Online knowledge sharing

Exploring the relationship between enablers and motivators for successful online knowledge sharing

Credits

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Abstract

Due to today's competitive market, organizations are ought to continuously develop their business. Organizations depend on employees' productivity and knowledge for continuous innovation practices. Thus, knowledge sharing among employees has been recognized as a valuable tool for organizational growth. Technological advances have enabled organizations to change traditional communication activities to continuous, dynamic online knowledge sharing activities. Merely providing online knowledge sharing tools does not imply for actual online knowledge sharing among employees. Therefore, academic research has identified various success factors of online knowledge sharing. However, despite the growth in its importance and popularity among modern day organizations, previous research has shown that online knowledge sharing activities remain low. For a deeper understanding of the success factors, this research has not only identified the success factors (i.e., enablers and motivators) of online knowledge sharing, but also examined their inter-relation. Since online knowledge sharing is a social practice, a qualitative research has been performed. Managers, consultants and experts working in the field of online knowledge sharing have been interviewed and results have shown the importance of the facilitating conditions (i.e., job design and technology use), online knowledge sharing intentions and intention motivators (i.e., contextual factors, individual motivation, explicit motivation and characteristics of online communities). Also, for a better understanding of the relationships among the factors, a research model is developed to explain the inter-connectedness of the facilitating conditions, online knowledge sharing intentions and motivators.

Key words are online knowledge sharing, enablers and motivators, facilitating conditions, online knowledge sharing intention

Foreword

This research serves as the graduation project for the master Educational Science and Technology, with a specialization in Human Resource Development at the University of Twente.

This journey, up until my graduation, has been an opportunity for self-development. Content-wise, I have learned about the field of online knowledge sharing. Coming from a background in education, learning about online knowledge sharing was a new and exciting experience. Socially, I have met many professionals and learned to think critically and always think a step ahead. This journey gave me the opportunity to recognize my abilities, knowledge and the many possibilities ahead of me. With much pleasure, I have worked on this study the past two years. Although a lot has happened the past year and a half, I look back upon my thesis as a time and place of rest. Furthermore, writing my thesis has brought me great joy and (almost afraid to say) I am sorry it has come to an end.

Throughout this journey I have had great support. First of all, from God. Through faith I have had the strength to always continue this journey with persistence and dedication. Secondly, my fiancé. He has pushed me through the past years, has helped me when I could no longer. He has been my number one supporter, teacher and friend when I needed it the most. Thank you, I greatly appreciate it. Of course, my family. My mother and father for reminding me to eat whilst writing my thesis (since writing my thesis was sort of a therapy for me, I often forgot to eat). My siblings and friends for distracting me with all sorts of amusing nonsense.

Of course, I could not conduct this study without the help of my supervisors. Bas, thank you for your feedback and for being there when I needed advice and direction. Thank you for your time and effort. Jeroen, even though we haven't had many feedback sessions, thank you for your constructive feedback and reminding me to think more critically.

I have happily put much time and effort into this research and it gave me the opportunity to learn a small bite of online knowledge sharing. Hopefully this study will be read, used and even loved as much as I do. The online knowledge-sharing world is a wonderful world to get lost in.

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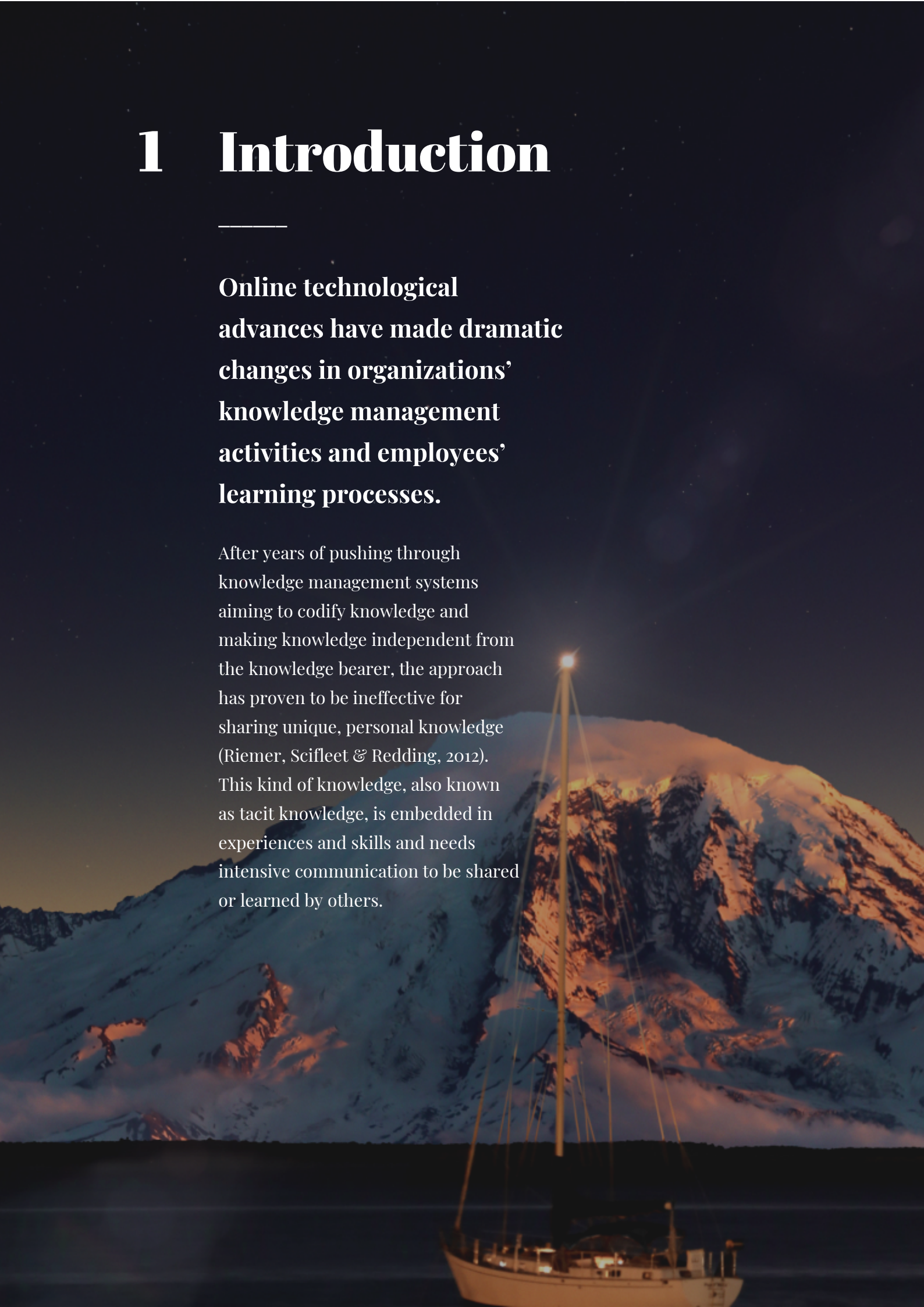
1 Introduction

Online technological advances have made dramatic changes in organizations' knowledge management activities and employees' learning processes.

After years of pushing through knowledge management systems aiming to codify knowledge and making knowledge independent from the knowledge bearer, the approach has proven to be ineffective for sharing unique, personal knowledge (Riemer, Scifleet & Redding, 2012). This kind of knowledge, also known as tacit knowledge, is embedded in experiences and skills and needs intensive communication to be shared or learned by others.



Traditional knowledge management systems do not allow for this form of communication. Online technological advances enabled organizations to expand their knowledge management activities by transforming traditional system implementations into a more dynamic and communication-based approach, where knowledge is associated with the knowledge bearer and online knowledge sharing communities are encouraged (Paroutis & Al Saleh, 2009; Riemer et al., 2012). While earlier collaboration technologies were merely for explicit knowledge sharing through data and databases, new approaches focus on the communicative aspects and take a 'knowledge-in-action' perspective (Mathiesen & Fielt, 2013). Because modern day organizations become more global, workforces are more dispersed and co-worker relationships will be less local. Due to these characteristics of modern-day organizations, collaborative online tools will become more valuable in day-to-day work processes such as inter-communication and cooperation among employees (Thomas & Akdere, 2013).

According to Antonius, Xu and Gao (2015), enterprise social software has transformed organizations into 'extended networked enterprises', where knowledge is associated with social practice (Riemer et al., 2012). Employees can communicate, collaborate and innovate in ways traditional knowledge management systems would not allow. The informal characteristic of enterprise social software makes natural information distribution possible, enables employees to debate, (co-)create knowledge and learn from each other. With this innovative approach, the use of social media for knowledge management has made the practice more people-centered. Because of this new approach, knowledge can be captured, disseminated and reused. By sharing knowledge, its value can be increased, cause change and foster innovation (Antonius et al., 2015). Allowing employees to work more effectively and efficiently, organizations will have to facilitate the online efficient flow of knowledge by not only implementing online collaborative tools, but also by stimulating employee engagement in online knowledge sharing and in usage of the online tools (Thomas & Akdere, 2013).

1.1 Importance of the research

In the ever-evolving knowledge intensive age, knowledge management has developed into an important source of economic growth, innovation and competitive advantage (Jeon, Kim & Koh, 2011; Hau, Kim, Lee & Kim, 2013). In today's organizational environment in which outstanding performance is expected and has become the norm, organizations need to engage in knowledge management activities such as knowledge sharing and in on-going development, as well as continuous learning of their members to prevent the loss of the organization's knowledge (Amidi, Jusoh, Abdullah, Jabar & Khalefa, 2015). Knowledge management has gained its popularity by its added value for responding to environmental challenges (Gaál, Obermayer-Kovács & Csepregi, 2015). Since knowledge cannot be easily copied or replaced, it enables possibilities to create unique and outstanding business value and organizational success (Sigala & Chalkiti, 2015).

With today's mobile workforce and high turnover, organizational knowledge is easily lost unless the knowledge is disseminated and shared among organizational members (Amidi et al., 2015). Knowledge sharing provides a link between the employee and the organization by moving knowledge from individual level to the organizational level. Thus, converting individual value into economic and competitive value for the organization (Hendriks, 1999). The new generation of online knowledge management systems are designed to encourage the development of communities of practice (CoPs) (Riemer et al., 2012). Online CoPs can function as a vehicle for organizational learning. In these online communities, free communication is encouraged (and possible, due to its ease of use and social characteristics). The externalization process requires deeper processing and clarification of own knowledge in order to explain or share knowledge with others. This leads to better understanding of possessed knowledge and therefore, knowledge sharing does not only lead to organizational growth, but also to an individual learning process (Sigala & Chalkiti, 2015). Thus, not only the transfer of knowledge is facilitated through online collaborative tools, understanding and deepening of knowledge is stimulated as well. Both on individual and organizational level, knowledge sharing can be highly valuable for growth and innovation.

Why online knowledge sharing? The importance of knowledge sharing is clear. Since organizations are growing and becoming more global, co-worker relationships are becoming less local (Akdere, 2013). With today's fast pace of innovation, knowledge needs to be quickly shared and used. Online knowledge sharing offers the opportunity to share and retrieve knowledge without limitations of time or space (Akgün, 2006). Thus, knowledge is quickly and easily accessible. Therefore, this study will look into the success factors of online knowledge sharing (i.e., success factors are factors that will lead employees into performing online knowledge sharing). In the context of this study; success is achieved when employees share their knowledge in an online environment.

1.2 Previous research

Much research has been carried out to investigate facilitating and technological aspects of online knowledge sharing, also known as **enablers** of online knowledge sharing. Besides the implementation of technological tools and social media, these researches highlight the usage of social media as a people centric approach to knowledge sharing, changing the focus of sharing explicit knowledge to sharing tacit knowledge (Antonius et al., 2015; Behringer & Sassenberg, 2015; Gaál et al., 2015; Omar, Dahalan & Yusoff, 2016; Sigala & Chalkiti, 2015; Thomas & Akdere, 2013). Also, online CoPs have been shown to be highly valuable to the knowledge sharing process (Chiu, Hsu & Wang, 2006). As the importance of an efficient facilitator is evident, merely providing a tool or platform, does not assure employee engagement in online knowledge sharing. Therefore, different **motivators** have been examined in recent research. The importance of the organizational culture (the context in which knowledge sharing takes place) has been acknowledged in many research fields as influencing employees' behaviour and motivations (Scarsco, Bolisani &

Salvador, 2009; Wang & Noe, 2010). Results have shown that the organization's knowledge sharing strategy, beliefs and norms are valuable for fostering knowledge sharing but have not shown the effect of the context on employees' behaviour in online environments. Al-Alawi, Al-Marqoozi & Mohammed (2007) showed that management and support as well as social interaction are determining factors in the behaviour of online knowledge sharing. Employees are more willing to share their personal possession in case of trust, shared goals and when employees know about each other's capabilities (Yi, 2006).

Due to the self-organizing characteristic of online CoPs as well as online knowledge sharing often being an extra-role task, employees decide whether to engage in sharing their personal knowledge (Fang and Chiu, 2009). Employees are less willing to share personal and unique knowledge because of the fear to lose their valuable intellectual property (Dhanaraj, 2004). Sharing tacit knowledge depends on an individual's commitment and involvement in the context (Lam, 1998). Therefore, beside the context, willingness and personal motivations are important matters in online knowledge sharing (Wang & Wang, 2012; Wasko & Faraj, 2000; Xiang et al., 2013).

1.3 Research question

Despite the growth of the popularity of online knowledge sharing and tools used for the activity, actual usage and participation remains low. A research conducted in 2016 has shown recognition of the value of online tools within daily activities of employees among Dutch organizations but merely two percent of the targeted audience participates in online communities (Evolve, 2016). Since online knowledge sharing remains strikingly low despite the number of research performed and many success factors (i.e., **enablers** and **motivators**) have been identified, but perhaps overlook important factors that play a role in online knowledge sharing. Besides identifying success factors of online knowledge sharing, the relationships among the factors may explain their role in online knowledge sharing and different relationships might have different effects online knowledge sharing. Since online knowledge sharing is a situated process embedded in social practice and who's development depends on outside factors, as well as a learning process (Hendrinks, 1999; Chouikha & Dakhli, 2012), there might be several factors that can influence online knowledge sharing and those factors might strengthen of weaken each other in the process of online knowledge sharing. Factors might be interdependent or certain factors may moderate the effects of other factors on online knowledge sharing.

Thus, to learn how online knowledge sharing takes place and to provide a deeper understanding of the underlying processes of participation in online knowledge sharing and the connections between this process, this research will investigate not only the success factors, but foremost the relationships among the influencing factors. For a deeper understanding of the interplay and inter-connectedness of factors, this study will look into success factors of online knowledge sharing and into

theories explaining relationships between factors leading to behaviour (online knowledge sharing). To meet the challenges of organizations with the participation of employees in online knowledge sharing, research is needed with maximum utility and usability in mind (Thomas & Akdere, 2013). Despite the fact that qualitative studies provide a rich and in-depth examination of context in which knowledge sharing occurs, little qualitative research has been carried out to investigate success factors of online knowledge sharing, let alone the interplay of the factors (Wang & Noe, 2010). This qualitative research will combine theoretical knowledge and practical expertise and experience to clarify what factors influence employee participation in online knowledge sharing and will explore the relationship between the identified factors by presenting a framework in which both objectives are combined (Wang & Noe, 2010). To examine this social approach to organizational growth and learning and to deepen the understanding of online knowledge sharing, the aim of this study is to identify success factors and the interplay between the success factors leading to employee participation in online knowledge sharing. The following objectives are developed:

1 EXPLORING ONLINE KNOWLEDGE SHARING AND SUCCES FACTORS
The field of knowledge sharing in online communities and the interplay of its success factors will be explored through analyzing relevant academic literature as well as comparing it to and analyzing professional practical experience and expertise which is obtained by performing several interviews with online knowledge sharing experts, managers and consultants.

2 AN INTEGRATED ONLINE KNOWLEDE SHARING MODEL
A research model will be presented in which theory and practice are integrated into a framework for a better understanding of success factors and their interplay for participation in online knowledge sharing within organizations. Aiming to identify what factors and how these factors influence participation in online knowledge sharing.

Based on the aforementioned, the following research question has been formulated:

What is the relationship between the enablers and motivators for successful online knowledge sharing?

1.4 Research outline

In order to address to research problem and answer the research question, the key concepts of the research question will be analyzed. Relevant literature will be analyzed by answering the following questions. Foremost, to have a better understanding of knowledge, it will be defined and categorized by its characteristics and usage (Q1). Secondly, knowledge sharing will be defined and the beneficial

outcomes of knowledge sharing will be reviewed and outlined. To put the research into its perspective, characteristics of online knowledge sharing will be outlined (Q2). Thirdly, it is learned how online knowledge sharing can be facilitated (Q3). The following chapters will identify success factors (enablers and motivators) that bring online knowledge sharing to a success. Several theories to learn how factors lead to behaviour (online knowledge sharing) will be analyzed (Q4 and Q5).

Q1 WHAT IS KNOWLEDGE?

1.1 What is the difference between tacit and explicit knowledge?
1.1.1 What is the role of explicit/tacit knowledge in knowledge sharing?
1.2 What is the difference between individual and collective knowledge?

Q2 WHAT IS KNOWLEDGE SHARING

2.1 What are the types of outcome of organizational knowledge sharing?
2.2 What are the key characteristics of online knowledge sharing communities?

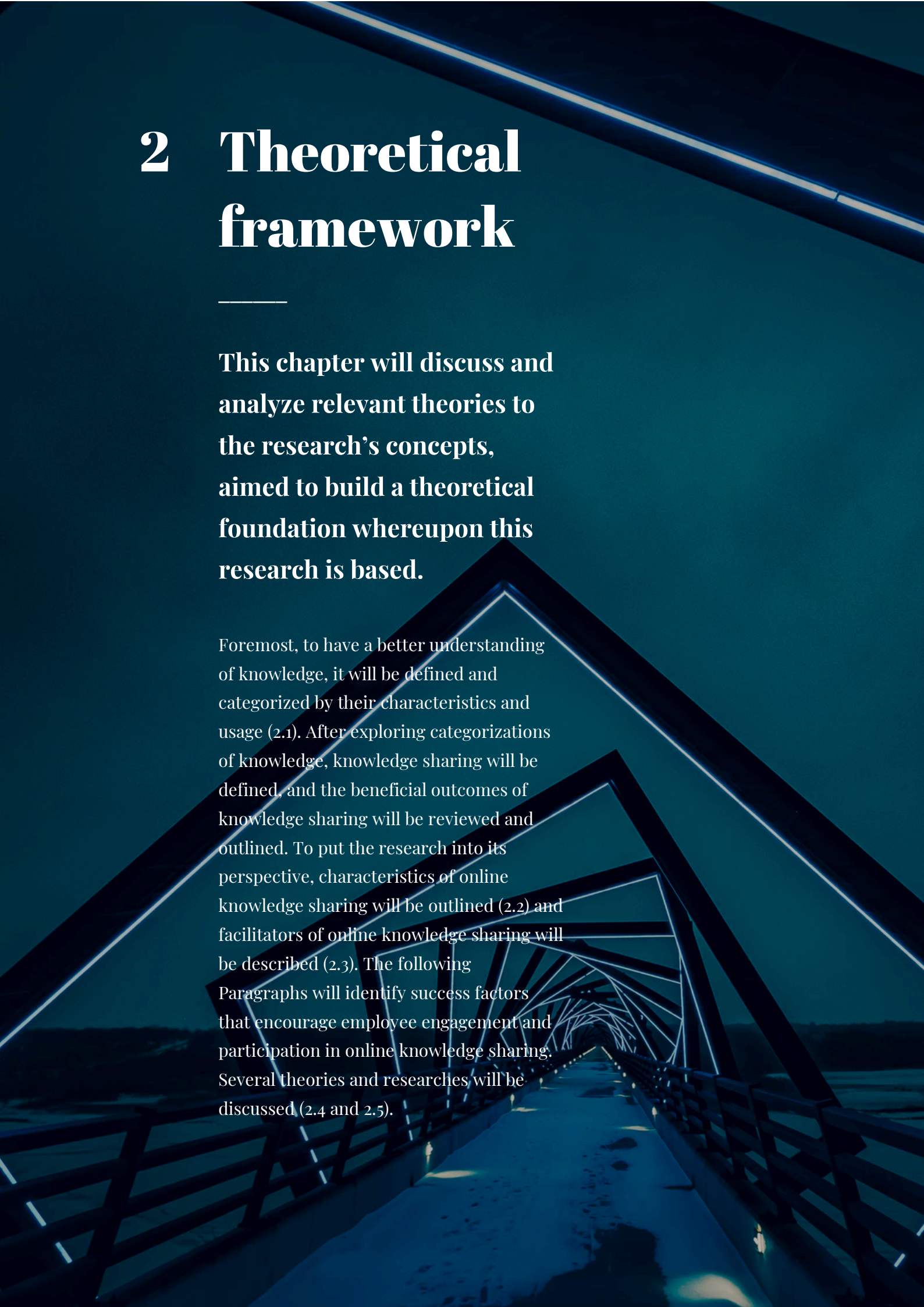
Q3 HOW CAN ORGANIZATIONS FACILITATE KNOWLEDGE SHARING?

Q4 WHAT ARE THE KEY ENABLERS OF KNOWLEDGE SHARING?

Q5 WHAT ARE THE KEY MOTIVATORS OF KNOWLEDGE SHARING?

Finally, after learning and reviewing literature about the key concepts of the research problem and outlining key enablers and motivators for successful knowledge sharing, the factors and reviewed literature will be analyzed and integrated into a model for online knowledge sharing. In the following chapter the methods and procedures for the data collection will be outlined and explained. The findings will be presented and analyzed. A new research model will show an integrated framework of theory, expertise and practice. Finally, practical implications and new discussion points for future research will be presented (Figure 1-1).

Figure 1-1. The research outline



2 Theoretical framework

This chapter will discuss and analyze relevant theories to the research's concepts, aimed to build a theoretical foundation whereupon this research is based.

Foremost, to have a better understanding of knowledge, it will be defined and categorized by their characteristics and usage (2.1). After exploring categorizations of knowledge, knowledge sharing will be defined, and the beneficial outcomes of knowledge sharing will be reviewed and outlined. To put the research into its perspective, characteristics of online knowledge sharing will be outlined (2.2) and facilitators of online knowledge sharing will be described (2.3). The following Paragraphs will identify success factors that encourage employee engagement and participation in online knowledge sharing. Several theories and researches will be discussed (2.4 and 2.5).

After learning and reviewing literature about the key concepts of the research problem and outlining success factors for participation in knowledge sharing, the reviewed literature will be analyzed and integrated into a research model depicting the success factors for online knowledge sharing and explore their interplay (2.6).

2.1 Defining knowledge

Information is often linked to knowledge when discussed in scientific research. Information is seen as the preliminary stage to knowledge. When information is integrated with experiences and a certain context, it becomes knowledge (Hoe, 2006). Nonaka and Takeuchi (1995) state that knowledge, in comparison to information, is put into perspective, is more complex and carries a higher level of understanding. Due to its value, it is this context-specific knowledge that can lead to better organizational performance. For a better understanding of knowledge, the following paragraph will aim to discuss classifications of knowledge as well as the role of these classifications in knowledge sharing.

2.1.1 Tacit and explicit knowledge

The often-used classification of explicit and tacit knowledge is used to deepen our understanding of the nature of knowledge shared among employees. Most scholars have classified knowledge into two types: (1) tacit knowledge, and (2) explicit knowledge (Hau et al., 2013; Dyer & Nobeoka, 2000). Explicit knowledge is known as information that can be easily captured, codified and transmitted in formal, systematic language (Dhanaraj, Lyles, Steensma & Tihanyi, 2004; Xiang et al., 2013). Sharing this factual knowledge seems to be more common because it is embedded in standardized procedures, easy to acquire and can be exploited quickly (Dhanaraj et al., 2004; Dyer & Nobeoka, 2000).

Tacit knowledge however, is more abstract and thus related to more complex ways of acquiring and sharing. It consists of the employee's experiences and skills and can only be communicated through active involvement of other employees. Although tacit knowledge is more complex to share because of its difficulty to be codified or articulated, it is more valuable to organizations since this knowledge is often unique and personal. Tacit knowledge is defined as work-related, context-specific, practical knowledge learned and developed informally on the job. It has an important cognitive element, beliefs and perspectives that are not easily articulated (Dhanaraj, 2004; Hau, et al., 2013; Sigala & Chalkiti, 2015).

2.1.2 Sharing tacit and explicit knowledge

As the classification was first used by Polanyi (1962), he argued that a large part of human knowledge cannot be articulated. It is merely transferable by example or observation, such as from experienced employees to apprentices. Thus, to share context-specific knowledge, close interaction, shared understanding and trust are required (Lam, 1998). While technology makes it possible to simply store and share explicit knowledge via databases, documents or programmes, tacit knowledge is usually done through face-to-face, informal interaction and non-standardized

processes. However, due to the growth and globalization of organizations, communication between employees is often challenged by separation of time and space (Akgün et al., 2006). Such organizations often depend on online tools for communication and are challenged with facilitating informal communication, creating a shared understanding and creating trust between employees due to the separation of time and space. Therefore, sharing tacit knowledge online is often challenged. Also, employees are less willing to share tacit knowledge because they fear to lose their unique and personal intellectual property. (Dhanaraj, 2004; Wang & Wang, 2012; Wasko & Faraj, 2000; Xiang et al., 2013). Thus, organizations are challenged with creating an environment for knowledge sharing, in which separation of time and space are no barriers and where employees feel safe and free to share their knowledge, without the feeling of losing personal value.

2.1.3 Individual or collective knowledge

Despite the often-used classification by Polanyi (1962), Wasko & Faraj (2000) have proposed a new classification of knowledge. Explicit and tacit knowledge are both shared for self-interest, while their third classification is motivated by moral obligations. Wasko and Faraj (2000) have classified three perspectives (Table 2-1) of knowledge. (1) Knowledge as an object: the idea that knowledge can exist independently of human action and perceptions. It can be codified and separated from the minds of people and is viewed as a property of the organization. This knowledge is similar to explicit knowledge. (2) Knowledge embedded in individuals: this kind of knowledge is inseparable from people, difficult to articulate and can be increased through organization learning. This knowledge is similar to tacit knowledge. (3) Knowledge embedded in community (communal knowledge): this perspective states that knowing and learning is connected to activity and practice. Knowledge is embedded in a community; thus, this public good can be maintained, by open discussion through for example, s. Knowledge is seen as a public good and created in the community. Knowledge is shifted from personal value to the possession and value of the community/organization (Hendriks, 1999). The latter classification indicates that knowledge is created and maintained in the community through active communication and knowledge sharing.

Since both tacit and communal knowledge are unique and context-specific knowledge that both need (informal) communication and interaction for its dissemination through for example a CoP, this research will take on a combination of the two as the definition of knowledge. However, the main valuable difference between the two classifications is that communal knowledge is known as a public possession, encouraging employees not to keep knowledge to themselves and develop new knowledge by intensive communication. Thus, knowledge in this research will be defined as, “personal knowledge is unique knowledge embedded in employees’ experiences and skills, that needs communication and interaction for its dissemination through for example a CoP. For knowledge to be optimally shared and disseminated through the organization, it must be viewed upon as a public good instead of as a personal value.”

EXPLICIT KNOWLEDGE	TACIT KNOWLEDGE	COMMUNAL KNOWLEDGE
Easily transferrable	Abstract knowledge	Knowledge is connected to a community
Can be codified	Imbedded in experiences, skills, context specific	Connected to activity, practice and skills
Organization's possession	Individual's possession	Context specific
		Public possession

Table 2-1. A classification of knowledge

2.2 Defining knowledge sharing

To fully utilize the knowledge base, organizations need to exploit already existing knowledge-based resources and need to consider how to transfer expertise from one employee to another (Wang & Noe, 2010). Knowledge does not add any value, unless it is shared and/or put to use (Xiang, Lu & Gupta, 2013). According to Gaál et al. (2015), knowledge sharing is the process by which knowledge of individuals is converted into a form that can be understood and used by other individuals (Ipe, 2003). Through knowledge sharing, employees can contribute to knowledge application, innovation, and ultimately the competitive advantage of the organization (Wang & Noe, 2010).

2.2.1 The outcomes of knowledge sharing

By sharing knowledge, employees convert possessed knowledge into a form that is understandable by others and therefore go through a process of understanding and learning. Knowledge sharing leads to individual learning as well as organizational growth. The following paragraph will describe the outcomes of knowledge sharing and explain why knowledge (sharing) is beneficial to the organization and employee.

1 KNOWLEDGE SHARING AND ORGANIZATIONAL GROWTH

Because of the competitive dynamics of today, many well-known organizations have been forced upon continuity of growth and others have been taken over by their competitors when failing this challenge. The purpose of growth is not a higher market share but to increase the firm's value in the long-term (Canals, 2001). Organizational growth is considered as an important measure for organizational performance (Salojarvi, Furu & Sveiby, 2004). According to Canals (2001), successful

growth lies in the companies' people, the capabilities and knowledge they have to offer. Studies have shown that organizational growth depends on the efficiency and effectiveness of knowledge management practices. With greater knowledge management skills, of which knowledge sharing is a key element, companies are able to use and apply knowledge better to increase organizational performance (Yusof, 2012). A learning and growing organization is an organization skilled at creating, transferring and retaining knowledge and more importantly, learn from new insights resulting from online knowledge sharing and subsequently change behaviour of employees aiming at continuous growth (Garvin, 2000). Standardized processes such as products and services can be copied, but an organization that is able to learn and develop more rapidly than the competition, can innovate, endure and remain its leading market share. To build a knowledge driven-organization, organizations needs to not only share but also actively apply new knowledge, by creating concrete steps to knowledge sharing and implementation (Garvin, 1993).

2 KNOWLEDGE SHARING AND LEARNING

Besides organizational growth, learning and development is a core element of knowledge sharing. Organizations that are effective at learning have developed routines for effectively developing, sharing, storing and applying new knowledge on a systematic and daily basis. Organizational learning has been viewed as routine based and is defined as a regular pattern of interactions among individuals that permits the transfer, recombination, or creation of specialized knowledge (Dyer & Nobeoka, 2000). These routines are known as the capability to manage knowledge flows (Dyer & Nobeoka, 2000). Organizational learning has been seen as the goal and outcome of knowledge management. By motivating knowledge sharing, knowledge management systems can help to continuously embed knowledge into the organization, leading to economic and competitive growth (King, 2009). Also, knowledge sharing enables organizations to keep the individual learning flowing (Yang, 2007). Although knowledge sharing has been recognized as an important element of organizational learning, the individual learning process of knowledge sharing has noticeably received less attention in research. According to Antonova and Gurova (2006), there are two types of individuals in the process of knowledge sharing: knowledge seekers, those who are searching for knowledge and knowledge sources, and knowledge sharers; those who own the knowledge and are willing to share. Not only do employees engage in a learning process when receiving knowledge, the act of sharing knowledge leads to an individual learning process as well (Wang & Noe, 2010).

3 THE LEARNING PROCESS IN KNOWLEDGE SHARING

In order to share knowledge, employees need to externalize their knowledge. When employees want to share and verbally express their knowledge, they need to fully understand it themselves. The externalization of knowledge requires deeper thinking, processing and clarification. To share knowledge, employees need to participate in mental efforts that can lead to a learning process. This process of

externalization causes deepening of own knowledge. By sharing and receiving knowledge and the interconnections between old (possessed) and new (received) knowledge, employees are able to expand their own and the organization's knowledge base by creating new ideas and insights (Sigala & Chalkiti; 2015; Wang & Noe, 2010). For knowledge sharing to take place, there must be an exchange. The received knowledge is information that is framed and formulated by the original knowledge owner. Although this knowledge comes from the original knowledge owner, the received knowledge is not the same as it goes through a process of interpretation and is then framed by the receiver's knowledge and identity. Thus, new insights and ideas are created (Sharratt & Usoro, 2003). Knowledge is developed in the community through active communication and thus, communal knowledge is developed (Wasko & Faraj, 2000).

2.3 Facilitating online knowledge sharing

Online collaboration between employees is challenged with the efficient and effective flow of communication since they depend on online technologies that make communication possible (Akgun et al., 2016). CoPs have not only played a role in knowledge sharing and organizational learning on the work floor, organizations have started to use them for online, dispersed communities as well. Different members of the organization with various backgrounds, status, expertise, ideas, skills and motivations can collaborate, share and create new knowledge. Of course, these communities do not run without any challenges. The following part will describe, define and discuss CoPs.

2.3.1 Defining communities of practice

In the dominant work of Wegner (2000), CoPs have been described as the basic building blocks of a social learning system. CoPs are first defined as 'an activity system about which participants share understandings concerning what they are doing and what that means in their lives and for their community' by Lave and Wenger as cited in Matusov, Bell and Rogoff (1994). The researchers have introduced the topic in relation to situated learning within organizations. They state that learning should be viewed as a feature of membership in a community of practice (Matusov et al., 1994). Brown and Duguid (1991) state that workplace learning is best understood in terms of the communities being formed or joined and personal identities being formed. According to them, learning means becoming a practitioner and not learning about practice. Understanding and interpretation is not explicit and is framed in a communal context. This process of becoming a member of a community is also known as legitimate peripheral participation. Less experienced employees participate in a community of experienced employees. Learning in this case, involves becoming a member of a community and learning to be active in the community (Lave & Wenger, 1991). These communities offer members of larger organizations the opportunity to step outside the organization's core view, so they can adapt to changes in the environment and innovate by sharing and building upon each other's' knowledge (Brown & Duguid, 1991).

According to Wegner (2000), CoPs exist of three elements. (1) Joint enterprise: members are bound together by their collectively developed understanding of what the community is about. To successfully contribute to the community, members need to know the organization well enough. (2) Mutual engagement: a community is built through mutual engagement. Members need to establish norms and relationships through interaction. To engage in these communities, members need to trust and be trusted as a partner. (3) Shared repertoire: members need to have a shared repertoire of communal resources. For example, common language, routines, styles etc. Also, members need to be able to use it properly. These factors are needed to participate in a community in which knowledge is shared.

2.3.2 Types of communities of practice

As is mentioned before, CoPs are not only 'traditional' communities that are formed on the workplace to learn and work together, online CoPs are now used for communication, discussion, as well as for cooperation and the coordination of dispersed employees. The existence of these online communities is enabled with the help of enterprise social networks, online programmes that are used by organizations or they are enabled by a more general form of online communication media: social media.

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1 SOCIAL MEDIA

The Internet enabled employees to exchange information and knowledge inexpensively and changed the scope, boundaries and dynamics of social interaction (Chang & Chuang, 2011). The Internet created new opportunities and worked as support for existing work practices and created new business possibilities. Also, it enhances employee productivity since it supports individual communication that is unrestricted by time or space (Cheung, Chang & Lai, 2000). There has been a change in internal communication. To publish organizational content online and communicate with employees, social and digital communication technologies such as blogs, forums and social networking sites are used (Kline & Alex-Brown, 2013). Large organizations such as Intel, Dell and Starbucks have taken on such tools for employee engagement. According to Mantymaki and Riemer (2016), enterprise social networking allows employees to communicate messages with particular employees, point out particular employees as communication partners, post texts and view messages. It can bring benefits to knowledge management and sharing through increased communication. Social network systems have moved beyond the realm of personal applications and are becoming fully integrated with organizational and collaboration practices (Mathiesen & Fielt, 2013). As knowledge sharing creates value for organizations, many organizations have chosen enterprise social software as an approach to knowledge sharing (Amidi et al., 2015). While earlier collaboration technologies were merely for explicit knowledge sharing through data and databases, new approaches focus on the communicative aspects and take knowledge in action perspective (Mathiesen & Fielt, 2013).

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2 ENTERPRISE SOCIAL NETWORKS

Web 2.0 applications have found their way into corporate practice. The demand for corporate social software to support knowledge sharing and collaboration has increased (Riemer, Overfeld, Scifleet & Richter, 2012). Enterprise social networks such as Yammer and Chatter are private, internal networks and are developed with the aim of enabling collaboration across different structures within an organization (Awolusi, 2012). These informal networks make effective collaboration possible by promoting employee's visibility and enabling open discussion. Through these networks, management of knowledge is possible as well (Awolusi, 2012). Employees can communicate, post and edit messages, and view other's contribution. Forums will enhance communication and discussions (Leonardi, 2014). Merely the implementation of technology and social software does not precipitate its usage. True usage only manifests when employees make sense of and incorporate them in daily work routines (Riemer et al., 2012). The higher the perceived usefulness, the stronger the intention for knowledge sharing will be (Behringer & Sassenberg, 2015). Despite the large amount of research on social networks and its adoption, there has been a tendency to de-contextualize individual adoption of enterprise social network (Riemer et al., 2012). Thus, influences from the context are neglected when researching individual adoption. Indicating that the adoption process is not only influenced by personal drivers but also by pressures from the organizational context (management) and from other individuals (colleagues, group members).

The rise of enterprise social software has added greater flexibility to CoPs. Enterprise social software stands apart from conventional systems through its ease of usage and usefully relevant features (Antonius et al., 2015). Social networking sites such as Facebook, Twitter and Linked-in gained popularity among organizations due to its increased usage by employees and organizations are experimenting with the implementation of such networks for business operations (Awolusi, 2012). However, unlike these public social media sites, where a user's online connections are mostly associated with their offline connections, enterprise social software enables connections between users who do not interact offline (Leonardi, 2014). The wide reach of connections beyond direct work group members enables knowledge sharing, communication and learning with various colleagues. Thus, connecting organizational members from all levels and backgrounds makes a wider reach for knowledge sharing possible enabling integration of different point of views, levels, cultures etc. (Leonardi, 2014).

2.4 Characteristics of knowledge sharing in online communities

Conversation is possible when it is framed by a context, for example a certain topic, a goal created by the organization or a shared vision about an activity that exists between participators. It facilitates the transfer and development of more deeply rooted tacit knowledge. Although lacking the benefits of face-to-face interaction, online environments give organizations a chance for faster pace of exchanges,

network-effectiveness, high performance and it is cost reducing. Online environments can extend resources and knowledge by connecting people with a diversity of experiences and skills and is not restricted by time or physical separation (Gera, 2013). Online discussions are more accessible to the community and therefore knowledge can reach more employees (Sharratt & Usoro, 2003).

Despite these advantages, online communication does not contain the frequency and depth, as does face-to-face communication. Organizational members interpret shared knowledge through personal biases that may lead to miscommunication or misinterpretations. This becomes more complex as online communication lacks the opportunity to utilize verbal and non-verbal feedback or confirmation (Gera, 2013). Individual struggles such as misinterpretations of meaning or emotions of others may lead to conflict and negatively influence knowledge-sharing intentions. Also, to participate in online knowledge sharing, members of the organizations need to know and understand technology. Learning how to express oneself professionally and emotionally and to understand other's emotions via technology takes time and effort (Heller, Laurito, Johnson, Martin, Fitzpatrick and Sundin, 2010).

2.5 Enablers of online knowledge sharing

After exploring and discussing all relevant constructs to the research problem, the following paragraphs will look at several theories that have been adapted to understand the enablers and motivators of knowledge sharing and their inter-relationships. This chapter begins with explaining how performance takes place and what leads employees to performing a certain behaviour by discussing the theory of planned behaviour, the Triandis model and the AMO model. Both the theory of planned behaviour and the Triandis model explain behaviour by including the construct intention/willingness. These theories are chosen because online knowledge sharing is characterized as an extra-role task and self-organizing (Fang and Chiu, 2009), therefore employees' willingness/intention to share knowledge takes an important role in the development of a research model for online knowledge sharing. The AMO model explains the inter-relationships of the constructs. Thus, the following question will be answered: what are the enablers of online knowledge sharing?

2.5.1 Theory of planned behaviour

This theory (Figure 2-1) adopts a rational decision-making approach to performing behaviour and believes that human behaviour is a process of making deliberate choices, choosing highest expected benefits. The main idea of the theory is that intentions lead to actual performance. Intentions capture the motivational factors that influence behaviour and indicate how hard a person is willing try and how much effort they are willing to put into preforming the behaviour (Hughes, 2007). The stronger the intention, the more likely the person is going to perform the behaviour. The theorists discuss three beliefs that influence intentions: attitude, subjective norms and perceived behavioural control. A subjective norm refers to the perceived social pressure to perform or not to perform behaviour. The more favorable these

social influences are, the stronger the intentions to perform behaviour will be. Also, the employees must perceive that it is possible to act. Perceived behavioural control refers to people's perception of the ease or difficulty to perform the behaviour. Their personal confidence will strongly influence the perceived behavioural control. Both intentions and perceived behavioural control can be used to directly predict behaviour. Similar to intentions, perceived behavioural control can be used to predict the probability of successful behaviour. Even with high intentions, a person with low behaviour control is less likely to perform the behaviour (Ajzen, 1991; McDonald, 2014).

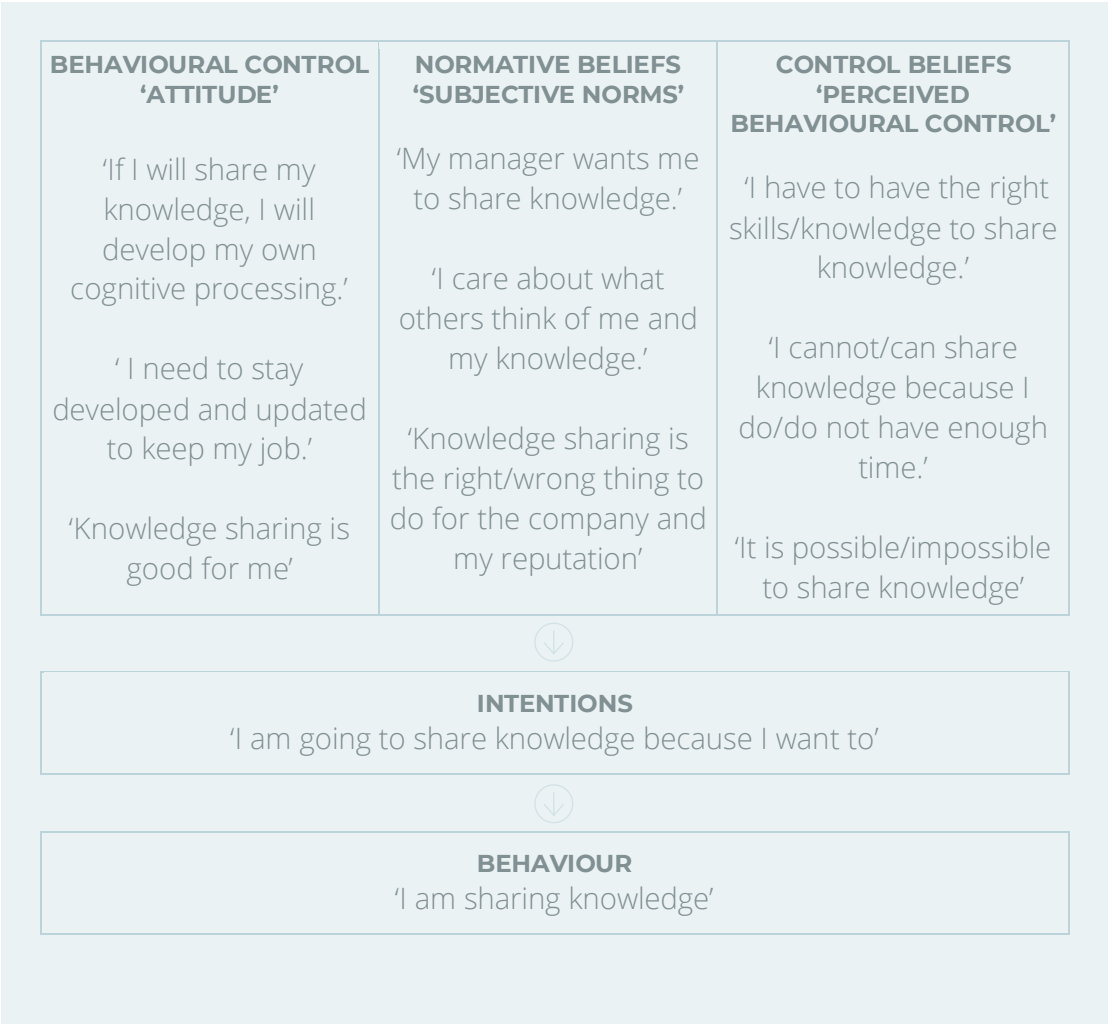


Figure 2-1. Theory of planned behaviour

2.5.2 The Triandis model

The Triandis model (Figure 2-2) is adapted by researches to understand a broad range of determinants of behaviour. Similar to the theory of planned behaviour, the core idea of this theory is that motivations influence a person's intention to perform behaviour, and, in turn, these intentions may lead to actual behaviour. Intentions are determined by the individual's attitude and emotions toward the behaviour and their social norms. Social norms are perceived rules about what is appropriate to

do. An employee's attitude is rational thoughts and beliefs about the outcomes of the behaviour. Affect is un-conscious responses toward a particular behaviour (McDonald, 2014). This theory extends the theory of planned behaviour as it recognized that behaviour is not always rational. The non-rational factors habit and emotive dimensions indicate that human behaviour is not fully deliberative, nor automatic. It provides a realistic view of how employees come to performing behaviour. Behaviour is determined by intentions, habits and facilitating conditions which are environment and situational skills and constraints. The theory indicates that, without facilitating factors, behaviour will not happen and thus is a prerequisite (Tamjidyamcholo et al., 2014). Facilitating factors are found to be important for active knowledge sharing in CoPs (Jeon et al., 2011; Tamjidyamcholo et al., 2014).

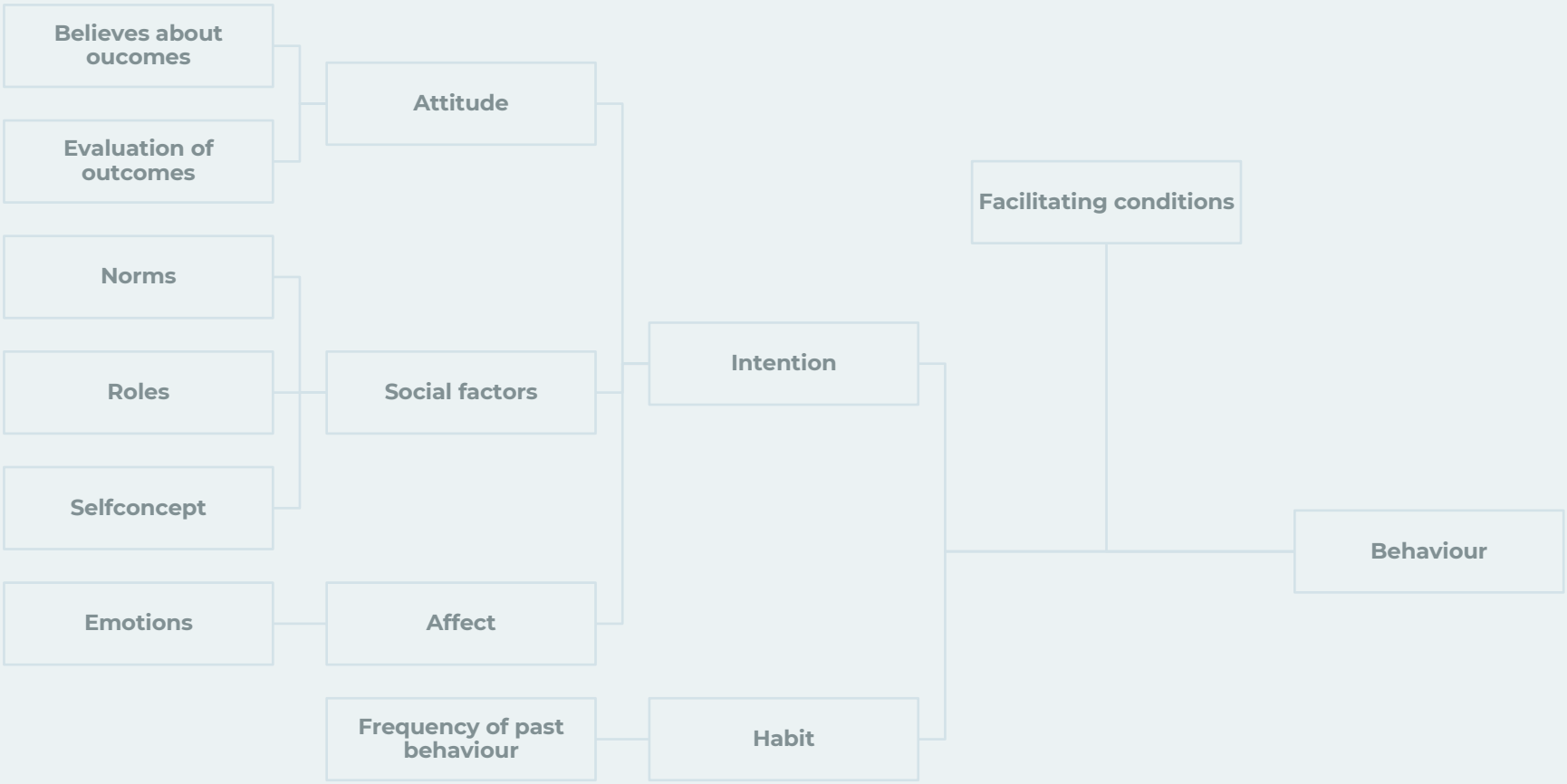


Figure 2-2. The Triandis model

2.5.3 The AMO model

Although these theories explain how people come to performing behaviour, they do not explain how the constructs motivations, intention and behaviour can have various relationships and thus have different effects on behaviour. The Ability, Motivation and Opportunity model (AMO) (Figure 2-3) addresses the constructs' relationships in several ways (Hughes, 2007). According to Subramony (2009), bundles of HRM practices that are synergistic and lead to one specific behaviour or performance have a greater influence on performance of organizations than practices alone. This is because individual practices to enhance knowledge sharing can support each other and create combined synergistic effects. Small bundles of HRM practices focused on enhancing or enabling a specific workforce characteristic, in this case knowledge sharing ,might have more advantages than multiple practices. Examples of these advantages are; lower costs and sufficient time for integration. According to the theory, most HRM practices have synergistic and performance enhancing effects when they are combined into three categories: ability enhancing bundles, motivation enhancing bundles and opportunity enhancing bundles.

The AMO model discusses that all employee performances are a function of the ability and the opportunity to perform, and the motivation to do so. This theory is used to address factors that influence people's choices about performing behaviour. The theory, designed by studies of behaviour, can be applied across various disciplines due to the generality of the three concepts. Its validity lays on the internal structure of the theory self. The usage and theories attached to it will determine its usefulness (Hughes, 2007). As cited in Sterling and Boxall (2013), Blumberg and Pringle (1982) demonstrated the importance of opportunity in the model of motivation and ability. To perform, employees need resources such as technology and time. These factors are now accepted as mediators in any model of HRM (Sterling & Boxall, 2013).

Although these separate factors have been applied at the individual level of analysis, the relation of these three factors have been discussed throughout literature as well (Argote, McEvily & Reagans, 2013). Different relationships between the factors have been suggested: the additive model, the combination model and the multiplicative model (Kim, Pathak & Werner, 2015). The additive model assumes that each variable contributes independently to performance. The combination model indicates that ability is a prerequisite for performance and that motivation and opportunity can only help in presence of ability. Lastly, the multiplicative model shows that the three factors operate in a complementary or interactive manner. None dimension can operate solely, all three must be present. Compared to the other two models, this model indicates that each dimension supports the other two (AxMxO). The results of the research of Kim et al. (2015) supported the multiplicative model, indicating that performance is highest when all three factors are high. Although the theory has been used in different ways, according to Hughes (2007), the explanatory power increases when ability and opportunity (i.e., facilitating conditions (The Triandis model) and perceived behaviour control (the theory of planned behaviour)) are

considered as moderating factors. These two constructs will then address situational (opportunity) and individual differences (ability) among employees.

Figure 2-3. The AMO model

2.6 Motivators of online knowledge sharing

To elaborate on the motivational aspects of online knowledge sharing, the following chapter will outline external influencers. As is shown by Wegner (2000) and Riemer et al. (2012), external aspects are considered to be highly influential for sharing knowledge in online communities. Employees can share context specific and appropriate knowledge when they are aware of each other's knowledge and capabilities and have a common interpretation of goals. Therefore, The Transactive Memory System will be explained and its role in online communities will be discussed. Such a system is created through social interaction (Chen, Li, Clark & Dietrich, 2013; Xiang et al., 2013). The social capital theory explains what and how relational, structural and cognitive aspects influence intentions toward the behaviour. Thus, this chapter will answer the following question: what are the motivators of online knowledge sharing?

2.6.1 Transactive memory system

The Transactive Memory System theory (TMS) has been used to explain the importance of a shared understanding of who knows what within a community. Wegner (1987) defined TMS as "a team level knowledge holding structure, where various knowledge possessed by individual team members is stored and connected through the shared awareness about who-knows-what within the team." By knowing what knowledge the group possesses and by being able to identify its location, members can anticipate on knowledge needs and plan knowledge sharing behaviours accordingly (Chen, Li, Clark & Dietrich, 2013). The ease of knowledge sharing between employees increases with the level of shared understanding about the team, task and technology (Robert, Dennis & Ahuja, 2008). By being able to predict and understand the behaviour of others by common interpretation of goals and capability of others, employees can anticipate by sharing the appropriate knowledge (Xiang et al., 2013). This shared mental model is formed through social interaction among employees (Yi, 2006). Communication is a critical mechanism of

TMS. By communicating and exchanging knowledge, patterns of interactions and information networks are created. Increased coordination within the team reduces uncertainties about interactions. Employees will feel more confident in their ability to utilize their information network and share their knowledge when they experience that shared knowledge is utilized effectively. However, online communities are challenged with developing such TMS. Due to the lack of face-to-face communication in online communities, misunderstandings about the team, task or technology are more likely to happen, challenging the development of a TMS (Akgun et al., 2006). Also, when shared knowledge is utilized effectively, employees may feel valued or recognized for their expertise. However, in an online community, it is hard to learn whether shared knowledge is used or implemented outside the virtual community. Thus, when team members are familiar with each other, personal knowledge is more likely to become part of their communication (Ellis, Porter & Wolverton, 2012).

2.6.2 Social capital theory

Online communities are social networks in which people interact to share information and knowledge and engage in social interactions. It is these social interactions and relations that sustain such communities (Chiu et al., 2006). The Social Capital theory has been used to explain the role of relational resources in knowledge sharing activities (Hau et al., 2013). It has emerged as a popular concept and its value has been recognized since it inspires firms to stimulate coordination among employees (Widén-Wulff & Ginman, 2004). The social capital, which is the sum of the actual and potential resources of knowledge throughout the network of relationships, consists of structural, cognitive and relational dimensions (Hau et al., 2013). (1) The structural dimension deals with the pattern of relationships and connections found within the organization. (2) The cognitive dimension describes to what extent employees within the organization share the same perspective or understanding of the tasks and goals. A shared language is of importance in this dimension. (3) Lastly, the relational dimension concerns the nature of the relations and connections. Trust, norms and identification are important aspects (Chang & Chuang, 2011). An organization's social capital can promote knowledge sharing among employees through common values and by enabling them to build trust (Hung, Durcikova, Lai & Lin, 2011). According to Chiu et al. (2006), an individuals' behaviour is a product of their social network: through close interactions, employees are able to increase the depth of knowledge exchange. Wei, Zheng & Zhang (2011) showed that the employee's network position, such as social distance and sharing the same social environment affect their knowledge transfer.

Despite the importance of social interaction, Chiu et al. (2006) showed an insignificant relation between social ties and the quality of shared knowledge. Quality is measured by relevance, ease of understanding and completeness. This indicates that employees are less concerned about the quality of knowledge when their social ties are strong, only the quantity is increased. Employees are concerned with the quality of shared knowledge in case of trust, shared language and vision. Anticipating on the social capital dimensions, Hau et al. (2013), showed that the

cognitive dimension positively influences the knowledge quality. When shared language and vision are present, employees may be more concerned about the quality of their contribution.

Social capital is important for online communities; yet, it is hard to develop in online communities. Stable relationships, norms and trust may be difficult to develop due to the variation in communication partners and communication goals. Participants constantly change over time. Important antecedents for creating a social capital are stability of the group, interdependence and interaction between participators. Yet, these antecedents are challenged by the changing characteristic of online communities (Wagner, 2014). An overview of the previously discussed theories is given in Table 2-2.

THEORY OF PLANNED BEHAVIOUR	TRIANDIS MODEL	AMO MODEL	SOCIAL CAPITAL / TMS
Behaviour is determined by intentions	Behaviour is determined by intentions, habit and facilitating factors	Behaviour is determined by motivations, ability and opportunity	Behaviour is determined by relational, structural and cognitive dimension
Perceived Behavioural control can directly determine Behaviour when realistic	Intentions are influenced by attitude, social factors and affect	All three equally and directly influence Behaviour	Shared vision and language have most influence on quality of shared knowledge
Intentions are determined by attitude and subjective norms	Combines rational factors and non-rational factors	Explains the relationship between motivation and Behaviour	Knowledge sharing is easy with shared understanding of the community's knowledge, task and technology

Table 2-2. An overview of theories

2.7 An integration of theories

Finally, after learning and reviewing literature about the key concepts of the research problem and outlining success factors (enablers and motivators) for online knowledge sharing, the factors and reviewed literature will be analyzed and integrated into a model to explore their interplay. The elements of the analyzed

theories will be divided into the intention towards online knowledge sharing, as well as enablers and motivators of knowledge sharing. Enablers and motivators are then divided into sub-categories.

2.7.1 Enablers

Comparing the theory of planned behaviour, the Triandis model and the AMO model, all three explain factors leading to performing behaviour. The theory of planned behaviour and the Triandis model both explain that intentions leading to behaviour must be motivated and that behaviour must be enabled. The Triandis model identifies the enablers as employees' skills and environmental constraints (or environmental enablers), while the theory of planned behaviour mentions them as perceived behavioural control. Which means that despite it is realistic or nor, employees must perceive the behaviour is possible to perform and not difficult. Therefore, in both cases, it must be enabled by enhancing the ability (enhancing talent and skills) to share knowledge and the possibility (providing time and technology) to do so. Building upon this, the AMO model shows the importance of the enablers (opportunity and ability) beside motivations and indicates that the higher these factors are, the better the performance will be. However, also shown is that the explanatory power of the AMO model increases when ability and opportunity are considered as moderating factors instead of direct influences on performance: they will address situational (opportunity) and individual differences (ability) among employees. These individual characteristics are highly important in online knowledge sharing (Wang & Noe, 2010). Also, compared to the Triandis model, the AMO model does not capture the intention construct explicitly but includes them as willpower in the motivation construct. Motivations are considered to directly influence a particular behaviour (Hughes, 2007). However, since knowledge is stored in an individual's brain, sharing can only occur when the knowledge owner is motivated to do so (Xiang et al., 2013). Knowledge belongs to the individuals; therefore, knowledge sharing in virtual communities is far from spontaneous (Chang & Chuang, 2011). Knowledge sharing is mostly a voluntarily and extra-role task, therefore, the intention (willingness) to share knowledge is a prerequisite and must be influenced by motivators. Therefore, intentions and motivations will be approached as two separate constructs in the research model and facilitating conditions will be a moderator to increase the explanatory power of the research model. The base of the model will be as follows:

- Intentions lead to actual behaviour and must be influenced by motivations. Knowledge sharing must be enabled through ability and opportunity (facilitating conditions) (Figure 2-4 and 2-5).
- Ability and opportunity are considered as moderating factors in-between knowledge sharing and intentions to address individual and situational differences among employees (Figure 2-4 and 2-5).

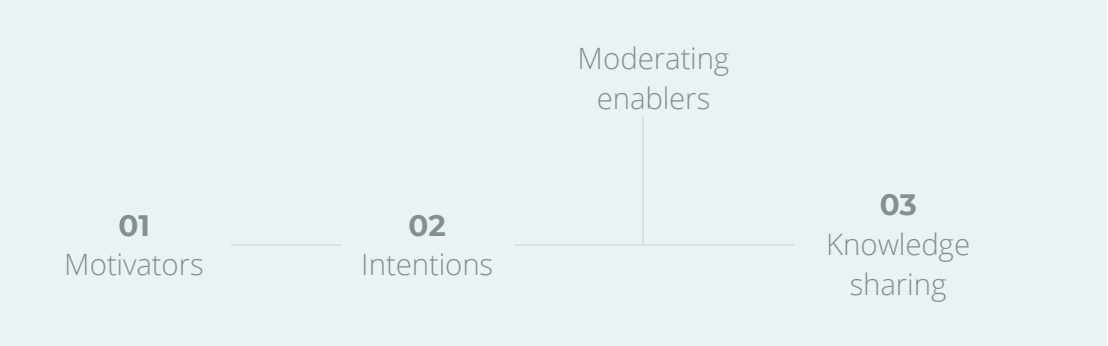


Figure 2-4. The base of the research model

2.7.2 Motivators

The following paragraphs will describe the motivators of the research model. The analyzed theories indicated the importance of two factors: individual motivators and contextual motivators. This explains that motivation comes from the surrounding and context in which knowledge is shared, as well as personal factors of employees.

1 INDIVIDUAL (RATIONAL AND NON-RATIONAL)

As is mentioned in the Triandis model and the theory of planned behaviour, employees' attitude toward knowledge sharing play a role in their intentions toward the behaviour and depend on the perception or expectation of profits and losses of their contribution. Individuals will participate in a virtual community when the perceived benefits outweigh the loss of knowledge (Chang & Chuang, 2011). Employees are less willing to share personal knowledge when they fear to lose unique intellectual property (Dhanaraj, 2004; Wang & Wang, 2012; Wasko & Faraj, 2000; Xiang et al., 2013). The Triandis model than adds non-rational constructs to the rational construct attitude to indicate that behaviour is not fully rational. By adding the habit and emotion constructs, it shows that behaviour is not fully deliberative (choices are led by emotions and habits one has), nor automatic. Therefore, individual motivators are important in improving participation in online knowledge sharing:

– The model must contain (portray) individual motivators that are rational (perceived benefits) and non-rational (habit and emotions) to portrait a realistic view of how employees perform behaviour (Figure 2-5).

2 CONTEXTUAL

Lastly, both the Triandis model and the theory of planned behaviour show that external influences play a role in whether an employee is intended to perform behaviour. The theory of TMS shows the importance of understanding behaviours of others by having a common interpretation of goals and capabilities of others. Since this can help employees to anticipate by sharing the appropriate knowledge. When employees are familiar with each other, they will feel more confident in using

their information network and tacit knowledge becomes part of their communication. Because of the dispersed characteristic of time and space of online communities where face-to-face interaction is limited, as well as the diversity of members in expertise, status and cultural background, online communities are often challenged with establishing a shared understanding for efficient flow of knowledge. To meet these challenges, structure and clarification is needed by establishing common views and goals by the managerial department of the organization (Akgun et al., 2006; Zakaria, Amelinckx & Wilemon, 2004). The social capital theory shows the importance of relationships among employees, shared language, common value and norms to build trust for enabling knowledge sharing. According to Law & Ngai (2008), organizations that aim to facilitate a learning organization need to create supportive environments in which learning and exchanging knowledge can take place. Organizations' cultural norm can encourage employees to participate in knowledge sharing (Wasko & Faraj, 2000). True participation in online communities only manifests when it is fully incorporated into daily processes (Behringer & Sassenberg, 2015; Riemer et al., 2012)

- Organizations need to encourage employees' common context (common goals, views, norms and language) to increase quantity and depth of knowledge sharing (Figure 2-5).
- Organizations must create a supportive environment in which online knowledge sharing and take place and in which online knowledge sharing is integrated in daily work processes (Figure 2-5).
- Individual behaviour is a product of their social network: through close interaction, employees are able to increase the depths of their knowledge sharing. The depth, pattern and structure of relationships among employees can increase or decrease the depths of knowledge sharing (Figure 2-5).

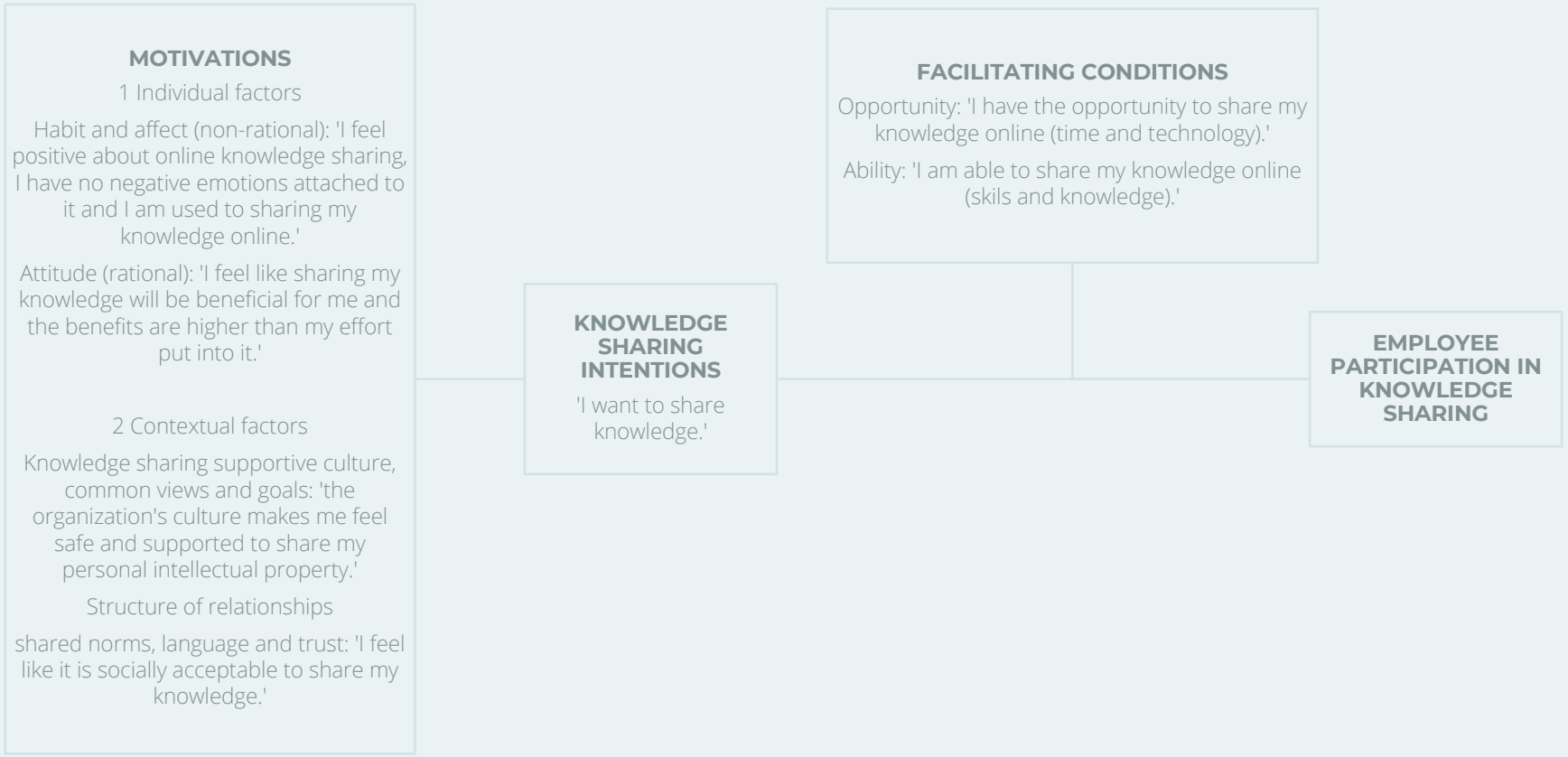
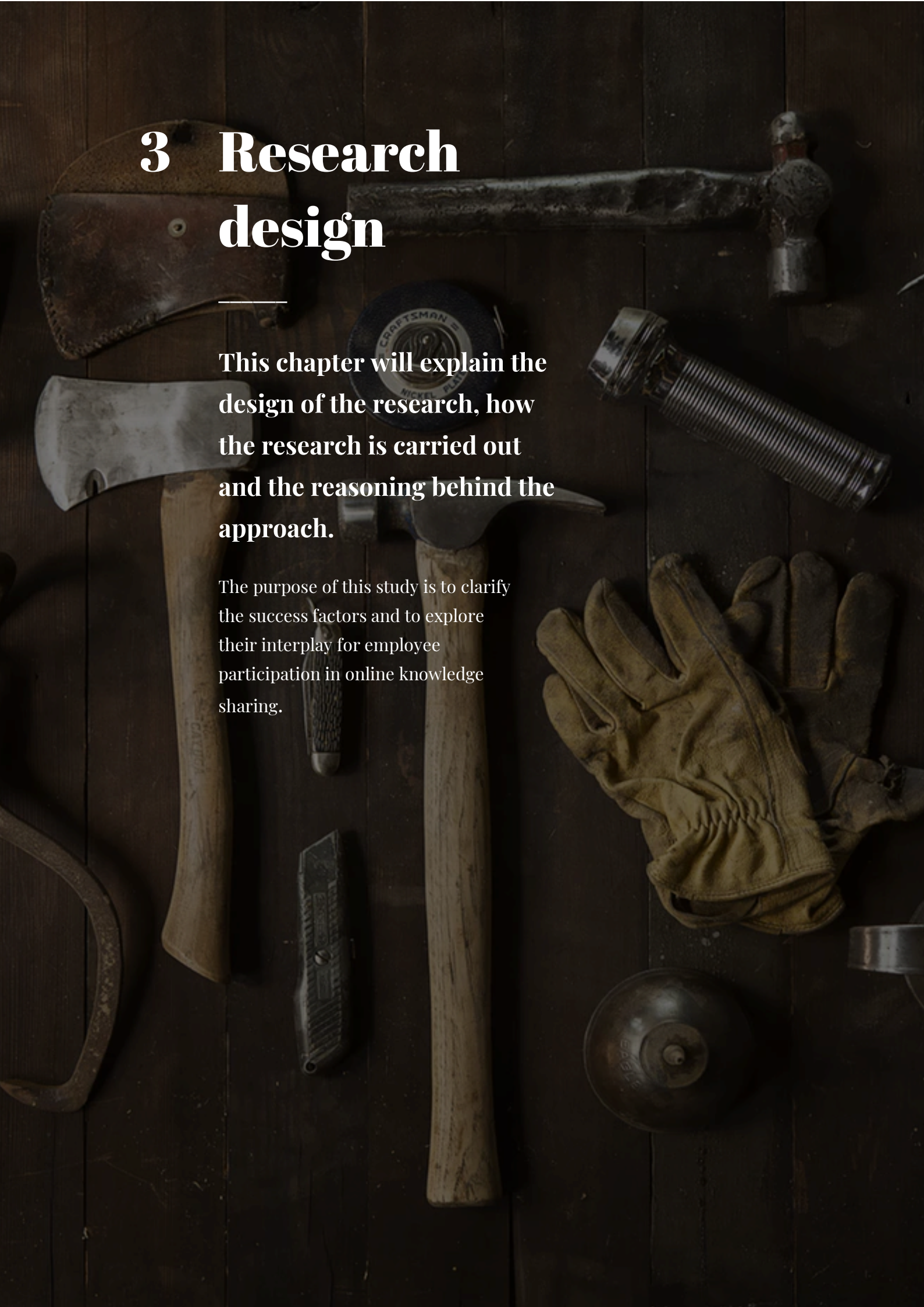


Figure 2-5. The research model



3 Research design

This chapter will explain the design of the research, how the research is carried out and the reasoning behind the approach.

The purpose of this study is to clarify the success factors and to explore their interplay for employee participation in online knowledge sharing.

The study aims to develop practical knowledge to support organizational management in understanding how to successfully manage, enable and motivate the flow of knowledge in an online community to create value for both the organization and its members: organizational growth and learning through constant circulation of knowledge. The research question is an open and exploratory question. Therefore, a qualitative research method will be applied to answer the question. A qualitative approach to this study can cater for an in-depth view in online knowledge sharing practices. The desire for better understanding of triggers for the knowledge sharing efforts and their interplay of employees, has led to an exploratory research design (Babbie, 2007).

3.1 Respondents

To gain an improved understanding of the motivators and enablers of participating in online knowledge sharing, knowledgeable and experienced experts of online knowledge sharing will be interviewed. These interviewees (Table 3-1) are chosen for their practical knowledge and experience, for which their knowledge can be combined with academic theory to develop a research model. By doing so, the research model provides new theory from an academic and practical point of view.

The respondents are HR-managers of firms that have adopted knowledge sharing practices and of which their HR-managers are experienced with guiding, implementing or managing online knowledge sharing, knowledge sharing tools or online communities for internal communication. Also interviewed are consultants knowledgeable and experienced with online knowledge sharing as well as knowledgeable influencers and writers on the field of knowledge sharing, knowledge management and knowledge sharing tools.

Respondents are personally contacted via phone or e-mail, during which the interview's reasoning is shared with the respondents. Depending on the respondent's place of residence, the interview is held via skype or face-to-face. The number of respondents will be determined by the respondents willing to take part in the study and the saturation point (Babbie, 2007). The saturation point has led to 10 participants. Due to their privacy, the participants are categorized as follows: experts, HR managers and consultants.

PARTICIPANT	CHARACTERISTICS
Expert 1	Public speaker, writer and consultant in social online tools
Expert 2	Influencer, public speaker and writer
Expert 3	Public speaker, writer and consultant
HR manager 1	Knowledge online technology manager
HR manager 2	HR director
HR manager 3	HR lead
Consultant 1	Internal online community consultant
Consultant 2	HR consultant
Consultant 3	HR consultant

Table 3-1. An overview of participants

3.2 Instrumentation

Little amount of qualitative research has been conducted to investigate influencing factors of participation in knowledge sharing in online communities (Wang & Noe, 2010). Belief-based measures can provide insight into the cognitive foundation underlying perceptions. Semi-structured interviews are performed and allowed for possibility for probes: requesting elaboration of answers when needed (Babbie, 2007). Meaning that the interviews are flexible and have the ability to adapt the interview's direction when new insights appear. As face-to-face interviews were preferred, it can deal with the context in which respondents are thinking and acting (Babbie, 2007). In the literature review, critical success factors were found. A model was developed which showed the inter-relationships of the factors leading to participation in online knowledge sharing. With the performed interviews for this study, the success factors are tested and therefore validated (Babbie, 2007). However, to avoid bias, during the interviews, the interviewer's presence should not affect the respondent's perception of the question and the interviewer must be neutral when questions and answers are transmitted. To increase reliability, the interviewer must avoid random error, by for example misreading question (Babbie, 2007).

A questionnaire is developed for gaining an improved understanding of employee participation in online knowledge sharing. The research model showed the importance of motivations, enablers and intentions. The interview questions (Table 3-2) are based on these three factors. First, the general view of online knowledge sharing of the participants in explored to create an understanding of the context (example question 1). Then, a general view of successful online knowledge sharing is

explored (example question 2). To explore the field of enablers of and intentions towards online knowledge sharing, bare minimum prerequisites for online knowledge sharing are asked (example question 3), as well as the difference between enabling and motivating online knowledge sharing in practice (example question 4). Also, questions about the motivators (contextual and individual) were asked (example question 5, 6, 7 and 8). Lastly, questions about the role of the organization in online knowledge sharing is asked for a better understanding of this factor and the context (example question 9) (appendix 1). On average, each interview took 60 minutes to complete. This depended on the length and the interviewees' answers. The face-to-face interviews are recorded with a voice-recorder and the skype-interviews via software to record sound and image. The recorded interviews were digitally transcribed.

#	TOPIC	QUESTION
1	General view of OKS	How does online knowledge sharing differ from face-to-face knowledge sharing in practice?
2	General view of successful OKS	What is your view on successful online knowledge sharing? What does this look like?
3	Enablers of OKS	What factors are most important in enabling OKS?/ How is OKS enabled in practice?
4	Difference between enablers and motivators	In practice, how does enabling OKS differ from motivating OKS?
5	Motivations	How is motivation built in OKS among employees?
6	Motivations - contextual	What factors play a role in contextual motivation to participate in OKS?
7	Motivations - Individual	How do individual factors play a role in OKS intentions?
8	Motivations - individual	What individual factors influence online knowledge sharing intentions the most?
9	Context / role of organization	What is the role/responsibility of the organization in online knowledge sharing?

Table 3-2. Example questions of the performed interviews

3.3 Data analysis

To make sense of the data and to highlight the important findings, on a basic level, the interviews are digitally transcribed, coded and classified into categories by scanning data for repetition of words. On a higher level of analysis, the results are analyzed, relationships are identified and differences are compared. Also, the results are compared to findings of literature. These results will be discussed and will cater for a basis for the new research model that is presented.

4 Results

This chapter is organized according to the first objective of this study, which is to create a better understanding of the field of online knowledge sharing, its success factors and the interplay among the factors.

First in section 4.1, definitions and different approaches toward online knowledge sharing will be presented for a better conceptual understanding of online knowledge sharing.

Then, section 4.2 will show why and how online knowledge sharing has advantages compared to face-to-face knowledge sharing. In line with the theoretical framework, paragraph 4.3 will point out analysis' resulting enabling factors for online knowledge sharing. Lastly, 4.4 will elaborate on the identified motivators after analyzing the results of the interviews.

4.1 Definition of online knowledge sharing

The results of the performed interviews showed that the definition of online knowledge sharing, unlike in academic works, is unclear among the organizations that have participated in this study. While academic works showed different categorizations of knowledge and knowledge sharing, it appears that a clear definition is still unidentified by the HR managers and consultants. Analysis of the interviews performed with managers of the participated organizations (HR managers 1, 2 and 3), exposed that online knowledge sharing is accepted as an important tool for business creation and organizational development. Organizations show that they have recognized employees' knowledge and communication as valuable assets for innovation. Yet, online knowledge sharing is and remains an extra-role activity as "employees are losing themselves in work" and their agenda's do not allow for "online chatting sessions" (HR manager 3) since their main goal is to create profit in as little time as possible. Therefore, managing and exploitation of this field remains low as theory (the known benefits of online knowledge sharing and the wish for it to be practiced) and actual daily practice remain inconsistent.

Even though the value of online knowledge sharing appears to be clear, a grey area that remains among the organizations that have participated in this study is the definition of online knowledge sharing. As literature describes knowledge sharing as the process in which knowledge of individuals is converted into a form that can be understood and used by other individuals (Ipe, 2003), actual understanding of the conceptual term of online knowledge sharing remains undecided. A frequently asked (or perhaps reflecting) question after participants explain online activities of their employees is; "what actually is online knowledge sharing?" While organizations are still unraveling the true definition of online knowledge sharing, the experts participating in this study are far beyond this phase as becomes apparent from the following example: as expert 3 states that "knowledge comes to die in email conversation", actual practice shows that organizations are very accepting toward creating email groups and using email conversation for online knowledge sharing and mention this as an example of a successful form of online knowledge sharing. Strikingly, experts describe online knowledge sharing as a much more complex 'phenomena'. "Online is where knowledge has a life beyond the individual person and for which communities, processes and strategies have to be created (expert 3)." Active management, engagement and stimulation are key factors in online knowledge sharing. Analysis showed different views and approaches toward facilitating, enabling and motivating the flow of online knowledge sharing. The following sections (4.3 and 4.4) will elaborate on the different views and approaches.

4.1.1 Advantages of online versus to f2f knowledge sharing

In the interviews performed for this study, it becomes clear that online knowledge sharing is still often compared to face-to-face knowledge sharing. As is already mentioned, analysis showed that online is where knowledge has a life beyond the individual person (expert 3): "knowledge can be easily captured, it can reach many people, it can be made searchable, people can learn from it and people have better access to it (expert 2)." "It is concise and straight to the point (expert 4)." Online knowledge sharing creates the opportunity to interact with people outside of your direct workgroups, which may lead to new ideas and innovation. Online knowledge sharing is, compared to face-to-face knowledge sharing, less confronting (expert 2 and 3). Personality characteristics play less of a role and thus online conversations will flourish that may not have in face-to-face situations. Since online communities are more equalizing, there is less of chance for negative first impressions; factors such as race, appearances and hierarchy are less likely to hinder any possible conversation (HR manager 3). On the other hand, analysis showed the perception of online knowledge sharing and the quality of the shared knowledge differs among the participants. Where some participants state that face-to-face knowledge sharing produces higher quality knowledge due to clear patterns of communication and human factors such as mimic (expert 2, HR managers 1, 2 and 3, consultants 1 and 2), others state that employees are able to discuss matters of higher complexity online because of the wide reach of experts and other employees, thus, more divers input may lead to a more dynamic conversation (expert 3 and 4). Also, face-to-face conversation is of temporal nature and ends more quickly, while online conversation is not bound to time (a temporal) nor place.

4.2 Enablers

Throughout the interviews, it has become clear that beside motivating, online knowledge sharing has to be enabled. The following paragraphs (4.3.1 and 4.3.2) will show the identified enablers (intention and facilitators) and will elaborate on them. Thus, the following research question will be answered: what are the key enablers of online knowledge sharing?

4.2.1 Intention

According to the theory of planned behaviour and The Triandis model, the intention of an employee to share knowledge, is what actually leads to knowledge sharing. Intention means, according to The Cambridge Dictionary (2018): "something that you want and plan to do." However, throughout the conducted interviews, respondents have mentioned purpose as a highly important factor when it comes to online knowledge sharing. According to expert 2 and 3, employees need to have a purpose for online knowledge sharing, without it; it is not going to take place. Online knowledge sharing needs to have value to it. In face-to-face situations, it is clear why an employee should share their knowledge. For example, in meetings, everybody is sharing something; there is a clear communication pattern. Employees can anticipate and participate by sharing their personal knowledge. Naturally and most typically, employees want to help and support each other (expert 1). Online, there

are many reasons not to share. Employees might not visit the online community, the fear of negative responses or building a record might interfere with the intention to share knowledge. "Those are things you will have to overcome as a company and motivation to get employees sharing is important. Without motivation, people will just choose the easier course; which is not to post. Motivation tends to address that; it means, here are reasons why you should share (expert 2)." Motivational factors such as the willingness to help each other, gain new knowledge or be rewarded gives employees a purpose for online knowledge sharing.

4.2.2 Facilitators (ability and opportunity)

As is mentioned by HR manager 2: "we don't reward the process of online knowledge sharing, we merely facilitate the process." Throughout the interviews, the facilitating role of the organization has been mentioned as an important factor in enabling online knowledge sharing. Even with high intentions, employees cannot participate in online knowledge sharing activities without the opportunity or ability to do so, thus the facilitating factors play the role of a moderator between online knowledge sharing intentions and actual online knowledge sharing. The following paragraphs will elaborate on these two factors.

1 TECHNOLOGY USE

Evidently, technology is a crucial part of online knowledge sharing. Analysis demonstrated that technology is an important enabler for employees to take part in online knowledge sharing whereas it can cater as an accessible tool for online communication. Therefore, technology has been mentioned throughout all interviews. However, its role and its importance are evidently different among the organizations. Expert 1 and 3 mention that the focus in online knowledge sharing practices and research is too much on technology, facilitating it does not mean that people will use it. "Technology adoption is a problem on its own and should have its own research (expert 3)." The characteristics of an online tool such as efficiency and ease to use are important. However, as becomes clear from analysis: "chosen tools are often tools that lay outside of the daily work routine and therefore usage can be limited (HR manager 2)." Unlike familiar social media channels such as Linked-in or Twitter, when not integrated into daily work routines, corporate social media often asks for extra effort to take part in online knowledge sharing activities. Therefore, only the very motivated will engage in such activities.

Analysis showed that the usage is far more important. Users need explicit and concrete reasons about what it can be used for and technology-use needs to be embedded in daily work routines. According to expert 3, "organizations should not invent the wheel themselves, but should look for ways to replace traditional communication with online discussion and posts." Users need to understand the software and need to be familiar with it. It is only then when employees can use the tool and participate in online conversation. Also, merely providing tools and instructing employees to use it is not enough. Employees need to learn how and why online tools can be incorporated into daily work processes for efficient and

effective usage on day-to-day basis. Employees need to be explained why certain tools are more effective compared to alternatives (expert 2). True usage only manifests when employees make sense of and incorporate them in daily work routines (Riemer et al., 2012).

2 ONLINE KNOWLEDGE SHARING AND JOB DESIGN

One of the challenges of increasing online knowledge sharing activities among employees is that it is often an extra-role task. Therefore, the question of how online knowledge sharing can be enabled has been proposed and answered by most respondents with the following answers. Online knowledge sharing needs to be integrated into employees' daily work, so it becomes part of their job. It has to be so that it is not an addition to their work. The key is to embed online knowledge sharing into work processes to the degree that it is not perceived as extra work. This can be done by for example replacing traditional ways of communication with online communication (expert 2). HR manager 2 explains that their organization incorporates knowledge sharing 'duties' in their promotional levels. The feeling of responsibility for online knowledge sharing grows with the growth in promotional levels. The higher in level, the more responsibility employees have and as stated by HR manager 2, "people take these responsibilities seriously and are active in knowledge sharing because their 'job' tells them to do so." "I don't have time for it means that other activities are more important" (HR manager 3)." Meaning that if online knowledge sharing is not incorporated into daily work processes or not incorporated into their job description, employees will not recognize it importance and will most likely not participate in online knowledge sharing activities since their 'job' doesn't tell them to do so and no time is reserved for it.

4.3 Motivators

According to expert 2: "you can enable knowledge sharing but motivation is necessary when employees do not want to share knowledge. This is a significant challenge in online knowledge sharing." Motivations have been mentioned throughout the interviews. "Behaviour takes place in case of ability and opportunity but the willingness (intention) to perform is highly important as well (consultant 1)." This intention can be increased by internal and external stimulating factors, also known as motivation (Business dictionary, 2018). The following paragraph will outline the identified motivators in the interviews. The constructs identified through the theoretical framework are: contextual (external) factors and personal factors. The constructs have appeared in the interviews, however analysis also implied for new factors such as online communities and explicit motivation. This paragraph will begin with showing the results of the external factors 'characteristics of online communities', 'contextual factors' and 'explicit motivations'. Followed by 'personal motivations'. Thus, the following research question will be answered: what are the key motivators of online knowledge sharing?

4.3.1 Characteristics of online communities

Missing in the theoretical framework, analysis of the interviews implied that beside the technology used, the online community which the employee takes part in plays an important role in active engagement in online knowledge sharing as well. Factors contributing to the success of online communities can be divided into three separate categories: the members of the online communities, communication characteristics within online communities and the purpose of online communities. Important characteristics of the members of an online community that may interfere or stimulate online knowledge sharing and conversion have been mentioned. First of all, knowledge needs to reach the right people (consultant 2). Meaning that the online community or group in which the knowledge is shared needs to be composed of people who can utilize the knowledge, have interest in or are willing to learn about the topic (expert 3). In a diverse online community in which knowledge is shared, a discussion can be sparked off with different experts, knowledge levels or point of views. However, this also means that difficult (expert level) topics will be harder to discuss because all members have different expertise (consultant 2). According to consultant 3, employees prefer to be part of special interest groups instead of large online communities when knowledge is shared or discussed about a specific topic.

Employees will often choose the most efficient and effective way of communicating. Therefore, one of the prerequisites for online knowledge sharing is that it has to be easy and fast. It needs to be timely. The more specific the shared knowledge or question is, the easier it is for other employees to respond in a little amount of time (timely matter) (expert 4). When responding takes little time, the more feasible it will be to go online and share knowledge. Clear communication is therefore an important factor. Another factor that can influence communication within online communities is communication moderation. Because online communication deals with a lot more complexities, the presence of a moderator or facilitator can be beneficial. Why? A moderator enables the flow of knowledge to occur however it needs. By giving direction or asking the right questions, he or she can help people to get out of the conversation what they need, enabling people to effectively and efficiently use the time they have for online communication (expert 4, consultant 3). An online community takes time and effort to grow and needs responsibility of employees to help its development (expert 3). When communicating, employees need to learn and know that knowledge sharing is meaningful and functional. By showing others you have already tried different ways to find the answer to your question, responding and sharing knowledge becomes more meaningful and therefore more reasonable (consultant 1, expert 4). It gives employees a purpose to share their knowledge.

Lastly, the purpose of the community is highly important in attracting employees to participate. When the online community has a clear purpose that is relatable to employees, they will be more likely to spend their time online and participate in conversation (expert 4). “The subject area of the community must be relevant to all employees, so they have a purpose to share their knowledge”. However, according

to consultant 3, a wide variety of topics, but still relevant to everyday tasks, will attract different employees and thus will create a dynamic online knowledge sharing community. Notably, according to expert 4, with new topics to all employees, employees are much more likely and find it easier to share their knowledge and start conversation. “A new topic to all members will increase the success of a community. It opens conversations, there are no embarrassments. Because the topic is new to everybody, you are not supposed to know everything. Employees need new knowledge and are willing to learn. In such cases, perceived negative consequences play less of a role (expert 4).”

4.3.2 Contextual factors

Familiarity and trust among participants is a highly discussed topic, with mainly the same thought that these factors determine employee participation and employees’ feeling of safety for participating in online conversation: “people need to feel and know that it is safe to use the online community, without the trust factor, nobody will share their knowledge (expert 2).” However, other state that “trust does not play a role in online knowledge sharing, knowledge sharing is purely functional. If employees have something useful to share, they will. No outside factors can influence this process (HR manager 3 and consultant 1).” According to expert 4, the level of trust, which causes people to feel safe to communicate, is harder to develop and maintain in online communities. An important factor for this feeling of trust and safety is the organizational culture. According to HR manager 1, the culture of the organization is one of the most important factors that will lead to online knowledge sharing among employees. The culture of the organization must be so that it does not impede with employees’ willingness to share their knowledge. To achieve this, organizations need to undergo a change of culture: while earlier employees believed that having knowledge and keeping knowledge leads to power, a change of culture will lead to employees realizing that knowledge sharing leads to multiplying knowledge, personal development and organizational development.

According to HR manager 1, a ‘flat’ culture of an organization in which all employees are equal to one another encourages employees to share their knowledge and to portray themselves as experts. The responsibility of the organization in online knowledge sharing is creating a culture and an environment, in which people feel confident enough to ask and answer questions (expert 1). Organizations can do this through leading by example. When management uses the online community for their communication, it gives the image that it is safe to share knowledge online (expert 2). “Show how things are ought to be done. If management want employees to share their knowledge online, show them how to do it.” Many online communities fail because of perceived negative consequences of online knowledge sharing. According to expert 1, organizations can motivate employees to share their knowledge, but can also remove any obstacles from employees that are showing inclination to sharing their knowledge. This kind of culture needs to express: by sharing your knowledge, one does not lose its value. It means that one has to keep learning and developing to stay relevant (expert 5, HR manager 2 and 3). Thus, it should carry the characteristics of an ongoing learning and development culture.

According to HR manager 3, an organizational culture that stimulates online knowledge sharing carries a common sense that together, as an organization, department, team etc., we know more than as an individual. Sharing your knowledge and receiving knowledge will lead to a successful career. Employees are expected to continuously develop their knowledge, therefore communication with other employees is an important factor. This kind of culture emphasizes that collaboration among employees is important to achieve success in your work (HR manager 2). Explained by the TMS theory, a shared language and common understanding of online knowledge sharing and organizational goals creates an organizational culture in which online knowledge sharing is supported and encouraged and therefore carried out by employees.

Remarkably, analysis of the interviews showed that social factors are less determining in online knowledge sharing than expected. Analysis implied that the role of the organizational culture has a larger impact on online knowledge sharing intentions of employees. However, a few social factors have been mentioned multiple times. One of the mentioned social difficulties of online knowledge sharing is the lack of understanding of context and background of other employees. Interaction among employees is more likely to occur when they personally know each other (consultant 2). "When employees engage with a person online, they have to have some shared context to be able to make sense out of what they're sharing or what they are asking (expert 4)." This comes through relationships and trust, knowing where the other person is coming from. In case of good relationships and trust, employees are more likely to make time out of their limited time to share their precious knowledge with others." When employees are familiar with each other, they often prefer to personally ask, face-to-face or by phone, for information they need or when they need to share something. However, in case of unfamiliarity due to for example physical distance, employees are ought to use online tools for communication. In such cases, growth of community feeling or 'cohesion' plays a role in online knowledge sharing (HR manager 2). "A community feeling can be achieved by interaction. It is far more than physically being close to each other. It is about creating experiences together." As is shown by the Social Capital theory, it is the characteristics of relationships among employees that are important, not the number of social contacts or how often employees interact (Chiu et al., 2006).

Many online communities fail because of negative social pressure or perceived negative social consequences of online knowledge sharing (expert 1). In online communities it is important to create a safe surrounding in which employees feel safe to share their knowledge, interact and make mistakes. "You have to find ways to stimulate online relationship growth between employees, as would happen offline. Good personal relationships will cater for good virtual relationships. You have to figure out ways to understand each other, to see each other as people that we have empathy for, the more likely we are motivated to share (expert 2)." "Growing a community is like growing a garden, not starting a machine. It is organic and very challenging (expert 3)."

However, social pressure exists both positively and negatively. When employees are sharing their knowledge online, or responding to a post, others might feel the pressure to respond as well. Also, online is where personality characteristics and negative first impressions based on for example appearances or race, are less likely to hinder knowledge sharing intentions due to the equalizing characteristic of online communities (expert 2, 3 and HR manager 3).

4.3.3 Explicit motivation

Missing in the theoretical framework of this study, analysis of the interviews implied that explicit motivation: conscious, verbal and strategic stimuli coming from the management or organization itself, can play an important part in stimulating online knowledge sharing. Even though this form of motivation is essential, interviewees are brief in explaining how it is executed. This explicit or extrinsic motivation can be divided into two categories: communication from the management and rewards and recognition.

According to expert 2, as an addition to a positive, supportive environment, employees are more likely to share knowledge in presence of explicit motivation in forms of goals, measurements and rewards. “Positive reinforcements such as positive responds from management or direct leaders, are motivating.” Also, “employees do what they get paid for: if management wants employees to share knowledge, they have to make it part of the job (HR manager 2).”

Beside rewards and recognition, online knowledge sharing is more likely to be performed when expectations about the activity is clearly communicated by the management of the organization. “Employees have responsibilities in online knowledge sharing but they have to be defined by the organization. Assuming employees will share knowledge will not lead to actual online knowledge sharing. Expectations need to be clear, in form of formal goals, messages or communication from the management (expert 2).” Clear expectations can be, for example, asking for examples of shared knowledge and its result during evaluation talks.

However, according to HR manager 3, when online knowledge sharing is in the DNA of the organization, rewards or even punishment is not needed. Clarifying that the organizational culture is more determining than these forms of explicit motivation. HR manager 3 explains that the process of online knowledge sharing is not rewarded, only the positive outcomes. For example, new business. Also, according to expert 2, with extrinsic rewards, the quality of shared knowledge will be less.

4.3.4 Individual factors

Intrinsic motivations mentioned throughout the interviews can be divided into three categories. Firstly, employees have the human nature to be willing to help and support each other and therefore, willing to share their knowledge or respond to questions in online communities when they see a chance to help each other (expert 1 and 2). However, reasons not to share knowledge are often present and may

hamper online knowledge sharing intentions. Management is responsible for removing these obstacles (expert 1).

Secondly, according to HR manager 1, a change in intrinsic motivation has taken place in commercial organizations. Employees' and organizations' focus on the profit made and the bonuses coming out of performance, has changed into a focus on creating new business. This willingness to be successful needs cooperation and communication with other employees and conjoins the third intrinsic motivation which is the willingness to share knowledge and learn for personal (knowledge) development (HR manager 2 and 3). According to HR manager 1, employees' productivity is determined by receiving rewards, new experiences and new knowledge. From these three, knowledge is unique in every organization and therefore a valuable tool organizational and personal development.

5 Discussion

As described in the introduction, the problem statement indicated a need for a deeper understanding of the interplay of success factors of online knowledge sharing.

A review of academic literature has showed several enablers and motivators important for online knowledge sharing, which were then merged into a research model. This research model explains how intention, facilitating conditions and motivational factors interplay in online knowledge sharing behaviour.

Through the analysis of the performed interviews, the success factors are reconsidered and therefore validated. This chapter will discuss the significance of the research findings compared to the literature review and research model, as well as describing new understandings or insights of the research problem that have emerged after reviewing the findings of this research. This chapter will start off with reviewing the analyzed success factors and interplay among them, followed by presenting a new, post-analysis research model.

5.1 definition of online knowledge sharing

Through the analysis of the results, it appears that online knowledge sharing is considered as a valuable tool for organizational growth, however, results also showed that exploitation of this field remains low. The question asked by the participated organizations, 'what actually is online knowledge sharing?' might depict its current role in organizations. Results have shown that online knowledge sharing has various roles and levels of importance among the organizations. This could be explained due to the absence of clear definitions or the lack of having a clear idea of what online knowledge sharing is. Analysis indicated that organizations invest more time in face-to-face knowledge sharing. This form of communication is more familiar and the outcomes of, for example, face-to-face meetings are clear. Conversely, the importance and beneficial outcomes of online knowledge sharing compared to face-to-face knowledge sharing is unclear and the act remains as only an 'extra' task. Different stands in, views of or used conceptions of the activity can alter its importance. Without a clear idea of what online knowledge sharing is, or what role it can take on in organizational growth, organizations might be less likely to implement such activities.

Corresponding to this analysis, the results have shown that online knowledge sharing is often an extra-role task but has also shown (by the interviewed online knowledge sharing experts) that this field needs to be defined, explored and decided upon where management can support already existing online knowledge sharing attempts. Experts on the online knowledge-sharing topic have shown that organizations can lever online knowledge sharing results when it is actively stimulated and reasons not to participate in the activity are actively limited by organizational management. Employees will share knowledge and naturally be willing to help each other. However, without active management, many reasons can keep employees from sharing their knowledge or may limit the actual beneficial outcome of online knowledge sharing, which is: organizational growth. Adding to this, no clear categorization of knowledge is used, and knowledge is not differentiated in practice. Unlike the previously discussed categorizations of knowledge in academic works, this could indicate that the classification of knowledge does not play a role in practice. However, while not pronounced by the interviewees, it is clear that online knowledge sharing efforts are mostly for sharing unique and useable knowledge to spread the knowledge in the organization, which resembles mostly tacit knowledge. Also, knowledge is converted from a personal good to a communal good.

5.2 The success factors of online knowledge sharing

This paragraph will discuss the identified success factors of online knowledge sharing. Firstly, the enablers of online knowledge sharing will be discussed. While the results of the study showed a clear indication of what the enablers are, analysis also showed contradictory results and indicated for a discussion. For example, the construct intention showed different results compared to academic literature and analysis implied for a new construct 'purpose'. Secondly, the motivating factors will be discussed in paragraph (4.2.2).

5.2.1 What are the key enablers of online knowledge sharing?

1 FACILITATING CONDITIONS

The theory of planned behaviour explained the importance of the perceived behavioural control. Employees need the perception that it is easy and possible to act (Ajzen, 1991). Thus, they need to be able to and have the possibility to act (Subramony, 2009). The results of the analysis have explained the importance of the ability and opportunity in online knowledge sharing from a practical point of view and elaborated on what the factors actually comprise.

The results of this study have implied technology (tools) and job design as important facilitating conditions (Tamjidyamcholo et al., 2014) in online knowledge sharing. Review of academic literature has shown that true usage only manifests when employees make sense of it and incorporate it into daily work routines (Riemer et al., 2012). The higher perceived usefulness is, the higher usage will be. Review of the interviews has confirmed this and indicated that employees need to understand not only how to use online tools, but also when and in what particular cases to use online tools. Employees need to understand why certain tools are effective for online communication and need direction and concrete reasons to use online knowledge sharing tools. Academic research has shown that organizations have the tendency to decontextualize individual adoption of tools, indicating that beside personal factors, external factors determine adoption as well. Therefore, clear communication and active stimulation by the organization on how and when to use online knowledge sharing tools is highly valuable in activating the behaviour. Since technology used for online knowledge takes on such an important role, many questions rise from this discussion point: how does technology use (the tools that are used and how they are used) determine the quality of shared knowledge and its outcome (implementation of knowledge, innovation etc.)? Despite the rise in popularity of enterprise social network tools, analysis of the interviews has shown that familiar tools, i.e., tools that are used in personal settings by employees, are most likely to be used by employees and are more accessible compared to enterprise social networks. Only the very motivated will go about their daily routine to use online knowledge sharing tools (this however, does not indicate that the quality of shared knowledge is higher with enterprise social network tools).

Therefore: "you have to make it so that it is not an addition to their daily work, it has to be built in so that is becomes part of their job (Expert 2)." The organizations have shown when online knowledge sharing is not incorporated into employees' job description and when not communicated that online knowledge sharing is expected, "employees will choose the easy way out, which is not to share." When employees do not have time for online knowledge sharing, it means that it is not important enough. Thus, the activity is not part of their job description or, the organization is not clear enough about it importance.

2 INTENTION

Both the theory of planned behaviour and the Triandis model explain the intention construct and indicate that intentions lead to actual performance. They capture the motivation factors that influence behaviour and indicate how hard a person is willing to put effort into performing the behaviour (Hughes, 2007). The intention construct takes on an important role in online knowledge sharing literature and its importance is explained due to the extra-role characteristic of the activity: online knowledge sharing is often not an obligatory task (Fang and Chiu, 2009), and therefore employees' willingness/intention to share their knowledge is an important prerequisite. It is these intentions that organizations can influence for the better.

Remarkably, the interviewees have not mentioned the construct 'intention' and no statements were given about the importance of the construct. The missing of the construct could imply that online knowledge sharing intentions do not play a role in the actual work field as it does in academic literature. However, analysis of the interviews showed purpose as an important prerequisite for online knowledge sharing. The question that rises is: what is the difference between intentions and purpose? The Cambridge Dictionary (2018) defines purpose as "a reason why you do something" and expert 2 stated that motivations are reasons why employees could share their knowledge online. Purpose can change and employees can have different reasons why they carry out a certain task, a reason or a why can be for example rewards, recognition, joy or fulfillment of helping others.

On the other hand, intention is defined by The Cambridge Dictionary (2018) as "something that you want and plan to do". Intention is an employee's plan or desire to do something, which can be influenced by different external and internal factors. A difference between the two could be explained as follows: while employees might have a purpose or a reason to do something, it does not always mean that employees are intended to share their knowledge. An intention, explained as a plan to do something, indicates that employees want to do something. A purpose describes a reason to share, it might be simplistic and it might be right there and then (a simple short-term purpose). For example: a colleague (the sender) posts a question in an online community and asks for immediate help. The employee (the receiver) therefore has a purpose for sharing his or her knowledge: to help the colleague. However, the receiver's knowledge sharing intention (the plan to do so)

might be influenced by several factors: the context, the environment of the online community, social pressure to share or not to share etc.

Thus, intentions might complicate the online knowledge sharing process, it might involve more steps and thinking in the process of online knowledge sharing. Practically, the value of the intention construct can be unclear. Purpose is a clear construct, relatable to all. “Motivations address intentions, it means, here are reasons why you should share your knowledge” (expert 2). Perhaps purpose is a part of the plan employees have in the intention construct.

The discussion of the difference between purpose and intention continues when behaviour is set in the light of rational behaviour (the theory of planned behaviour) versus non-rational behaviour (Triandis model). While some motivational factors such as rewards, desire to help others etc. play in on giving an employee a purpose (in this case the activity would be a rational act) for online knowledge sharing, some motivational factors do not provide a purpose and only cater for, for example, an environment in which online knowledge sharing is safe and encouraged to do so. In this case, the motivational factors play in on an employees’ non-rational behaviour.

5.2.2 What are the key motivators of online knowledge sharing?

Although the results of the interviews showed many different motivators, a clear set of important motivators have become apparent in the analysis process. While the social capital theory and the TMS explained the importance of external factors in online knowledge sharing, the theory of planned behaviour and the Triandis model showed the importance of individual factors such as emotions and habit. Thus, the research model took on 2 main motivators: external factors and internal factors. While these factors are surely confirmed by the interviews, analysis has implied for a different organization and interpretation of these motivational factors, as well as an indication for new factors. The following motivational factors have been determined by analyzing the interviews and will be discussed.

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1 CONTEXUAL FACTORS

Through analyzing academic literature, it has become clear that online knowledge sharing is a very social activity. Corresponding to this, the Social capital theory and the theory of TMS are both used to explain the role of external factors such as social interaction and relational resources in online knowledge sharing (Hau et al., 2013). However, as has become apparent from the interviews, experts and HR managers have indicated the importance of contextual factors of the organization to be more important than individual factors. The culture and the overall environment of the organization play an important role in online knowledge sharing intentions of employees. Interviewees state that organizations need to undergo a change of culture for their employees to learn that knowledge sharing leads to further development and growth of business instead of the loss of valuable personal possessions (knowledge). To grow a community in which knowledge is shared, social interaction alone does not cater for a growing community. The characteristics and

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structure of relationships are far more determining for online knowledge sharing. In order for employees to feel safe to share their knowledge or interact, they need to understand each other and good relationships need to be created online, as they do offline. However, such relationships are much more complex to develop due to the communication disadvantages of online knowledge sharing (Gera, 2013). While Wegner (2000) explains these important factors in building a knowledge sharing community, more research is needed from a practical point of view on how organizations can build such online knowledge-sharing environment and how it differs from offline environments.

2 CHARACTERISTICS OF ONLINE COMMUNITIES

Even though Wegner (2000) has shown important factors of participation in online communities, little research is carried out on specific characteristics of online communities important for online knowledge sharing. An online tool or programme alone does not cater for online knowledge sharing. Wegner (2000) has explained the existence of three important elements for communities: the collective understanding of the community, the importance of engagement, norms and relationships and lastly, the importance of shared repertoire. This study has shown that online communication and, specifically, online knowledge sharing is harder in online communities compared to face-to-face communities. The results indicated the importance of the characteristics of members (the diversity), the communication (lack of non-verbal cues and clarity of communication) and the purpose of the online community. Gera (2013), has explained that conversation is possible when it is framed by a certain context. Thus, in online communities, employees need a certain topic or purpose to engage, communicate and develop online communities. However, communication is easily misinterpreted due to the lack of non-verbal communication. Learning how to naturally express oneself via online technology takes time and effort (Heller et al., 2010).

3 INDIVIDUAL MOTIVATION

While theory showed the importance of non-rational individual factors habit and affect and the rational individual factor attitude, this research implied for a new interpretation of individual factors and has shown three main factors. Unlike theory (which defined the factors into rational and non-rational factors), the new factors can be divided into the willingness to give and the desire to take. The attitude towards online knowledge sharing depends on the perception or expectation of profits or losses of employees' contribution (Chang & Chuang, 2011), in this study, this 'take' factor is explained by the desire to be successful. Other important factors that have not been mentioned in theory, is the role of the willingness to learn. Employees who are eager to learn, are more willing to share their knowledge in order to receive knowledge or to respond to and interact with co-workers online. Lastly, the only 'give' factor is the willingness to help others. Employees are naturally intended to help co-workers (expert 1) and will do so when obstacles are limited (expert 2). In which organizations can play a role in limiting 'reasons not to share'.

4 EXPLICIT MOTIVATION

Missing in the original research model, the results of this study implied for a new important factor in online knowledge sharing: explicit motivation. Resulting from this study, it becomes clear that strategic stimuli such as rewards have different effects on employees. This study showed contradictory results concerning rewards. While employees are more likely to perform online knowledge sharing when they know they might be rewarded, the quality of shared knowledge is not any higher in this case while the quantity might be. Receiving a reward gives employees a purpose to share their knowledge. Thus, knowledge sharing is rational behaviour. Results also have shown that the organization's culture and management needs to express clear expectations and positive responding by the management are more important in online knowledge sharing, compared to rewards. Since this form of explicit motivation does not give employees a direct purpose to share knowledge, this form of motivation plays in on an employee's intention to share knowledge online.

5.3 Presenting a new research model

This paragraph will address the second objective of this study, which is to present a new research model after analyzing this study's results. The findings of this study contribute to the current academic work by providing a rich and in-depth view into success factors (enablers and motivators) of online knowledge sharing through qualitative research. To achieve this, managers of organizations, experts, writers and researchers have been interviewed. However, an even greater contribute is the exploration of the interplay among factors contributing to online knowledge sharing. The study's research model explains the interplay among facilitating conditions, intention and motivational factors.

Similar as in the research model, analysis of the interviews showed the important role of the facilitating conditions in online knowledge sharing. According to the theory of planned behaviour, the element perceived behaviour control as well as the facilitating conditions in The Triandis Model indicate that behaviour is determined by environmental and situational skills and constraints. These environmental and situational skills and constraints are translatable into the factors opportunity and ability of the AMO model and represent the presence of the needed time, skills and tools to perform online knowledge sharing. Hughes (2007) showed that the explanatory power of the facilitating conditions increases when they are considered as moderating factors. The AMO model and Tamjidyamcholo et al. (2014) show that without these facilitating conditions, employees are not able to perform behaviour. Thus, employees may have the intentions or a purpose to share, without facilitating conditions, online knowledge sharing might not occur. Therefore, facilitating conditions will be approached as moderating factors (Figure 5-1).

Also, it has become apparent that the practical role of online knowledge sharing intentions is not as clear as the role of an online knowledge sharing purpose is. A

purpose can be to help others, to gain knowledge, to be recognized by others for your knowledge or even to receive rewards for your shared knowledge. Organizations can manage those purposes by giving employees explicit motivations to share or employees can have individual reasons for online knowledge sharing. Intentions however, are more difficult to influence since these are often not 'practical' reasons why to share or not. Even though contextual factors and characteristics of online communities are harder to control, these are still determining factors for employees' online knowledge sharing intentions. Thus, the motivating factors could be divided into two categories: explicit and individual factors give employees a purpose (a direct reason) to share knowledge and contextual and the characteristics of online communities can influence online knowledge sharing intentions since they do not directly give employees a purpose to share. However, purpose is a new construct that has appeared from the results of the performed interviews. Therefore, the construct needs elaborated studies for a better understanding of its standing in this study's research model. Foremost, the construct purpose needs to be studied in comparison to knowledge sharing intentions to clarify their differences and explain what and how motivational factors influence purpose or intentions. Thus, this study will hold on to the 'old' research model and use the relationships between the factors for the new research model. The new research model shows the newly implied motivational factors and facilitating conditions. The newly developed research model (Figure 5-1) will be as follows and an overview of (and elaboration on) the success factors (i.e., motivators and enablers) is given in Table 5-1.

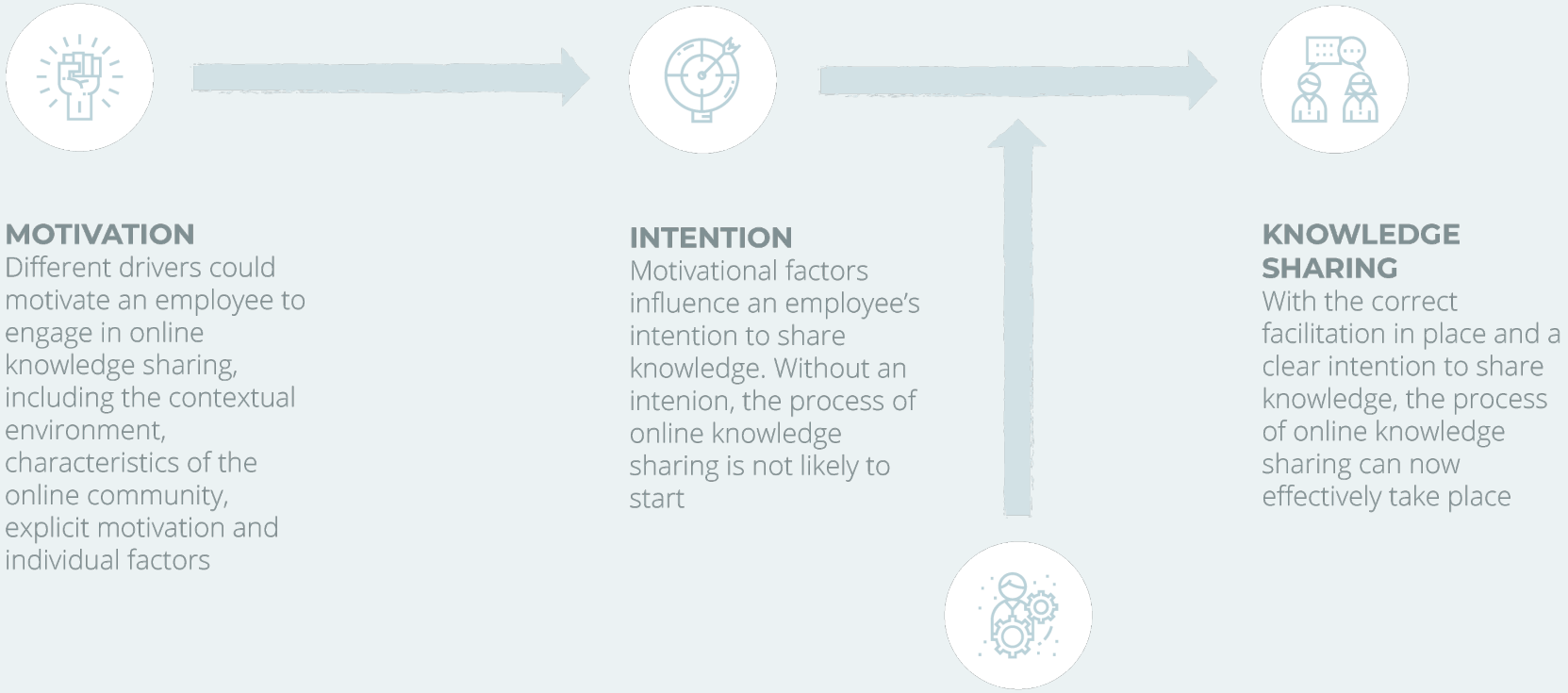

Figure 5-1. The new research model

MAIN FACTOR	SUB FACTOR	DESCRIPTION
Motivation	Contextual factors	Safe environment: Trust, familiarity with colleagues, cohesion Supportive culture: Organization positive about OKS, positive reinforcements, leading by example, ambassadors, show how employees can benefit from OKS
Motivation	Explicit motivation	Communication from management team: Clearly expressed goals and expectations for OKS Rewards and recognition: Financial rewards, positive responding, praise for positive outputs of OKS
Motivation	Characteristics of an online environment	Members: Diversity of members, sense making, knowledge needs to reach the right employees Communication: Clear and timely questions, help of moderator/facilitator, purpose/usage of knowledge is clear Purpose: Relevant topic, new topics open conversations, clear purpose of community
Motivation	Individual motivation	Willingness to help others Desire to be successful Desire to learn and share
Enabler: Facilitating condition	Technology	Features of tool: Efficient, easy to use, part of daily routine Usage: Employees need clear and concrete reasons to use online tools, employees need to understand how to use tool and to know that the tool is effective
Enabler: Facilitating condition	Job design	Integration in daily work and job description

Table 5-1. Overview of motivators and facilitating conditions

6 Practical implications

Even though online knowledge sharing is a social activity, performed from employee to employee, the results of this study have shown the important role of organizational management in enabling and motivating online knowledge sharing.

From a practical point of view, organizations can influence online knowledge sharing intentions by playing in on motivators and enable online knowledge sharing by providing the facilitating conditions.

Contextual factors are factors in the organizational environment that may influence online knowledge sharing intentions. These factors, such as safe environment and a supportive culture can be influenced by organizational management. “Provide ways to build trust, eliminate embarrassment and support employees in building relationships.” A supportive culture means that an organization “helps employees to understand the value of online knowledge sharing, lead by example (expert 2).”

Organizations can play an important role in the growth of an online community and community feelings (expert 3, HR manager 2). Adding to this, the creation of online communities is organic, development takes time and effort. Therefore, “organizations need people to help to grow the community (expert 3).” A moderator or facilitator can help enable to flow of knowledge to occur however it needs. A moderator or facilitator can help communication in online communities to flourish. Also, organizations can give employees a purpose to share knowledge. Explicit motivations are direct motivations in form of communication from management, rewards and recognition. These factors can be actively stimulated. “Merely the output of online knowledge sharing is rewarded if it has an added value for the organization. The process of online knowledge sharing is not rewarded, it is only facilitated” (HR manager 2).” The willingness to help others, the desire to be successful and the desire to learn and share knowledge are factors that may be influenced through the organizational environment, by creating learning situations or by expressing that online knowledge sharing is desired and employees will be recognized for it.

Importantly, online knowledge sharing needs to be facilitated. Organizations can play a role in providing a tool that is easy to use, efficient and lies within daily routine. Management can help employees with the usage by explaining what it can be used for and help people to understand how to use the tools. Even though technology is an important factor, merely providing it does not mean employees will actually use it. To further enable online knowledge sharing, organizations can help employees by providing the time and opportunity to share knowledge. Thus, even though management cannot determine intentions, organizations can help in motivating and enabling employees to share their knowledge online.

7 Limitations and future research

This chapter will discuss the limitations of this study and will present the future research possibilities concerning the discussion points in the previous chapter.

Firstly, the results of this study have shown that definitions of online knowledge sharing differ among organizations. Definitions are mainly based on the organization's characteristics and needs.

While this study took on a definition derived from literature, organizations' perception of online knowledge might have biased the interviewees' answers. Due to sometimes unclear definitions or the lack of a clear idea of what online knowledge sharing is, it may alter the level of importance and (therefore) may be differently approached or managed by organizations. Thus, to study online knowledge sharing in an organizational context, it is important to hold this important factor into account. Specifically, when studying the role of online knowledge sharing in organizations, management in online knowledge sharing and their effect on the performance of online knowledge sharing.

Secondly, analysis of the results has shown that organizations are unsure about the difference between online and face-to-face knowledge sharing. Future research may focus on the difference: why and how they are different, while it is more apparent how these differ in facilitators, it is important to understand how this becomes apparent in motivational factors and what the difference is of the role of the organization/management in online versus face-to-face knowledge sharing.

This study has shown and explored the interplay between the success factors as well as determining the motivational factors. However, while analyzing the motivators, it has become apparent that these separate factors might interplay and complement or may amplify each other. For a practical point of view, future research may focus on the interplay between the motivational factors and determine how they can amplify each other.

The discussion between the newly appeared construct purpose continues. While the analyzed theories and academic work only implied for online knowledge sharing intentions. It has become clear that practice mainly implies for online knowledge sharing purposes. Since purpose is a new construct, which has appeared from the results of the performed interviews, the construct needs to further be studied, especially in comparison to knowledge sharing intentions. New studies might determine which of the identified motivators might give employees a purpose to share and which play in on employees' intentions. Questions that arise are: what are the differences between these motivators and why do they differ? Also, the facilitating conditions need further research in the light of intentions and purposes. Although the results clearly implied for facilitating conditions as moderators, unclear is whether intentions or purposes would be possible without the presence of facilitating conditions.

While theory provides a good basis for research, this study has shown that theory and actual practice are almost two worlds apart. The intention construct seems to not 'live' as much in organizations as it does in academic literature. Also, while there are a clear set of motivational factors determined through the results' analysis, organizations need a more practical approach towards the motivational factors to understand how these factors play a role in day-to-day online knowledge sharing.

Even though this qualitative research might have had the limitation of a small amount interviewees and a biased view might be given by the interviewees because only one interviewee per organization has participated, the saturation point has been achieved and indicated a clear set of motivational factors, as well as explanation for the intention construct, facilitating conditions and of course, their interplay. Also, beside managers, consultants and experts have been interviewed and have provided a less biased view due to their broad experience and knowledge.

This research has implied for a research model to explain how success factors lead to online knowledge sharing by exploring their interplay. A further elaboration on this study might imply for a practical understanding of how management of organizations can influence the identified success factors such as the contextual factors of the organization or the influencing factors of the online communities. Since online knowledge sharing has become such an important activity for the development of employees and organizations, organizations have taken on online tools and have set up online knowledge sharing communities. However, these steps only do not cater for online knowledge sharing among employees. Clearly the results of this study indicated a high need of understanding among management of organizations of how online knowledge sharing among employees can be increased, as well as opportunities for further academic research. Online knowledge sharing is a social practice where valuable knowledge is spread from employee-to-employee and eventually to the organization. Thus, due to its importance, it needs to be fully understood, theoretically and foremost practically. By deepening our practical understanding of online knowledge sharing through qualitative research, we can deepen our theoretical understanding. By combining both, a better understanding is created of what practices are needed to stimulate online knowledge sharing and how these practices interplay.

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Appendix

Appendix 1

FIRST ORDER CONSTRUCT	SECOND ORDER CONSTRUCT	QUESTIONS
Online knowledge sharing: is the process of sharing personal knowledge by using an online tool or in an online community.	Successful online knowledge sharing: the process of online knowledge sharing that has come to a success. The outcome or effect of shared knowledge does not play a role.	– How does online knowledge sharing differ from face-to-face knowledge sharing in practice? – What is your view on successful online knowledge sharing? What does this look like? – Can you describe a recent success in online knowledge sharing? Why was this a success and how did you accomplish this?

Appendix 1 continued

FIRST ORDER CONSTRUCT	SECOND ORDER CONSTRUCT	QUESTIONS
Motivation: motivations are factors that determine behaviour. Motivations influence a person's intentions to perform behaviour.	Contextual factors: are the cognitive dimensions of the social capital theory. These factors resemble a shared vision and goals the organization. The importance of the organizational culture has been acknowledged for the long-term success of knowledge sharing. Individual factors: are the structural and relational dimensions of the social capital theory. Explains the importance of the pattern and relational dimension of relations among employees. Employees' network position influences knowledge sharing. Individual factors: intrinsic factors of employees that can be rational and non-rational to share their knowledge.	– How is motivation built in OKS among employees? – What is the role/responsibility of the organization in online knowledge sharing? – How can an organization build motivation in employees for sharing their knowledge online? – What is the role/responsibility of the employee in online knowledge sharing? – How do individual factors (social factors) a role in OKS intentions? Does this differ from FTF knowledge sharing? – What individual factors influence OKS the most? – What factors play a role in external motivation to participate in OKS?

Appendix 1 continued

FIRST ORDER CONSTRUCT	SECOND ORDER CONSTRUCT	QUESTIONS
Facilitating conditions: enablers of online knowledge sharing that create the ability and opportunity to share knowledge online.	Opportunity: addresses situational differences of employees. Ability: addresses personal differences between employees.	– What are the bare minimum prerequisites for online knowledge sharing? – In practice, how does enabling online knowledge sharing differ from motivating online knowledge sharing? – How can you enable online knowledge sharing? – How does enabling online knowledge sharing differ from motivating online knowledge sharing?
Knowledge sharing intentions: intentions are defined as "indications of how hard people are willing to try, of how much of an effort they are planning to exert, in order to perform the behaviour" (Hughes, 2007). Intention is determined by motivations.		The research model and thus, the motivation-intention-facilitating conditions-behaviour construct is explained. The interviewees are asked for their views upon this construct and asked how online knowledge sharing intentions play a role in practice.