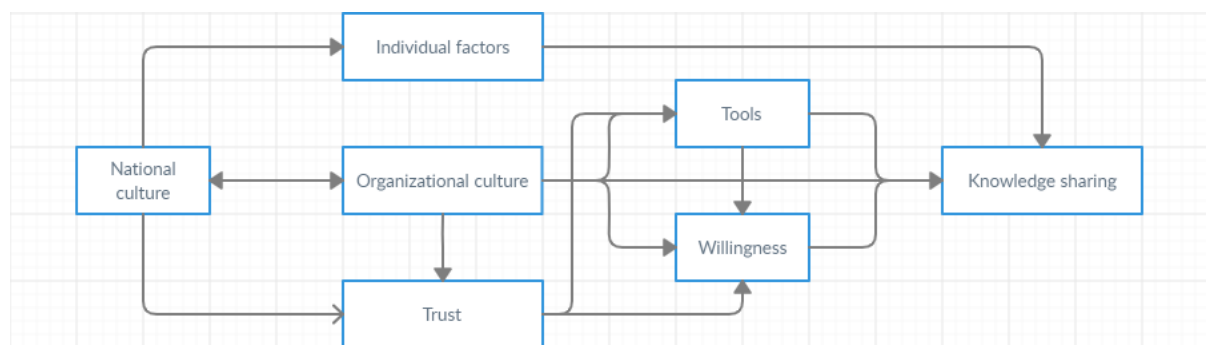
Figure 6 Proposed framework, own made

Conclusion, limitation and future suggestions

In this study, the link between national culture, organizational culture and knowledge sharing was discussed. Knowledge sharing and culture were explained, and a theoretical gap was presented. To fill this, interviews were made within a single organization with people from different national backgrounds to see how their national culture influences their knowledge sharing practices, supplemented by participatory observation to verify the data. Based on the

findings of these, a framework was presented and discussed, detailing the impacts of both national and organizational culture. From the participatory observation, it was clear that the organizational culture is in line with the national culture, confirming previous researches. It was also argued that with time, the organizational culture has an impact on individuals. In national culture, three dimensions were considered to have an impact on knowledge sharing either directly or indirectly. There is evidence that combining particular national cultures with a different organizational culture could create synergies in knowledge sharing. Besides these, both factors from the individuals´ perspective and the organization´s perspective were considered. Combining both views can lead to a better optimized and customized knowledge-sharing environment. While most factors were intangible, this framework also contains tangible tools and channels for knowledge sharing. While these are not directly influenced by national culture, they are indirectly influenced through trust.

While this framework might be useful in identifying chokepoints in knowledge sharing and thus having the potential to increase knowledge sharing, it also has some limitations. First, the number of participants should be considered. Adding more participants would likely have increased the reliability of the identified factors or could have found more factors which should be part of the framework. Secondly, the origin of the participants could have been more widespread, as most participants were from Europe, thus their cultural distance was relatively low. It should also be noted that this case study was done in a period of months. As culture is ever-changing, it might not be useful in a longer timeline.

For future studies, it should be considered that this study was made from an interpretivist view. While that allowed to explore these phenomena in-depth, this framework should be verified from a quantitative approach. It would likely be worthwhile to consider comparing companies from different backgrounds, which would have different organizational cultures. Exploring other tools for knowledge sharing might also reveal certain synergies with different cultures.

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