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COMPARATIVE ANALYSIS OF KNOWLEDGE TRANSFER BARRIERS
FROM HEADQUARTERS TO FOREIGN SUBSIDIARIES IN A MNC

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ABSTRACT

Knowledge transfer between organizational units in international settings helps to build competitive advantage for MNCs. However, knowledge does not flow easily within the organization owing to existence of knowledge transfer impediments.

Moreover, knowledge transfer from headquarter to subsidiaries is considered as an important factor for the daughter units' successful operation. Nevertheless, the previous research presumed that knowledge transfer barriers are identical for all subsidiaries.

Therefore, there was two research questions stated in this study. The first one was focused to examine whether knowledge transfer barriers differ in the case of each subsidiary. The second one was dedicated to investigate what factors can affect this difference.

Empirical study was conducted through qualitative research method taken place in case study by means of semi-structured personal and phone interviews. There was 12 interviews organized in total: 6 with subsidiary and headquarter managers; and 6 with parent and daughter companies' employees.

The results showed that there are some barriers which will always exist between headquarter and subsidiaries, such as transmission channels, market, cultural and linguistic difference owing to the fact that it is an international transfer. On the other hand, knowledge barriers can vary due to social capital difference between parties and diverse subsidiary characteristics. Study showed that strong personal ties have significant positive effect on efficiency of knowledge transfer, trust building and relationships' formation. Research showed that such subsidiaries' specifications as difference in size, age, mode of entry, level of autonomy, and geographical distance determine a variety among knowledge transfer barriers. The results also showed the importance of efficient transmission channels, proper Human Resource Management practices and headquarter role as knowledge transfer facilitator.

KEYWORDS: Knowledge transfer, International knowledge transfer barriers, Headquarter, Subsidiaries, National culture, Subsidiary characteristics, Social capital.

1. INTRODUCTION

This section provides a background of this study; outlines a research problem which is followed by the research questions; it describes a scope of this study and explains a research structure.

1.1 Background of the study

In nowadays business world, companies consider knowledge as the most important resource which they possess. (Spender & Grant 1996; Tsoukas 1996; Spender 1996) During their business operation, companies transform knowledge into the products and services. (Kogut & Zander 1993; Grant 1996; Bou-Llusar & Seggarra-Cipres 2006) Hence, companies realize that their ability to leverage, share, and use the knowledge is a key to the success of their performance. Therefore, for many of them to identify, capture, share and utilize the knowledge has become a significant goal, because it forms a basis for competitive advantage which is then difficult to imitate by rivals. (O'Dell & Grayson 1998) However, a central problem in knowledge transfer is that knowledge doesn't flow freely in the organization, owing to existence of knowledge transfer barriers. (Kogut & Zander 1992; Szulanski 1996)

Furthermore, nowadays companies rarely operate in a single country. Often organizations are spread to different locations around the world. Thus, replication of knowledge and its successful transfer from headquarters to subsidiaries becomes critically important. (Kogut & Zander 1993) However, international knowledge transfer represents an additional challenge for companies owing to difference in national cultures and laws of those countries which result in variety of relationships between headquarter and subsidiaries. Therefore, knowledge transfer, in international settings, has become more complicated. Difference in languages, business cultures, and institutions increase a psychic distance and decrease a probability that the knowledge will be transferred across borders. (Holtbrügge & Berg 2006)

However, studies about international knowledge transfers assume that there are the same knowledge transfer barriers from headquarter to all its subsidiaries within one

MNC. Therefore, the purpose of the present study is to fill a research gap and to analyse whether knowledge transfer barriers differ between headquarter and its subsidiaries in one MNC; and what factors can affect it.

1.2 Research problem

Knowledge management topic is a relatively new one for business and academic world. Moreover, an existing research in this area mainly concentrates on either examining one type of knowledge barriers or evaluating a set of barriers in an MNC. However, this research assumes that those barriers equally exist in knowledge transfers between headquarter with all its subsidiaries. It means that an existing research doesn't assume that those barriers can differ depending on the case of each particular subsidiary within one MNC.

Therefore, the purpose of this research is to fill this research gap and add a new insight to the existing research in terms of investigating whether knowledge transfer barriers differ with each particular subsidiary within the same MNC; and what factors affect this difference. Consequently, this study brings new and significant contribution to the existing academic research.

On the other hand, this study is valuable for the business world too, because it gives more comprehensive view on knowledge transfer impediments from headquarter to its foreign subsidiaries in the same MNC; and allows understanding what factors affect this difference in knowledge transfer. Those findings can help the companies to process a knowledge transfer easier based on those factors.

Therefore, a case study is an ideal research method for an investigation of this topic, because it allows analysing a research problem raised in this study in the most effective and comprehensive manner.

1.3 Research questions

A purpose of this study is to investigate whether knowledge transfer barriers differ between headquarter and each particular subsidiary. Then, it is aimed to analyse a

magnitude of this variance; and to research the factors which affect a difference of these knowledge transfer barriers. This research specializes on knowledge transfers from headquarter located in Germany with its subsidiaries located in Belgium, Spain and Czech Republic. A theoretical framework will be based on the literature review emphasizing a description of knowledge transfer barriers existing in the MNCs, outlining the subsidiaries' characteristics, nature of their relationships with headquarter and cultural difference. An empirical research is taking place on a vertical level, where a headquarter is a knowledge sender and subsidiaries are knowledge recipients.

Therefore, the research questions of this study are:

- *To what extent knowledge transfer barriers differ across headquarter-subsidiary relationships within the same MNC?*
- *What factors explain these differences?*

Therefore, the main objective of this research is to understand to what magnitude knowledge transfer barriers can differ within the same MNC; and what are the main reasons of this difference.

Finally, the study is aimed to advise how these barriers can be overcome and provide a suggestion for the companies how a knowledge transfer from its headquarter to the subsidiaries can be handled more effectively.

1.4 A scope of the study and delimitations

A scope of this study is focused on knowledge transfer barriers from headquarters to subsidiaries. It outlines such concepts as knowledge stickiness factors and knowledge transfer barriers in the international settings; it provides the subsidiaries' characteristics, nature of their relationships with headquarter and cultural difference; it describes an effect of those characteristics on knowledge transfer effectiveness too. Moreover, the study is based on the research of a single MNC and focused on unit-level knowledge transfer. It investigates the vertical relationships between a headquarters and

subsidiaries. It researches a direct knowledge transfer which occurs from headquarter to subsidiaries. In this study, knowledge transfer occurs between headquarter and subsidiaries located in countries which belong to the European Union.

Consequently, a main delimitation of this study is that the research doesn't investigate a horizontal knowledge transfer and doesn't assume the relationships between the subsidiaries itself within the network. Furthermore, the study doesn't investigate a reverse knowledge transfer which occurs from subsidiaries to headquarter. The research doesn't assume a knowledge transfer occurring between the parties located in Eastern cultures or between European and Eastern countries.

1.5 An outline of the research structure

This study is comprised of eight chapters. Chapter 1 provides an introduction to the topic of this research. It gives an explanation of the research problem and questions, presents study's background and delimitations.

Chapter 2 and 3 contain literature review which is used for this study. In this part, main theories, concepts, terms and processes are discussed. This chapter also represents a current state of the literature and science on knowledge transfer. These chapters explain a nature of knowledge; provide two theoretical frameworks about knowledge transfer barriers; illustrate concept of social capital and its influence on knowledge transfer; represent various subsidiary's characteristics and their effect on efficient knowledge sharing process; they propose the impact of national cultural difference between headquarter and its subsidiaries on knowledge transfer process among them. At the end of Chapter 3, a summary and conceptual framework of the study that emerged from the literature review is illustrated.

Chapter 4 is concentrated on a discussion of the methodological approaches and research strategies used in the thesis. Moreover, the research methods and process of data collection, through which the research was conducted, are also presented in this part.

Chapter 5 explains the findings which occurred through the research. It includes an illustration of the results of empirical data collected through semi-structured interviews with managers and employees in both headquarter and subsidiaries. The findings were organized according to the sequence of research questions and provided the answers about whether knowledge transfer barriers differ with each particular subsidiary; and what factors affect these differences.

Chapter 6 discusses and analyzes the findings presented in Chapter 5. Similarly, this part also follows the sequence of the research questions and provides the analysis of findings according to them. In the discussion part, the findings are connected to the theoretical framework and theoretical patterns defined in Chapter 2 and 3. The findings are also explained through the earlier developed theories and observations in the literature review.

Finally, Chapter 7 provides a conclusion of this study. It also underlines the main contributions of the study and its managerial implications. It also takes a notion of the limitations of the study as well as suggestions for further research.

2. LITERATURE REVIEW

In the literature review, it is important to begin with introduction and description of knowledge concept before analysing knowledge transfer barriers.

2.1 Definition of knowledge

Knowledge as a term, can be usually confused with a word information, because sometimes they can be interpreted as synonymises. Those concepts are interrelated, but not the same. Information is facts, figures, self-evident propositions and symbols. (Kogut & Zander 1992) Information can carry a flow of messages and individuals can learn from it. However, knowledge can be created by a flow of information, depending on the commitment and belief of its holder, because information presents only a necessary medium for knowledge formation. (Nonaka 1994)

On the other hand, there are some academics who define knowledge differently. Several scholars believe that knowledge is embedded in individuals and “*expressed in regularities by which members cooperate in a social community (group, organization or network)*”. (Kogut & Zander, 1992: 383) It means that knowledge is located in the organization and its principles by which people cooperate within the firm. (Kogut & Zander, 1992) Then, the other pioneer of Knowledge Management views it as something what a firm knows in terms of “*best practices*”; and its transfer represents simultaneously the biggest value and challenge for the companies. (Szulanski 1996: 27)

However, a knowledge concept which will be used in this study is provided by one of the professionals in this field, who views knowledge as something what “*resides in the heads of the individuals*”. (Grant 1996:110) This is a new concept of understanding an operation of modern MNC, which is called “*knowledge-based view of the firm*” (Grant 1996; Spender 1996). This concept undermines that a company consists of individuals who are a prime owners of the individual knowledge, because it is created and stored in their individual minds. This knowledge is derived from their previous experiences and relations. (Tsoukas 1996) A definition of knowledge simultaneously demands a description of its characteristics.

2.2 Knowledge characteristics

There is a debate among academics about knowledge characteristics. Some scholars consider that knowledge possesses such characteristics as *codifiability*, *teachability* and *complexity*. It means that knowledge cannot be easily codified or articulated in documents. Teachability refers that knowledge cannot be easily taught to others. Finally, knowledge complexity is determined by the amount of critical elements embraced in the activity or entity. It means that knowledge is very complex in its nature. (Kogut & Zander 1993; Ruisala & Suutari 2002)

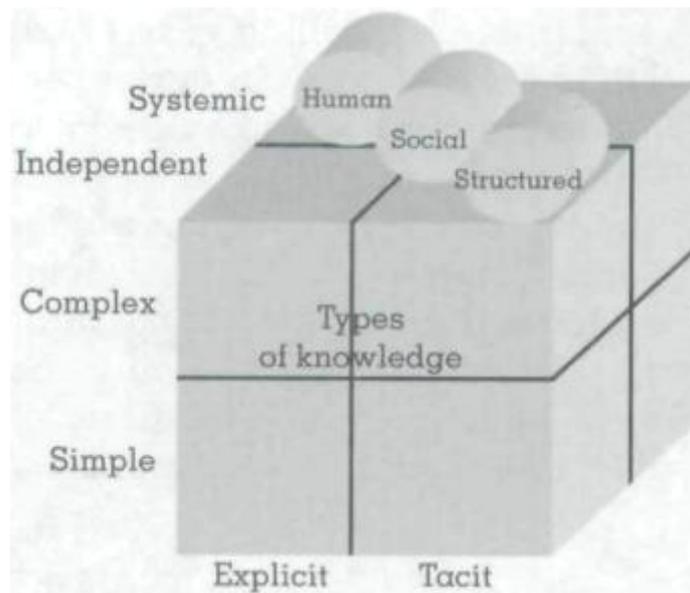
Furthermore, the scholars emphasise on two other important knowledge characteristics as being *explicit* and *tacit*. On one hand, explicit knowledge is generally formal and systematic. (Nonaka 1991) It can be communicated and codified relatively easily. (Grant 1996) On the other hand, a tacit knowledge is highly individual, difficult to formalize and communicate. It can be revealed through application and practice of specific context, like profession, technology, product, market or work group activities. (Nonaka 1991) Consequently, a transfer of tacit knowledge is slow, costly, uncertain and the most difficult one. (Grant 1996) Thus, knowledge tacitness represents one of major barriers in knowledge transfer. (Leyland 2006).

Moreover, knowledge can be embodied, in both individuals and organizational processes. An individual knowledge is stored within the minds of individuals. It is very specific for the person and its profession. It means that it depends on his/her skills, background and qualifications. (Tsoukas 1996) On the other hand, organizational knowledge is stored in manuals, scripts, standard operating procedures, routines practices, rules and forms. (Nonanka 1994) Organizational knowledge is stored in unspoken norms and beliefs of the organization too. (Cabrera & Cabrera 2002) This is a way how organizations can integrate individual knowledge into a company which will be available for public use of the whole organization. (Grant 1996; Leyland 2006) This knowledge is created within a firm. Therefore, it is unique, company specific, path dependant and very hard to imitate. (Grant 1996) Thus, the proper organization of

firms' operational principals can improve the knowledge flows, create a competitive advantage; prevent it from imitation and copy by competitors. (Kogut & Zander 1992)

Finally, there are many different authors who discuss that knowledge possesses different characteristics, like Spender (1996), Nonaka (1991), Grant (1996), Szulanski (1996), etc. However, in order to bring a consistency in knowledge interpretation, in this study, knowledge characteristics will be examined from the comprehensive model created by Bhagat & Kedia (2002). (**Figure 1**) The uniqueness of this model is that it highlights several types of knowledge, such as *-human, social, and structured*. Then, knowledge varies across dimensions of being *explicit* and *tacit*; *simple* and *complex*; *independent* and *systemic*. (Bhagat & Kedia 2002)

Figure 1: Comprehensive Model of Knowledge Types



(Source: Bhagat & Kedia 2002)

Human or individual knowledge is considered as an important skill which constitutes what individuals know. This type of knowledge is comprised of the psychological components that are stored within the individual. It can contain both explicit and tacit knowledge. *Social* knowledge is created within relationships among individuals or

groups. (Grant 1996) This type of knowledge can be available publicly, because it is embedded within the routines, culture and norms. Generally it is very tacit. (Spender 1996) A final type of knowledge is *structured* one; it resides in the organizational routines, technologies, structures. It serves as the basis for transfer of individual and social knowledge. Mainly, this type of knowledge is explicit and can exist independently from a human. (Bhagat & Kedia 2002)

Complex knowledge is characterized by creating uncertainties. It demands significant skills from both source and recipient; and big amount of information in order to share this type of knowledge accurately. (Minbaeva 2007) However, *simple* knowledge is much easier to transfer, because it requires a little information to be transmitted to the receiver. Thus, knowledge complexity already can be one of the barriers of knowledge transfer. (Bhagat & Kedia 2002)

Furthermore, the authors identify both explicit and tacit knowledge. *Explicit* knowledge is formal and systematic. (Nonaka 1991) It can be communicated and codified easily. (Grant 1996) A *tacit* knowledge is highly individual, difficult to formalize and communicate. It is hard to articulate in the formal language and express directly. (Kogut & Zander 1993) It is specific for a particular profession, technology, product, market and activities. It can be revealed through its application and practice. (Nonaka 1991) A transfer of tacit knowledge is slow, costly uncertain and the most difficult. (Grant 1996) Knowledge tacitness represents one of potential knowledge transfer barriers. (Leyland 2006).

Final knowledge features are being either *independent* or *systemic*. Those features determine an extent to which knowledge is embedded in the organizational context. *Independent* knowledge can be described by itself, whereas *systemic* knowledge is identified in a relation to body of knowledge which exists in MNC. (Bhagat et al. 2002)

In international settings, the authors argue that knowledge type is the most important component in cross-border transfer. Complex knowledge involves casual uncertainties due to its complicated nature. Therefore, it is very difficult to transfer it in cross-border

settings. Tacit knowledge is very personal and difficult to communicate. Systematic knowledge is inseparable from a knowledge body and its context. Therefore, authors state that knowledge which is tacit, complex and systematic represents the biggest challenge when a transfer takes place between different countries and cultures. (Bhagat et al. 2002; Kogut & Zander 1993)

Finally, these knowledge characteristics affect the speed of knowledge transfer as well. (Kogut & Zander 1993) It means that more complex, systematic and tacit knowledge becomes; then more slow and complicated its transfer occurs. However, it was researched that this type of knowledge represents the biggest value for the companies. (Leyland 2006). Thus, it means that more complex, systematic and tacit knowledge becomes; then there is more likelihood that it will be transferred from headquarter to the subsidiaries. Therefore, in order to make this knowledge transfer more efficient, there is a need for rich media and communication channels. (Kogut & Zander 1993; Bhagat et al. 2002)

2.3 Knowledge transfer

Knowledge transfer represents a main purpose of the relationships between headquarter and subsidiaries in this study. It can be view as the communication theory where a transaction occurs between sender and recipient. Thus, knowledge transfer can be defined as “*an attempt by an entity to copy a specific type of knowledge from another entity*”. (Leyland 2006: 257). The ultimate goal of knowledge transfer is to integrate new knowledge from the source to the recipient’s context; and to make the effective use of it. (Schlegelmilch & Chini 2003) In this study, a knowledge source is a headquarter and recipients are subsidiaries.

There are different types of knowledge transfer. On one hand, it can be either identical or partial replication of knowledge from a provider to recipient. It means that source can either transfer a whole indented knowledge piece or only its parts depending on the capabilities of the recipient. (Lucas 2006; Szulanski 1996) On the other hand, knowledge transfer can be viewed as structured and unstructured process. Structured knowledge transfer is a formal and planned process. It is mainly made on purpose. An

explicit knowledge is mostly transferred through the structured process. Unstructured transfer occurs as informal, spontaneous and unplanned process which happens at any time between the individuals. Hence, more tacit knowledge is usually transferred. (Chen, Sun & McQueen 2010) In this study, knowledge process will be viewed as partial knowledge transfer which occurs through structured and unstructured processes.

Furthermore, knowledge is formed in the specific environment: cultural, geographical, technological, economical, etc. Therefore, subsidiaries can benefit from headquarters's knowledge transfer, because this knowledge was created in different settings and consequently can improve the operations of subsidiaries and whole MNC. (Tsoukas 1996) Furthermore, the empirical researches show that headquarters's knowledge transfer affects the subsidiaries' performance. It was researched that subsidiaries which receive a significant knowledge from headquarter perform in the market better than those who either do not obtain it or do not use it. Therefore, it can be concluded that subsidiaries' efficiency significantly depends on knowledge transferred from headquarter. (Monteiro, Arvidsson & Birkinshaw 2004)

This study will be based on knowledge transfer from headquarter to subsidiaries. It will be viewed as structured and unstructured processes, embedded in practices, routines, technologies and individuals. It is presumed that implementation of this transfer permits to improve performance of the subsidiaries and whole organization as the result. In this study, two models of knowledge transfer barriers will be examined. The first one is provided by Szulanski (1996), which is referred to "sticky" knowledge transfers. The second one is written by Ruisala and Suutari (2004) which describes knowledge transfer in international context. In the next chapter, first model will be reviewed.

2.4 Knowledge "stickiness" factors

The most fundamental work, explaining the knowledge transfer barriers within the organization was made by Szulanski (1996) on the example of best practices' transfer. (O'Dell & Grayson 1998) The author had noticed that some units in the organization perform better than others. It means that knowledge utilization within the companies should be improved. Therefore, the author made an empirical research dedicated to the

investigation of best practices' transfer within the company internally. He discovered that knowledge can be “sticky” and requires an effort to be transferred. Thus, he developed the eclectic model which indicates that knowledge stickiness can depend on characteristics of knowledge, its source, recipient and the context in which the source and recipient are placed. (**Figure 2**) (Szulanski 1996)

The author tested the model by using correlation analysis of one hundred twenty two transfers of best practices in eight companies and discovered that major barriers in internal knowledge transfer are knowledge-related factors, such as recipient's lack of absorptive capacity, casual ambiguity and arduous relationships between the source and recipient. Thus, he concluded that a solution to improve internal knowledge transfer within the organization can be to devote more resources and managerial attention for developing learning capabilities of the companies' units; to foster closer relationships between them; understand and communicate those best practices to different units systematically. (Szulanski 1996)

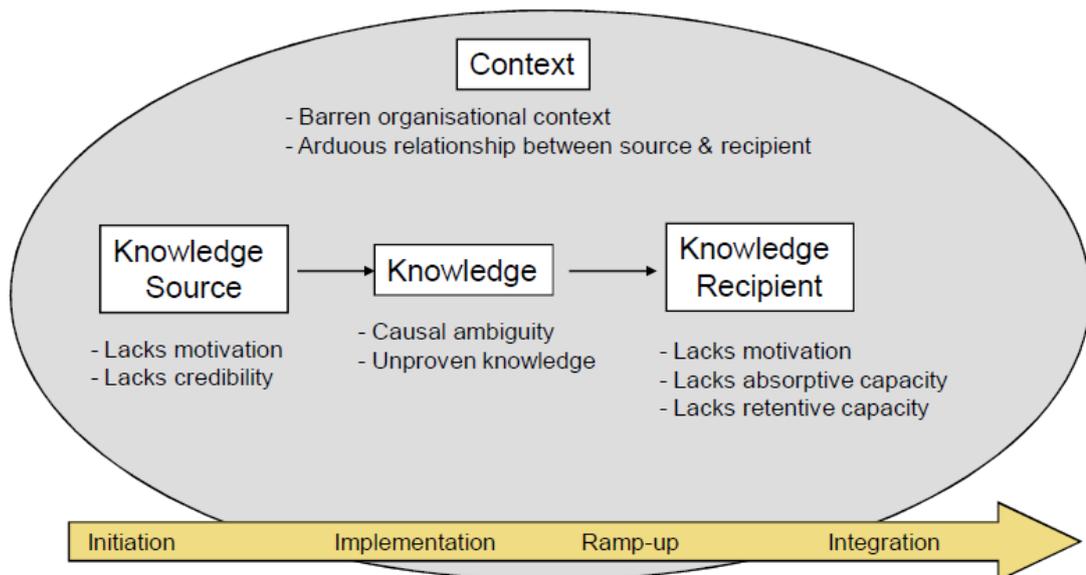
However, this study has some limitations as well. Firstly, it was conducted more than fifteen years ago. Therefore, it can miss some facts, discovered in recent research related to internal knowledge transfers. Furthermore, this study was made among just eight companies which have American origin. Therefore, there can be some biases related to a number of companies and their culture. Finally, this study was conducted internally and consequently did not take into account such external factors as cultural difference and market regulations in different countries. Nevertheless, Szulanski's framework describing knowledge stickiness factors remains to be the most fundamental model used in the academic world. (Szulanski 2000) Below, there is more detailed description of Szulanski's model.

In its model, the author states that *knowledge* itself creates a barrier due to uncertainty surrounding its application in the settings different from its origin. The author called it *causal ambiguity*. Secondly, uncertainty related whether a knowledge originated in one setting will be the same efficient in the other setting is referred to second knowledge characteristic called *unproven knowledge*. (Szulanski 1996, 2000) A replication of

original context is difficult; consequently requires knowledge transfer efforts. (Leyland 2006). Several empirical studies related to knowledge transfer between headquarter and subsidiaries indicated that not only characteristics of the knowledge affect a success of knowledge transfer. The features of a source, recipient and context represent a significant challenge for success of knowledge transfer. (Minbaeva 2007)

On one hand, knowledge transfer barriers can be related to a knowledge *source*. Knowledge is created within individuals' minds. (Nonaka 1994) Consequently, *lack of source's (individuals') motivation* to share it impedes knowledge transfer significantly. (Szulanski 1996) In the academic literature this phenomenon was referred as Social Dilemma. It means that individuals by trying to maximize their benefit of not sharing knowledge lead to a public damage for the whole organization. Organizational knowledge is considered as a public good which the whole organization can access. Thus, if individuals do not share this knowledge they limit company's asset and decrease the efficiency of the whole firm. In other words, an individual rationality leads to a collective irrationality. (Cabrera & Cabrera 2002)

Figure 2: Knowledge Stickiness Factors framework



Source: Szulanski (1996)

Furthermore, a *source* can *lack credibility* for knowledge recipient to receive and utilize the knowledge. If a recipient thinks that it has little to learn from the source, then a motivation to learn decreases. (Martinkenaite 2011) Thus, if the source has bigger value of knowledge stock, then more attractive this knowledge seems for the recipient. (Noorderhavn & Harzig 2009) In international context, if a headquarter has a great knowledge stock in terms of market experience, technology, know-how and employees' skills; then its knowledge seems more attractive for the subsidiaries. The other studies also showed that source's good reputation has also a positive effect on knowledge transfer. (Lucas & Ogilvie 2006) Thus, headquarters' credibility will result in bigger motivation to learn and apply the knowledge by the units. (Gupta & Gavindarajan 2000)

On the other hand, a *recipient* can also have *lack of motivation to receive* the knowledge. It can be expressed in passivity, sabotage, or rejection of its implementation. An empirical study made by Gupta & Gavindarajan 2000 showed that innovations' success depends on the effectiveness of knowledge transfer which is based on employees' motivation to receive and apply it in their working practices. (Gupta & Gavindarajan 2000) Therefore, this study shows that recipient's motivation is an important factor for efficiency of knowledge transfer.

Furthermore, a success of knowledge transfer can depend on recipient's *absorptive capacity*. (Grant 1996) Absorptive capacity is referred to an ability to acquire, assimilate, transform and exploit a new knowledge. (Lee & Wu 2010) Knowledge acquisition requires more efforts than knowledge exploitation, because humans' capability to acquire, store and process the knowledge is restricted by brain's limitation. Thus, employee's ability to create, acquire and store a new knowledge requires his specialization on the particular knowledge area. (Grant 1996) Consequently, recipient's *lack of absorptive capacity* refers to its lack of prior knowledge such as education, skills, language, experience which results in inefficient adoption and application of new knowledge. On the other hand, *lack of retentive capacity* refers to recipient's ability to use a new knowledge without referring to the old one. Its absence impedes knowledge transfer significantly. (Szulanski 1996, 2000) Thus, when transfer occurs as an

unstructured process with tacit knowledge, then success of its acceptance and utilization depends on receiver's absorptive and retentive capacity. (Chen, Sun & McQueen 2010)

Moreover, willingness to share and learn the knowledge can be explained by cognitive theories of motivation. (Minbaeva 2007) Motivational Value-Expectancy Theory tells that value of perceived outcome as the result of particular behaviour will determine individual's behaviour. (Vroom 1964) It means that if a person receives either monetary reward or social recognition from knowledge sharing or receiving, then he will engage himself in this type of behaviour. Consequently, he will be very motivated to disseminate and learn the knowledge. (Cabrera & Cabrera 2002; Lucas & Ogilvie 2006) An empirical study showed that bonus paid to headquarter managers based on subsidiaries' effectiveness due to transferred knowledge, stimulate them to engage in knowledge transfer. (Gupta & Govindarajan 2000)

Finally, a *context* in which knowledge transfer occurs can impede this process too. Organizational culture which supports ideas' development and knowledge management initiatives is a necessary condition for successful company's operation. (Cabrera & Cabrera 2002) An empirical study made by Lucas (2006) proved that organizational culture based knowledge sharing has a significant positive impact on knowledge transfer between employees. (Lucas 2006 b) On the other hand, 'infertility' of organisational environment expressed in its structures, systems and culture impedes knowledge creation. Organizational environment which hinders knowledge inception is referred to *barren organisational context*. (Szulanski 2000)

Furthermore, nature of relationships between source and recipient can be a barrier in knowledge transfer too. Effective knowledge transfer requires close and strong relationships between the parties. On the other hand, *arduous relationships between source and recipient* impact knowledge exchange between the parties. (Goh 2002) Consequently, closeness and strength of relationships between knowledge source and recipient determine a good prerequisite for efficient knowledge transfer between the (Szulanski 1996)

2.4.1 Stages of knowledge transfer

Szulanski's model states that knowledge transfer occurs through initiation, implementation, ramp-up and integration stages. (Szulanski 2000) Those stages are shown in **figure 2**. This model describes structured knowledge transfer process. (Chen, Sun & McQueen 2010)

Initiation stage (*search*) undermines problem's identification and knowledge selection which is required to solve it. It means a search of potential solutions which lead to discovery of new superior knowledge. Once a required knowledge is found, then it leads to the next stage-implementation (*learning*). In this stage knowledge source and recipient plan necessary actions in order to undertake knowledge transfer process. Next stage is ramp-up (*practice*), where a recipient tries to use an acquired knowledge. Issues and problems are examined in order to ensure that recipient achieves a satisfactory performance. The last stage is integration (*grasp*). During this stage the recipient removes the obstacles and challenges arising from practicing a new knowledge. (Chen, Sun & McQueen 2010) Therefore, in order a knowledge transfer would occur in the successful manner, it should flow through all those stages smoothly and efficiently.

2.5 International knowledge transfer

Knowledge transfer in international settings differs from the one occurring within a firm due to the difference in nature of knowledge, its transfer and application. Knowledge is specific to a particular time and place. (Grant 1996). Therefore, in international settings, there are two kinds of knowledge: external and internal. External knowledge is formed from the input of local resources like customers, markets, suppliers, etc. Internal one is created based on external and local internal knowledge which exists in the organization and stored in its routines, practices, culture and people. Majority of MNCs try to transfer this type of knowledge from headquarter to the subsidiaries, because it represents the biggest value for them. (Holtbrügge & Berg 2006)

Furthermore, knowledge transfer and its application also differ in international context. There is a debate among academics about how knowledge should be transferred

between the borders. Szulanski and Jensen 2006 in their research argue that "best practices" should be copied and transferred as close as possible to the original practice in order to become efficient in new settings. It should be adapted cautiously and gradually after the transfer. (Szulanski & Jensen 2006) On the other hand, second group of scholars state that knowledge should be presumptively adapted to a new environment before the transfer in order to be utilized successfully in the new settings. (Kostova 1999; Berlett & Ghoshal 1989)

In this study, international knowledge transfer will be discussed from Noorderhavn and Harzig (2005) position, who stated that in order to make international knowledge transfer successful knowledge has to be diseembedded from the local environment, then translated in a way that it would be understandable for the receiver, applied to the new environment and adapted for the local practices. (Noorderhavn & Harzig 2005) Therefore, due to all these adaptations and operations, international knowledge transfer becomes very difficult; especially if both headquarter and subsidiaries are located in different cultures and markets. (Noorderhavn & Harzig 2005)

This study is concentrated on the examination of knowledge transfer barriers in international context. This phenomenon is researched on the example of knowledge transfer from headquarter to subsidiaries located in different countries. Therefore, it is important to start next chapter from definition of headquarter and subsidiary.

2.5.1 Definition of headquarter and subsidiary

In the modern world, MNCs are viewed as network of multidimensional transactions among units located in different countries. A headquarter is considered as the main office of the whole company. It is viewed as an orchestrator of resources and knowledge; having a prime interest in allocating resources in the most efficient manner in order to exploit local opportunities simultaneously having a global focus. (Ambos, Andresson & Birkinshaw 2009) Moreover, headquarter can perform several roles. Its main tasks are monitoring, resources' allocation, strategic planning and administration of subsidiaries. It performs facilitating and orchestration role in knowledge transfer too. (Dellestrand 2011)

On the other hand, subsidiaries are defined as “*entities that have some discretion over their actions. Subsidiaries are strongly influenced by headquarters, but they can set their own strategic priorities and they have the ability to influence the scope of their own operations as well as firm’s wide strategy.*” (Ambos, Andresson & Birkinshaw 2009: 1101) Thus, headquarter plays major role in knowledge transfer; and subsidiaries have more passive role in this process. However, knowledge transfer and its successful implementation by subsidiaries are very important for MNC.

Therefore, international knowledge transfer is different from one occurring within a single company. Therefore, other types of knowledge barriers exist in cross-border transfers. (Ruisala & Suutari, 2004) Next chapter will describe those impediments in more detail.

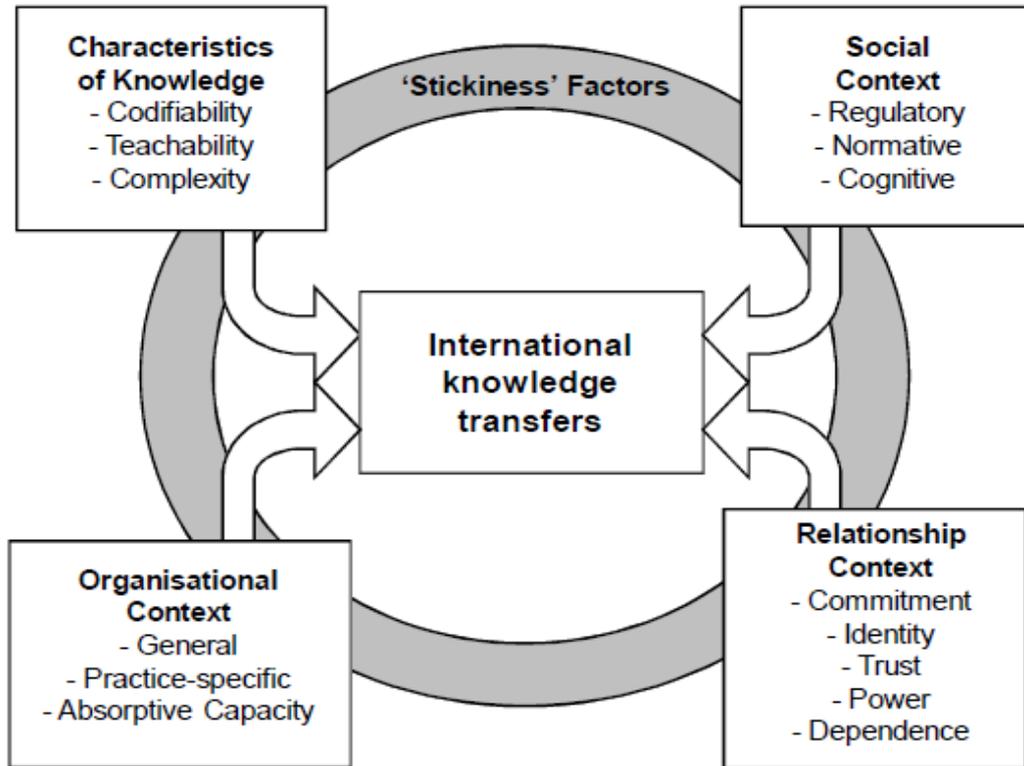
2.6 Barriers in international knowledge transfer

In this study, international knowledge transfer barriers are based on the framework developed by two researchers: Suutari and Riusala. (Ruisala & Suutari, 2004) The authors examined international knowledge transfer through expatriation and barriers related to it. They had developed a theoretical framework based on the existing literature and tested it empirically through qualitative study. The research method was a semi-structured telephone interviews conducted among Finnish expatriates working in Poland. A chosen sample was expatriates occupying only managerial positions with 3, 8 years of working experience on average. There were twenty four interviews conducted in total. The authors discovered that international knowledge transfer barriers occur due to knowledge characteristics; and difference in organizational, social and relational contexts between source and recipient. (Ruisala & Suutari 2004) These barriers are illustrated in the **figure 3**.

However, this study has some limitations as well. Firstly, all expatriates were originally from Finland. Then, all foreign affiliates were located in a single country-Poland. Thirdly, the research was based solely on expatriates’ opinions. The views of local employees were not taken into consideration. However, those limitations were

considered by authors when they generalized the findings. It made their study more valid and reliable. (Ruisala & Suutari, 2004) Therefore, this framework represents a fundamental analysis of international knowledge transfer barriers. Consequently, it was selected for the present study as well.

Figure 3: Barriers to international knowledge transfers in MNCs



Source: Ruisala & Suutari (2004)

In this model, first type of barriers is related to *knowledge characteristics*. Those impediments are based on knowledge codifiability, teachability and complexity. Those characteristics were adopted by Ruisala and Suutari from Kogut and Zander's model. Academics stated that *codifiability* measures an extent to which knowledge can be articulated in documents. It represents a barrier because knowledge cannot be very easily written and codified. (Kogut & Zander 1993) Secondly, *teachability* refers to extend how easily knowledge can be taught to a recipient. (Kogut & Zander 1993) Finally, knowledge is very *complex* in nature, thus its transfer becomes very problematic. (Bhagat & Kedia 2002)

Second set of barriers refer to *organizational context*. (Ruisala and Suutari 2004) It can be viewed from perspectives of organizational culture and structure. Organizational culture is a set of beliefs, assumptions, and values which members of the group share about the rules of conduct, administrative procedures and leadership styles. (Veiga et al. 2000) It determines relationships between individuals and groups in the company too. (Kogut & Zander 1992) Furthermore, each organization has its own unique routines, organizational practices, procedures, rules and forms. This is how it is structured. (Grant 1996) Research states that application of new knowledge may be impeded by difference in organizational structure and culture between sending and receiving units. (Bhagat & Kedia 1988) Thus, knowledge from headquarter can meet a conflict from subsidiaries' organizational culture and structure. This impediment is referred to *general knowledge transfer barrier*. (Ruisala and Suutari 2004; Lee & Wu 2010)

Similarly, when knowledge is transferred from abroad, *practice specific* barriers can occur. Climate in a subsidiary may not support innovation and transferred knowledge. (Ruisala & Suutari, 2004) Differences in operational processes between headquarter and subsidiaries can also impede knowledge transfer. It means that "*knowledge leaks in the direction of shared practice; it sticks where the practice is not shared*" (Noorderhavn & Harzig 2005:725) Thus, both parties are more eager to be engaged in knowledge transfer process when they share similar operational practices; and less willing when they have practice specific differences in their operations. (Noorderhavn et al. 2005)

Finally, lack of *absorptive capacity* is referred to inability to acquire, assimilate, transform and efficiently exploit a new knowledge by a receiving unit. (Ruisala and Suutari 2004) Knowledge acquisition is defined as firms' ability to recognize knowledge value and obtain it. Assimilation is referred to ability to absorb, understand, analyze and interpret a new knowledge. Transformation means to combine existing and newly acquired knowledge. Exploitation is a leverage of existing competences and creation of new ones by using acquired knowledge in its operations. (Lee & Wu 2010) Subsidiary's absorptive capacity depends on its employees. Local employees cannot understand and use knowledge if they don't have needed skills, diverse backgrounds

and education. (Grant 1996) Thus, company needs to develop individual absorptive capacity in order to facilitate knowledge transfer from headquarter. (Lee & Wu 2010)

Relational context have a significant impact on knowledge transfer from headquarter to subsidiaries. On one hand, headquarters' willingness and ability to share the knowledge is referred to *disseminative capacity*. (Minbaeva 2007) Thus, employees' fear to lose a value; unwillingness to spend time on knowledge sharing believing that it does not have a direct influence on the work; viewing subsidiary workers as "knowledge parasites" lead to low motivation of headquarter employees to share a knowledge. Some people can be threatened to share personal knowledge due to protecting themselves from the external assessment of their qualifications; or owing to the fear of losing the power. (Minbaeva 2007)

On the subsidiary's side, *dependence*, *power* (control), loss of *identity*, *trust* and *commitment* are viewed as relational barriers. (Ruisala and Suutari 2004) *Trust* can be defined as "willingness to accept vulnerability based on positive expectations about another's intentions or behaviours." (Li 2005: 80) Organizational trust is referred as a confident expectation and goodwill which a focal organization places to the other. Consequently, trust is an important element in the relationships between headquarter and subsidiary, because it facilitates coordination, cooperation and facilitates knowledge transfer. (Li 2005) Thus, loss of trust in host country to headquarters' intentions results in subsidiaries' unwillingness to receive and utilize a transferred knowledge. (Ruisala and Suutari 2004)

Relationships between headquarter and subsidiary can be explained by an agency theory, where headquarter is a principle which is interested in delegating the assignments and transfer a knowledge; whereas subsidiary is an agent who performs those tasks and utilize a transferred knowledge. The major barrier in those relationships can be to convince a subsidiary in knowledge importance and motivate a unit to exploit it due to difference in interests. (Li 2005) Furthermore, lack of motivation on the recipient's side leads to knowledge rejection or simulative implementation. (Gupta & Gavindarajan 2000) Consequently, lack of subsidiaries' *commitment* impedes the

transfer significantly. (Ruisala and Suutari 2004) However, subsidiaries' motivation is a complex issue, because it is based on subsidiaries' age, locus of control and its organizational commitment. It may also depend on intensity, stability and spread of knowledge culture within the organization. (Martinkenaite 2011)

Furthermore, subsidiaries' identification with a parent's organization is crucial for knowledge transfer, because *loss of identity* with headquarter results in low level of trust and non-invented here syndrome. (O'Donnell 2000) However, units' identification becomes greater as they interact with headquarter employees. Through increased interaction subsidiaries understand their role, stated objectives, headquarter policies, and overall organizational goals. Thus, they learn more about headquarter, own unit and the whole organization which leads to larger subsidiaries' identification with parent company. Therefore, subsidiaries become more receptive to parent's transferred knowledge. (O'Donnell 2000)

Overdependence on parent's organization results in employees' resistance in knowledge acceptance. (Ruisala & Suutari 2004) Individual autonomy is a good prerequisite for successful knowledge creation, transfer and implementation. Thus, a company which supports individuals' flexibility and self-motivation forms good organizational culture for knowledge transfer. (Nonaka 1994) In the international settings, subsidiaries' overdependence on headquarters' decisions results in loss of autonomy and ability to explore local opportunities. (Ambos, Andresson & Birkinshaw 2009) Furthermore, excessive *control* can create negative feelings in the subsidiaries towards headquarter, which can result in their reluctance towards headquarter's will and increase a probability of opportunistic behaviour. (O' Donnell 2000) A concept of control will be examined further in the study.

Finally, last type of barriers is referred to *social context* between a source and recipient. On one hand, this set of barriers can be explained by a term organizational distance. This concept means a dissimilarity between headquarter and subsidiaries in terms of business practices, institutional heritage and organizational cultures. Consequently, larger organizational distance between the parties, less successful a knowledge transfer

will occur between them. (Schlegelmilch & Chini 2003) Simultaneously, Gupta and Govindarajan (2000) state that more similar headquarter and subsidiaries become in terms of culture, organizational structure and communication styles; then easier a knowledge transfer will occur between them. (Gupta & Govindarajan 2000)

In the present model, *social barriers* are determined by normative, regulatory and cognitive differences between parent and daughter companies. Knowledge is specific to a particular place, time and practice. (Tsoukas 1996) Thus, in international knowledge transfer, it has to be adapted to local environment. (Chen, Sun & McQueen 2010) However, difference in laws and regulations between sending and receiving countries can impede significantly knowledge transfer. Therefore, difference in laws and regulations between host and home countries is referred to *regulatory barriers* in knowledge transfer. (Ruisala & Suutari 2004)

Furthermore, organizational barriers can be explained by *normative* differences between headquarter and subsidiary. Norms are expressed in values, views, beliefs and perceptions. (Ruisala & Suutari 2004) Subsidiary benefits from transferred knowledge because it can gain a significant competitive advantage of its implementation. (Grant 1996) However, if a transferred knowledge does not comply with local values, roles, beliefs and views of the subsidiary, then its implementation can be impeded. Thus, a success of knowledge transfer can be complicated by normative difference between headquarter and subsidiary. (Ruisala & Suutari 2004)

Last type of organizational impediments is called *cognitive* barriers. (Ruisala & Suutari 2004) Shared cognitive frame of references, cognitive schema and common knowledge between a knowledge sender and receiver play a crucial role for successful knowledge transfer. (Grant 1994) Indeed, in order to start collaboration, parties need to develop a shared framework of interpretation because it increases understanding between them. (Nonaka & Takeuchi 1995) Consequently, if employees in host and home countries have not developed a cognitive ground between each other, then a knowledge transfer from headquarter to subsidiary becomes difficult, because knowledge can be misunderstood and misinterpreted. (Ruisala & Suutari 2004)

2.7 Relational aspect between headquarter and its subsidiaries

Previous chapters provided two models of knowledge transfer barriers. First was developed by Szulanski (1996), which described knowledge transfer barriers within a single company. (Szulanski 1996) Second model was provided by Ruisala & Suutari (2004) and explained international knowledge transfer impediments. (Ruisala & Suutari 2004) However, both frameworks presumed that there are only two parties involved in knowledge transfer process. Those frameworks did not take into consideration that within a single MNC knowledge transfer barriers can differ with each particular subsidiary. Next chapters will focus on examination of knowledge transfer barriers from a single headquarter to multiple subsidiaries which can be caused by difference in relationships between them; by national culture difference; and finally by characteristics of each particular subsidiary. All those factors can be affect knowledge transfer in different ways, making it unique in a case of each particular subsidiary.

Knowledge and capabilities of each MNC are based on individuals' expertise. (Kogut & Zander 1992) Thus, companies' intent is to access an individual knowledge and make it usable for the benefit of the whole organization. A company can make it through establishment of personal commitment and identity with the enterprise. It helps to convince employees to follow firm's goals, values and mission. It facilitates trust and unity building. Only in this case employees will be willing to share knowledge with their colleagues abroad. (Nonaka 1991) Therefore, establishment of relationships between the colleagues located in different countries is very important aspect for successful knowledge management process.

Furthermore, successful knowledge transfer depends on actor's awareness about its counterpart's knowledge base. It only occurs through a communication process. (Grant 1996) Moreover, knowledge is best transferred through interaction between individuals; starting from individual's communication it reaches inter-organizational level: headquarter and subsidiary. (Nonaka 1994) Thus, only by communication, interaction and establishment of relationships knowledge will be transferred from parent company

to its units. (Nonaka 1991) Finally, relational aspect of headquarter and subsidiaries is best described by social capital theory.

2.8 Social Capital Theory

Social capital theory is widely used for determination of relationships between individuals, groups and organizations. It explains a variety of social behaviours. Main characteristic of social capital is that social interactions are not only the elements of social structures, but also are considered as resources for social affairs and exchanges. (Reiche, Harzing & Kraimer 2009) Thus, on one hand, social capital can be defined as *"goodwill available for individuals or groups. Its source lies in the structure and content of the actor's social relations. It affects flow from the information, influence, and solidarity and makes it available to the actor."* (Kase et. al 2009: 618) Furthermore, the pioneers of social capital theory Nahapiet and Ghoshal's (1998) define social capital as *"as a sum of actual or potential resources embedded within, available through, and derived from the network of relationships possessed by an individual or social unit"* (Nahapiet & Ghoshal's 1998: 243) Therefore, a notion of social capital is so important for the organizations because it allows to access, leverage and exploit individual and group knowledge. In this research social capital between headquarter and subsidiaries will be examined.

Social capital comprises from two aspects. The first one undermines the establishment of external relationships, also called *"bridging"*. This type of social capital concentrates on connecting a focal actor with other actors within the network. Those connections are facilitated by direct and indirect links within this social network. Bridging of the actors allows obtaining more valuable information; brings higher level of control; and allows reaching a competitive advantage. (Mäkelä 2006) The second aspect of social capital emphasizes the foundation of internal ties within a social network, named *"bonding"*. This term of social capital concentrates on collective actors' internal characteristics and relations within a group. It emphasizes ties that bond people together, increasing cohesiveness and collectivity, facilitating trust and cooperation. This type of social capital helps to ensure that collective goals are pursued. (Mäkelä 2006) However, Nahapiet & Ghoshal argue that both parts of social capital like *"bridging"* and

"bonding" are present in all behavioural situations. Thus, both those parts comprise a term of social capital. (Nahapiet & Ghoshal 1998)

This study will be based on a framework of social capital provided by Nahapiet and Ghoshal 1998, because it is considered as the most known and reliable among researches. (Mäkelä 2006) According to this framework, social capital consists of three important dimensions-*structural*, *relational* and *cognitive*. (Nahapiet and Ghoshal 1998) *Structural* social capital refers to network configuration and ties. It means physical linkages between people and units; where, how and to whom these actors are connected. *Relational* social capital focuses on personal relationships, friendships and respect which people developed during their working life. It is based on trust, obligations, expectations to others and identification with the organization. Finally, *cognitive* social capital mean shared languages, narratives, codes of interpretations and representations. (Tsai & Ghoshal 1998) The following subsections will explain this framework in more detail.

2.8.1 Structural Social Capital

Structural dimension of social capital means formation of informal networks. These networks can have either strong or weak ties. On one hand, strong ties mean having constant contacts on regular basis. On the other hand, weak ties are defined by relatively less frequent communication and contacts. Strong ties can also mean emotional "closeness" or intensity. (Nahapiet et. al 1998)

Structural social capital has strong effect on knowledge transfer. It means that better knowledge receiver estimates an attitude of knowledge sender and their mutual quality of relationships; then more receiver will trust a knowledge being transferred to him. Furthermore, strong emotional intensity undermines commitment and positive attitude of both knowledge sender and receiver, thus a risk of opportunistic behavior decreases. (Tsai & Ghoshal 1998) Consequently, more tacit, sensitive and strategic knowledge can be transferred; whereas explicit and less important knowledge can be transferred through weak ties and through such mechanisms like emails and phone calls. (Reiche et

al. 2009) Strength of business ties affect the efficiency of sharing codified knowledge and personal ties impacts transfer of non-codified knowledge. (Marouf 2005)

Consequently, the establishment of both types of network ties is important for knowledge transfer between headquarter and subsidiaries. However, as it was discussed earlier that a transfer of tacit and complex knowledge represents the biggest value for the organization. Consequently, the establishment of close ties should be a prime importance for headquarter and its subsidiaries. (Marouf 2005)

2.8.2 Relational Social Capital

Relational social capital means behavioural and motivational assets which comprise the human relations. Those are trust, norms, obligations and expectations. Relational aspect of social capital is very important because it determines the working relationships between employees. It also influences attitudes, behaviours and performance. (Nahapiet & Ghoshal 1998; Tsai & Ghoshal 1998)

Furthermore, empirical research tells that trust between the parties is one of the predominant factors for knowledge sharing. (Li 2005) It can also facilitate a knowledge transfer between interacting actors, by making them more motivated to share the knowledge. It can create higher level of cooperation between source and recipient which can result in increased performance. (Renzi 2006) This fact was also supported by the Szulanski's study described above, where arduous relationships between source and recipient created sufficient knowledge transfer barriers and led to knowledge losses. (Szulanski 1996) Consequently, relational aspect of social capital becomes very important element in knowledge management between parties.

2.8.3 Cognitive Social Capital

A term cognitive social capital can be defined as shared paradigms, understandings, and interpretations. Moreover, it refers to shared narratives, behavioural and linguistic codes as well, as the systems of meanings. (Nahapiet & Ghoshal 1998; Tsai & Ghoshal 1998)

Grant tells that commonality of narratives and specialized knowledge between individuals is crucial for knowledge transfer and its further integration. (Grant 1996) Academics had developed a concept explaining the reasons why difference between parties affects significantly a success of knowledge transfer. This term is referred to a "*law of homophily*". It means a degree of similarity between persons in terms of nationality, age, culture, values, beliefs, education, experiences, skills, languages. It means that bigger similarity between people provokes greater communication and consequently higher extent of knowledge exchange. (Gupta & Govindarajan 2000) Thus, similar terms of behaviour, language, cognitive schemata and common understanding become a significant prerequisite for knowledge transfer between the actors.

Nevertheless, when individuals communicate having the same type of knowledge, there is no benefit of knowledge transfer. On the other hand, when individuals communicate with completely different knowledge backgrounds, then knowledge integration becomes problematic. (Grant 1996) Thus, knowledge of two individuals shouldn't be identical; however it shouldn't overlap at the same points in order to be understandable and valuable for both parties. (Holtbrügge & Berg 2006) Therefore, it means that cognitive social capital is a prerequisite for efficient collaborative behaviour and resource exchange between knowledge sender and knowledge receiver. Thus, it helps to obtain a competitive advantage and helps to build synergy between distantly located parts of MNC. (Nahapiet & Ghoshal 1998)

2.9 Social capital and knowledge transfer

Social capital has a significant effect on the efficiency of knowledge transfer. Previous chapter stated that all three aspects of social capital affect positively knowledge flows and stimulate knowledge exchange. Firstly, structural social capital facilitates trust building between parties which decreases a risk of opportunistic behaviour. High levels of trust help to create positive attitudes between the participants and consequently stimulate a transfer of tacit knowledge. (Tsai & Ghoshal 1998) Furthermore, relational social capital facilitates formation of employees' identity with a company, affects a

motivation to share knowledge through establishment of close working and personal relationships between employees. (Nahapiet & Ghoshal 1998) Moreover, relational social capital represents a significant prerequisite for trust and identity building among subsidiaries' employees. (Ruisala & Suutari 2005) Finally, cognitive social capital helps to establish shared understanding which stimulates more close and intense knowledge exchange. Therefore, cognitive social capital ultimately provokes knowledge flows which are so important for knowledge exchange between distantly located parties. (Gupta & Govindarajan 2000)

Furthermore, formation of social capital is created by frequent interactions between the parties. Employees' identification becomes greater as they interact with other headquarter members. Subsidiaries understand their role, stated objectives, headquarter policies and overall organizational goals; because shared norms, values and vision play a crucial role for knowledge transfer. (O'Donnell 2000) Social capital is important for cross-border knowledge transfer because subsidiaries' identification with parent decreases "not-invented here" syndrome, increases absorptive capacity and motivation to learn the knowledge. (Li 2005) Therefore, subsidiaries become more receptive to parent's transferred knowledge and understand its value. (O'Donnell 2000; Martins & Antonio 2010)

Therefore, it is possible to state that social capital and frequent interaction have a positive effect on knowledge transfer. However, in every company social interactions and interpersonal relationships are shaped by its human resource management practices. Consequently, those practices perform a mediating role between social capital and knowledge transfer. (Kase et al. 2009) Thus, socialization mechanisms, trainings and team work stimulate trust building between employees. (Martins & Antonio 2010) In the international settings liaison mechanisms, cross-national temporary teams help to increase interpersonal knowledge, develop same language terms which results in improvement of cognitive understanding between the employees. (Reiche, Harzing & Kraimer 2009; Berner-Rasmussen & Björkman 2005) International assignments allow establishing social capital with host unit employees and maintaining the social ties within the home unit. (Reiche, Harzing & Kraimer 2009) Expatriates also perform

knowledge carrier function which allows improving an absorptive capacity of the receiving unit and permits to strengthen identity with the parent company. (Ruisala & Smale 2005) Rich communication channels such as information technologies and user friendly software are very useful mediums for transfer of codified and explicit knowledge. (Appleyard 1996) They also perform a facilitating role for transfer of tacit and non-codified knowledge, by means of video conferences, and online phone calls, which can effectively stimulate the formation of social capital. (Holtbrügge & Berg 2004) It can reduce social dilemma, by reducing the cost of knowledge sharing by decreasing a necessary time for sharing the ideas, making it more simple which will result in higher probability of electronic knowledge exchange between a headquarter and subsidiaries. (Cabrera & Cabrera 2002)

Therefore, strong social capital and supporting Human Resource Management practices help to overcome "transmission losses" which usually occur during a cross-border transfer. (Noorderhavn & Harzig 2009) Consequently, strong social capital creates favourable environment for successful knowledge transfer. (Gupta & Govindarajan 2000; Martins & Antonio 2010)

3.1 Culture

Nowadays, MNCs operate in different countries. Therefore it is important for managers to pay attention on national cultural differences in order to design an effective knowledge transfer system. In this study, culture and knowledge management between headquarter and subsidiaries will be examined from cultural perspective developed by Hofstede.

3.2 Cultural difference

Culture is defined as *“patterned ways of thinking, feeling, and reacting acquired and transmitted mainly by symbols, constituting the distinctive achievement of human groups, including their embodiment in artefacts; the essential core of culture consists of traditional (e.g. historically derived and selected) ideas and especially their attached values.”* (Thomas, 2008: 38) Furthermore, Hofstede defined values as *“a broad tendency to prefer certain states of affairs over the others. Because our values are*

programmed in our lives, they are non-rational and determine our subjective definition of rationality and perception.”(Andre 2003: 56) Through perceptions person understands the environment, events, objectives and other people. (Emery, Oertel, 2006). Thus, knowledge of person’s cultural-based perception can be a good predictor of knowledge transfer effectiveness.

Subsidiaries and headquarter usually have the same practices and values as a host society where they are located. Thus, their values and behaviour correspond to the national cultures of those countries. (Bhagat & Kedia 1988) Consequently, cultural differences between the countries where subsidiaries are located lead to large cultural variation inside MNC. (Drogendijk & Holm, 2011) A case study made by project Globe shows that greater cultural differences between the parties, then less advantages a receiving unit sees in adopting a transferred knowledge; and transfer becomes more complicated and costly. Differences in cognitive schemata, national values and communication result in parties’ unwillingness to share and apply the knowledge. (Schlegelmilch & Chini 2003) It also affects an absorptive capacity of the receiving unit, because similarities in culture make it easier to understand and apply a new knowledge. Therefore, cultural difference makes a knowledge transfer less successful. (Javidan, Stahl, Brodbeck & Wilderom 2005; Teagarden, Meyer, Jones 2008)

3.3 Hofstede cultural dimensions and their effect on knowledge transfer

Culturally based difference in attitudes, values and beliefs between a source and recipient and their inconsistency with transferred knowledge were determined as a major barrier in successful knowledge transfer between headquarter and subsidiaries. (Chen, et al. 2010) Furthermore, differences in organizational cultures between headquarter and subsidiaries; employees motivation, absorptive and retentive capacities, variety of work practices are rooted in the national cultures of the parties. (Rivera-Vazquez, Ortiz-Fournier, Flores 2009) Those national cultural differences can be explained by Geert Hofstede cultural dimensions. There is general description of those cultural dimensions with their application to the knowledge transfer barriers.

3.3.1 Masculinity/Femininity

Masculinity identifies a degree to which such values as assertiveness, performance, ambition, achievement and materialism are crucial in the society. It determines an extent to which people of a society are aggressive and competitive to each other. In feminine cultures, the society promotes cooperation and interaction. (Hofstede 2001)

In case, if both subsidiary and headquarter operate in masculine culture; then a knowledge transfer will be successful if they both get mutual benefits from it. On the other hand, if both subsidiary and headquarter operate in feminine cultures, than a knowledge transfer will be successful because both parties will be engaged in negotiation in order to find ways to make a knowledge transfer effective. (Leyland 2006) Nevertheless, if headquarter is located in a feminine culture and a subsidiary in masculine, then knowledge transfer is efficient, because the subsidiary feels own benefit from the transfer and headquarter is focused on facilitating it. However, on contrarily if the headquarter is located in the masculine society, then it can doubt about the knowledge transfer without having the proof of personal gain from it, when a feminine subsidiary would expect a transfer. This situation can lead to loose of trust and to partial failure of knowledge transfer. (Leyland 2006)

3.3.2 Uncertainty Avoidance

Second cultural dimension identified by Hofstede is uncertainty avoidance. This dimension is referred to a degree a society relies upon social norms, rules and procedures in order to reduce the unpredictability of future events. (Hofstede 2001)

Subsidiaries in high uncertainty avoidance cultures attempt to avoid changes and will not search for new way of doing things. Consequently, headquarter has to make a significant effort in order to bring any changes to the subsidiaries. Employees in weak uncertainty avoidance countries are very flexible, open minded and social control is appropriate in those cultures, instead of formal rules. Subsidiaries in weak uncertainty avoidance countries welcome a new knowledge and transfer because it can bring new positive outcomes and gains. Subsidiaries like to experience and continue to learn. However,

when a subsidiary operates in high uncertainty avoidance and headquarter is placed in low uncertainty avoidance; then headquarter is willing to transfer a new knowledge, but the subsidiary is not willing to accept it. Thus, headquarter has to develop different ways to persuade them. (Leyland 2006)

3.3.3 Collectivism/Individualism

Collectivism refers to an extent to which individuals in the society express pride, loyalty and cohesiveness in their families and organizations. It refers to how an individual sees himself. (Hofstede 2001)

In the individualistic cultures, knowledge is viewed as personal property, whereas in collectivistic cultures, knowledge is perceived as MNC's property. This statement concerns both recipient and source. In the individualistic cultures a source and recipient of knowledge may be concerned with assessing the individual benefits related to initiation of knowledge transfer and its implementation. Consequently, a subsidiary may be reluctant to search and acquire new knowledge from the source which is positioned differently according to collectivism/individualism dimensions. (Leyland 2006) In collectivistic societies knowledge is commonly transferred through close personal relationships and channels. In these conditions low trust from employees will prevent them to communicate honestly and transfer knowledge objectively. (Engelhard & Nagele 2003) Furthermore, collectivistic cultures prefer to share knowledge within in-group members, perceiving out-group members as strangers. Consequently, if both headquarter and subsidiary are located in collectivistic cultures, then there will occur bigger amount of knowledge transfer rather than, if the subsidiary will be based in the individualistic country. (Javidan et al. 2005)

3.3.4 Power Distance

Power distance determined as an extent to which members of society are willing to accept a power. (Hofstede 2001) It reflects an unequal nature of relationships between subsidiaries and headquarters, their hierarchy. It also determines a level of control, communication and decision making between the parties. (Drogendijk & Holm 2011) In

large power distance cultures a decision making is centralized; and headquarters pursues an autocratic approach. Most of subsidiaries are seen as knowledge adopters and acquirers, whose success is highly dependent on headquarters' willingness to transfer the knowledge. (Leyland 2006) Consequently, headquarter in high power distance country will emphasize on subsidiaries' competence development; and will transfer knowledge actively. On the subsidiaries side, a total acceptance is expected. (Drogendijk & Holm 2011) However, if a subsidiary is located in small power distance culture, following headquarters' behaviour can be met with resistance. Consequently, a success of knowledge transfer will be low. On the contrary, in small power distance cultures the relationships are characterized by consulting and participative decision-making. If knowledge source and recipient are both located in small power distance cultures, then they both are willing to find a compromise for knowledge transfer in order to smoothen a transaction. (Wilkesmann, Fischer & Wilkesmann 2009)

3.3.5 Long-Term Orientation/Short-Term Orientation

In long-term orientation societies, their members are more willing to work for the long-term goals than the ones located in short-term orientation countries. (Hofstede 2001) Members of long-term oriented cultures are willing to participate in knowledge management processes actively, which do not necessary generate immediate results (repository development, use of knowledge experts, knowledge sharing, internalization and socialization, use of knowledge outputs and results of the applied knowledge). Individuals in short-term oriented cultures intent to strive for immediate results; thus they can stop this knowledge management processes due to lack of immediate evidence of its effectiveness. (Michailova, Kenneth 2003)Therefore, it becomes obvious that headquarters and subsidiaries' positions in cultures placed differently along those cultural dimensions can complicate significantly knowledge transfer.

3.4 Language

Differences in national cultures are also expressed in language variances and communication styles. Thus, knowledge transfer is unlikely to happen if a source and recipient don't speak the same language, because they will either not understanding each other or trust each other. (Chen, Sun & McQueen 2010) Similarly, Grant (1996)

argues that knowledge transfer and knowledge aggregation is easier when the knowledge is expressed in common language. (Grant 1996)

Furthermore, high language proficiency of subsidiary managers is positively related the adoption of transferred knowledge from headquarter to subsidiaries, because it allows building stronger interpersonal relationships by improved communication and understanding. (Berner-Rasmussen & Björkman 2005) Nowadays, English has become a commonly learnt and used language. However, level of English proficiency differs among individuals and cultures. (Javidan et. al 2005) Therefore, in order to facilitate the knowledge transfer, headquarter should invest in improving English level skills of their subsidiaries and employees in the parent company, because it significantly improve cognitive understanding and trust building. (Javidan et. al 2005)

Thus, in a conclusion possible to state that knowledge transfer occurs more successfully between culturally aligned parties. Difference in values, attitudes, beliefs and languages between headquarter and subsidiaries and different positions among Hofstede's dimensions affect negatively a knowledge transfer. Hence, significant headquarters' involvement, support and facilitation is needed to make a transfer more efficient. (Leyland 2006)

Following chapter of this study is dedicated to explore what unit's characteristics play a major role in the success of knowledge transfer. Therefore, next subchapter starts with the examination of industry type; characteristics of headquarter and MNC in general and their effect on knowledge transfer. Then, it will examine different subsidiaries' characteristics and their role in success of knowledge transfer, because this is one of the research questions of this study.

3.5 Subsidiary characteristics and their effect on knowledge transfer

Industry in which a company operates has an impact on knowledge flows within it. MNCs operating in knowledge intensive industries are strongly engaged in frequent and intense knowledge transfers within an MNC. Those MNCs will be more motivated to transfer knowledge and then control its application thoroughly. On the other hand, firms

operating in non-knowledge intensive industries will be less concentrated on knowledge management within their companies. (Noorderhavn et al. 2009)

Furthermore, a size of the whole MNC plays a role in knowledge transfer too. In large MNCs knowledge transfer process becomes very complicated along initiation, implementation, practice and integration stages. Moreover, coordination of knowledge flows occurs more difficult in large MNCs. On the other hand, smaller MNCs can manage knowledge transfer processes easier owing to fewer amounts of participating players and less knowledge flows. It is easier to observe an effect of knowledge implementation too. (Noorderhavn et al. 2009)

A role of headquarter is also important for knowledge management. However, there is limited amount of studies related to this topic. Most of them discuss that head office's task is correct resources' allocation and decision making rights' delegation to its subsidiaries. It determines a good prerequisite for effective knowledge transfer. (Ciabuschi, Martin & Ståhl 2010)

Moreover, knowledge attractiveness is also an important factor for successful knowledge transfer to the recipient. Attractive knowledge is created by experienced headquarter having high level of knowledge stock and specialized knowledge base. Thus, in this case knowledge will be perceived as highly valuable and subsidiary will be very motivated to learn, adapt and implement it. (Ambos, Ambos & Schlegelmilch 2006) Furthermore, country of headquarters' origin and its economic development is also an important factor in subsidiaries' motivation to learn. Knowledge from headquarter located in advanced country is perceived as very attractive for the subsidiary. Consequently, the knowledge transfer occurs easier and more effectively to subsidiary. (Gupta & Govindarajan 2000)

A framework developed by Ruisala and Suutari (2004) embrace a wide range of knowledge transfer barriers in international context. However, this framework does not include such factors as subsidiary roles, its size, mode of entry, age, autonomy, geographical distance and control level. Therefore, in order to answer a research

questions, it is important to investigate those characteristics and their effect on knowledge transfer.

3.5.1 Subsidiary size

Subsidiaries' size has a significant effect on knowledge transfer. Subsidiaries which have a bigger size, have more organizational resources and amount of personal. Consequently, they have higher organizational slack, which allow them to implement a transferred knowledge easier, than for those which does not have it. (Holtbrügge & Berg 2004) Thus, bigger subsidiaries have larger absorptive and retentive capacity, which allow them to receive and implement headquarters' knowledge easier. An empirical research supported this fact, stating that bigger subsidiaries' size positively affect a knowledge transfer from headquarter, because knowledge is absorbed easier and quicker. (Gupta & Govindarajan 2000)

Furthermore, small subsidiary size results in fewer amounts of resources and capabilities which make them more dependent on headquarters' knowledge. Thus, units will be highly interested in headquarters' knowledge inflows. (Noorderhaven & Harzig 2009) Moreover, due to fewer amount of available resources, smaller subsidiaries have smaller amount of absorptive capacity. Consequently, smaller subsidiaries need more knowledge and support; attention and implementation's assistance from headquarter. (Gupta & Govindarajan 2000)

3.5.2 Subsidiary age

Subsidiary age play an important role in efficiency of knowledge transfer too. Older subsidiaries have longer operational time; therefore they have more knowledge stock and prior knowledge stored in the organizational memory. (Lee & Wu 2010) Prior knowledge can be related to the needed employees' experiences in the particular sphere, amount of market knowledge, required customer contacts, language skills, etc. These knowledge and skills are significant in order to manage, acquire, accept and apply a new knowledge. Thus, the subsidiaries having longer operational time have bigger absorptive capacity, which facilitate a knowledge transfer from headquarter. (Minbaeva 2007)

Furthermore, previous research shows that shared experience has increased joint cognitive ground because building on common experience encourages a knowledge receiver to sense intuitively what knowledge sender is trying to share. (Nonaka & Takeuchi 1995) Thus, through longer time of it gives a chance for both headquarter and subsidiary to be engaged in bigger amount of knowledge transfers consequently allowing to smoother the process and increasing an opportunity to learn each other better. Therefore, the knowledge transfer is more efficient with older subsidiaries. (Ambos, Andresson & Birkinshaw 2009)

Younger subsidiaries have a shorter operational time and less experience which results in difficulty to absorb a new knowledge. Academic research also state that when a recipient lacks a prior knowledge then it is looks for the support from the source. (Martinkenaite 2011) Therefore, younger subsidiaries require more support from headquarter and bigger amount of knowledge transfer than the older ones. They also require bigger amount of attention from headquarter and control for knowledge implementation. (Javindan 2005)

3.5.3 Subsidiary roles

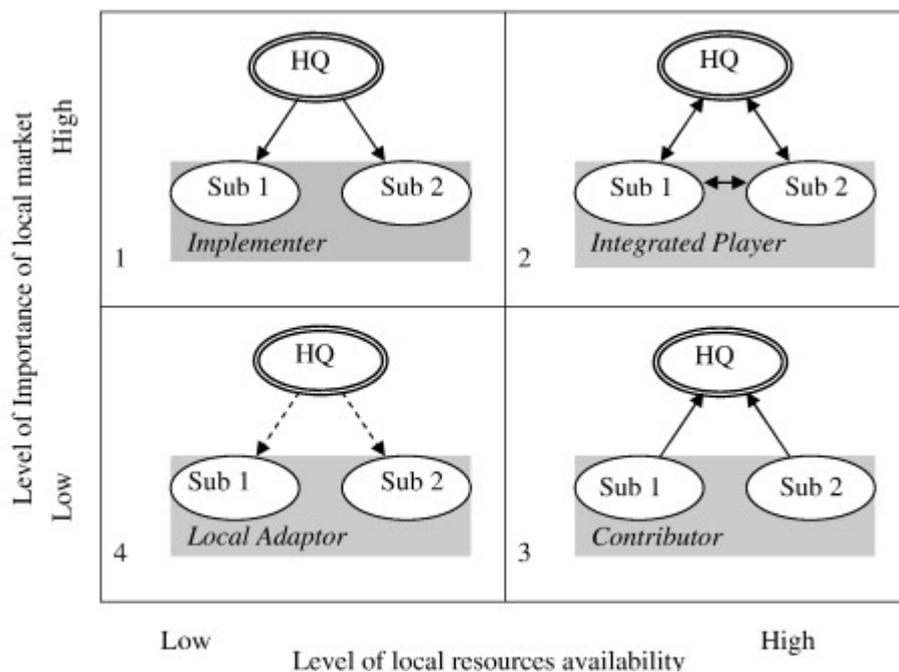
There are several different perspectives on how subsidiaries' roles can be determined. On one hand, headquarter decides on which role a subsidiary plays in MNC operations; then it is controlled by various informal and formal mechanisms. On the other hand, a subsidiary having a sufficient degree of freedom can decide on its own role. Finally, local environment influenced by specific market characteristics and resources' availability can define subsidiaries' roles too. (Birkinshaw, Holf, Thilenius & Arvidsson 2000)

Furthermore, subsidiaries can be differentiated regarding knowledge inflows or outflows. The most fundamental work related to knowledge flows and subsidiary roles was made by Gupta and Govindarajan (1991). (Gupta & Govindarajan 1991) The researchers discovered that subsidiaries roles can be defined regarding a type and volume of knowledge flows occurring within the organization. Thus, subsidiaries can become either a knowledge creators or appropriators. (Leyland 2006)

In the research, the authors define subsidiaries' roles as Global Innovator, Integrated Player, Implementer and Local Innovator. Global Innovator creates a big amount of knowledge outflow with low level of knowledge inflow. It can be characterized as centre of excellence. Integrated Player has both high levels of knowledge inflow and outflow. Implementer has low level of outflow and high level of knowledge inflow from the parent organization. Local Innovator has low outflow and inflow knowledge levels. They explore local opportunities and not willing to receive headquarters' knowledge. (Gupta & Govindarajan 1991)

Later, other researchers examined subsidiary roles and direction of knowledge flows from local resources' availability and level of local market's importance of perspectives. (Wang & Suh 2009) This definition of subsidiaries roles are similar to ones, described by Gupta & Govindarajan (1991). A framework is depicted on the **figure 5**.

Figure 5: Subsidiary roles and knowledge flows



Source: (Wang & Suh 2009)

According to the research the subsidiaries' roles are: Integrated Player, Contributor, Local Adaptor and Implementer. Integrated player possesses high level of local

resources having highly important market for headquarter. Thus, this subsidiary will be highly engaged in knowledge inflows and outflows to the whole MNC. Owing to resources availability, Contributor will be interested in high knowledge outflows. However, due to low market importance, headquarter will not be willing to transfer large amount of knowledge to this subsidiary back. On the other hand, Implementer will receive significant amount of knowledge from the parent company on the regular basis due to highly important local for the MNC. Finally, Local Adapter will receive the least amount of knowledge inflows due to having lowest level of resources and importance for headquarter. (Wang & Suh 2009)

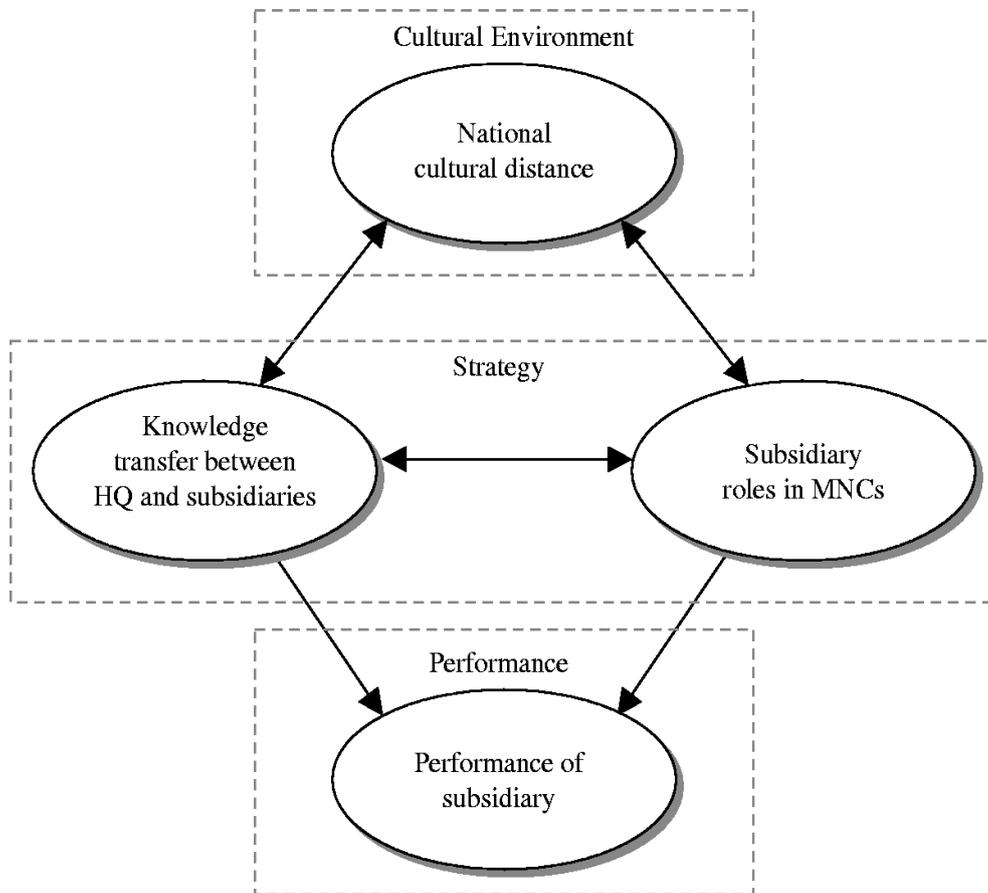
Furthermore, Holtbrügg and Berg (2004) also consider that subsidiaries which have significant local market importance, product knowledge, know-how can become an autonomic units. Therefore, headquarter may be engaged in more control in order to observe whether they implement and use the knowledge afterwards. Hence, the authors agree with the previous research stating that subsidiaries which have more strategic importance receive more attention from headquarter. Subsidiaries operating in less important market perform implementers role in knowledge transfer. (Holtbrügge & Berg 2004)

3.5.4 National culture and subsidiary roles

There is a study which proved that knowledge transfer is influenced simultaneously by cultural differences between headquarter and subsidiaries; and the strategic roles of the subsidiaries. (**Figure 6**)

The study revealed that direction and magnitude of knowledge transfer is determined by the subsidiary roles and influenced by cultural distance as well. It was discovered that more knowledge is transferred to subsidiaries which are younger and have less capabilities. Thus, the subsidiaries which perform implementer's role receive more knowledge from headquarter.

Figure 6: National culture and subsidiary roles.



Source: (Qin & Ramburuth 2008)

Moreover, knowledge transfer occurs easier when headquarter and subsidiary are located in the similar cultures; whereas a cultural dissimilarity impact negatively knowledge transfer. (Qin & Ramburuth 2008)

3.5.5 Mode of entry

There are several types of entry modes how a company can penetrate a foreign market. Those are direct and indirect entry modes such as export, licensing and franchising, joint ventures and strategic alliances, merges, acquisitions and greenfield. (Strategic Management 2010) However, in this study as an entry mode I will examine greenfield, merges and acquisitions, because by those entry modes a subsidiary can be formed.

Direct market entry modes made through acquisitions, mergers, and greenfield are exposed for bigger amount of local knowledge owing to local operations. However, a knowledge base between greenfield and merges and acquisitions will be different. (Martinkenaite 2011) Mergers and acquisitions, due to their formation by merging or acquiring another company, will have more knowledge stock comparing to greenfield, which will have less market knowledge. The knowledge stock of mergers and acquisitions will be formed by the prior knowledge of the acquired/merged company. (Gupta & Govindarajan 2000) Furthermore, organizational and national cultural difference between two firms in international mergers and acquisitions also forms a base for their knowledge stock. (Vaara, Sarala, Stahl, Björkman 2010; Sarala & Vaara 2010) Thus, absorptive and retentive capacity in mergers and acquisitions will be higher than in greenfield due to available prior knowledge base. Consequently, it will significantly facilitate knowledge transfer to those subsidiaries. (Gupta & Govindarajan 2000)

On the other hand, greenfield's knowledge stock is mostly created through knowledge transferred from headquarter; and available local market knowledge. Thus, its absorptive capacity of these subsidiaries will be lower which will affect negatively a success of knowledge transfer to them. (Gupta & Govindarajan 2000) Thus, the amount of knowledge needed for a successful operation of these three entities will be different. A greenfield subsidiaries need more attention, support and knowledge from a headquarter than the ones which were formed by mergers or acquisitions. Consequently, merged or acquired subsidiaries will demand less knowledge inflows. (Noorderhaven et. al 2009)

3.5.6 Subsidiary's autonomy

Autonomy can be defined as an extent a subsidiary is able to make own decisions without headquarters interference. (Varblane, Männik & Hannula 2005) Subsidiary's autonomy can be viewed from two viewpoints. On one hand, it is a positive feature, because subsidiary can exploit the local opportunities without headquarters' attention. (Gupta & Govindarajan 2000) Thus, headquarter can allocate its attention and resources to more needed areas which can result in more effective operation. It means a high level

subsidiary's decentralization which also leads to fewer knowledge inflows from the parent company. (Gupta & Govindarajan 2000)

On the other hand, subsidiary's autonomy plays a negative role. Local interests of subsidiary are not always aligned with headquarters' strategic goals. Therefore, subsidiary's autonomy represents a challenge for headquarter because it results in subsidiary's resistance to accept headquarters' knowledge. (Ambos, Andresson & Birkinshaw 2009) Furthermore, autonomic subsidiaries are less willing to receive and apply a new knowledge which can result in lower level of efficiency and underperformance. (Noorderhavn et al. 2009) Empirical research shows that autonomous subsidiaries perform less effective than subsidiaries which receive the knowledge from headquarter. (Monteiro, Arvidsson & Birkinshaw 2004) Subsidiary's autonomy also result in not-invented here syndrome from the personal attitudes of subsidiary managers which make them reluctant to receive a knowledge from headquarter. (Gupta & Govindarajan 2000)

There are several factors which lead to subsidiary's autonomy. Large subsidiary size undermines that it has significant amount of resources and capabilities. Bigger subsidiaries need much less headquarters' knowledge support thus they become an autonomic ones. (Johnston & Menguc 2007) Long years of operation and market experience stimulate ability to make own decisions which again results in higher level of independency from a parent unit. (Gupta & Govindarajan 2000) Subsidiary initiatives results in less headquarter control and granting bigger amount of autonomy. (Ambos, Andresson & Birkinshaw 2009) Subsidiary's strategic role means that it has high amount of capabilities and know-how which simultaneously can result in higher levels of autonomy. (O' Donnell 2000)

Nevertheless, frequent social interaction between headquarter and subsidiary has a positive effect on the subsidiary's autonomy, because investment in relational social capital by building close personal relationships between headquarter and subsidiary helps to eliminate not-invented-here syndrome and improve a motivation to learn a new knowledge. (Noorderhavn et al. 2009) All in all, it was empirically proved that

autonomic subsidiaries are less engaged in knowledge inflows and outflows. (Gupta & Govindarajan 2000) Autonomy makes learning and application of transferred knowledge more difficult. Thus, subsidiary's autonomy affects negatively knowledge flows from headquarter which results in lower levels of its efficiency. (Noorderhaven & Harzig 2009)

3.5.7 Control

The relationships between headquarter and subsidiaries can be viewed from agency theory perspective. A principle is a headquarter who assumes that the agent-subsiary will be engaged in the opportunistic behaviour. Therefore, the principle undertakes different control actions in order to prevent it. (O' Donnell 2000)

There are positive and negative aspects of control. On one hand, monitoring and control are the means to ensure that subsidiary is aligned with headquarters' policies and strategic goals. However, on the other hand, control restricts and reduces subsidiary's ability to respond to the local opportunities and can limit its decision making. (Ambos, Andresson & Birkinshaw 2009) Furthermore, there are several types of control. Social type of control refers to headquarters' observation whether subsidiary follows the norms, policies and objectives of the organization. (Li 2005) Generally, it is made by visiting headquarter managers and parent expatriates to the subsidiary. It is a soft measure of organizational control and can help to facilitate a communication between subsidiaries and headquarter managers; and ease knowledge transfer. This social control can improve the relationships between headquarter and subsidiary as well. However, second type of organizational control is called bureaucratic monitoring, when headquarter collects the information about subsidiaries' decisions and actions. Thus, limiting the subsidiaries' behaviours which can result in negative attitudes towards headquarter. (O' Donnell 2000)

Knowledge management theory states that it must be avoided that a receiver would believe that a knowledge transfer is imposed by a transmitter. (Martins & Antonio 2009) However, control and monitoring can create negative feelings in the subsidiary towards headquarter, which can result in its reluctance towards acceptance of

knowledge and increase a probability of opportunistic behaviour. Consequently, excessive control affects negatively the relationships between headquarter and subsidiaries. Therefore, it can act as an impediment in knowledge transfer. (O' Donnell 2000)

3.5.8 Subsidiary's location

Geographical distance plays a crucial role in the knowledge transfer from headquarter to subsidiaries. Particularly, large geographical distance limits knowledge transfer effectiveness. Moreover, a difference in time zones and longer transmission channels impede even more a knowledge transfer. (Ambos & Ambos 2009) Therefore, subsidiaries located far away from the headquarter, comparing to the ones which are placed closer, receive less knowledge flows from the parent company and considered as isolated. (Harzig & Noorderhavn 2006) On the other hand, closer location reinforces a homophile principle. It means that subsidiaries located geographically closer to a headquarter identify themselves more with a parent company. Therefore, those subsidiaries are more receptive to the knowledge flows from it. Consequently, there are more vertical knowledge inflows occurring. (Monteiro, Arvidsson & Birkinshaw 2004)

Level of economic development in the countries where the parties are located play a roles in knowledge transfer as well. If a source is located in economically developed country and recipient is placed in the less advanced one, then source's knowledge stock perceived as more valuable one. Therefore the recipient is more motivated to receive and absorb knowledge from the source. Therefore, knowledge transfer from a headquarter based in the economically advanced to the subsidiary placed in the less developed one occurs more successfully. (Gupta & Govindarajan 2000)

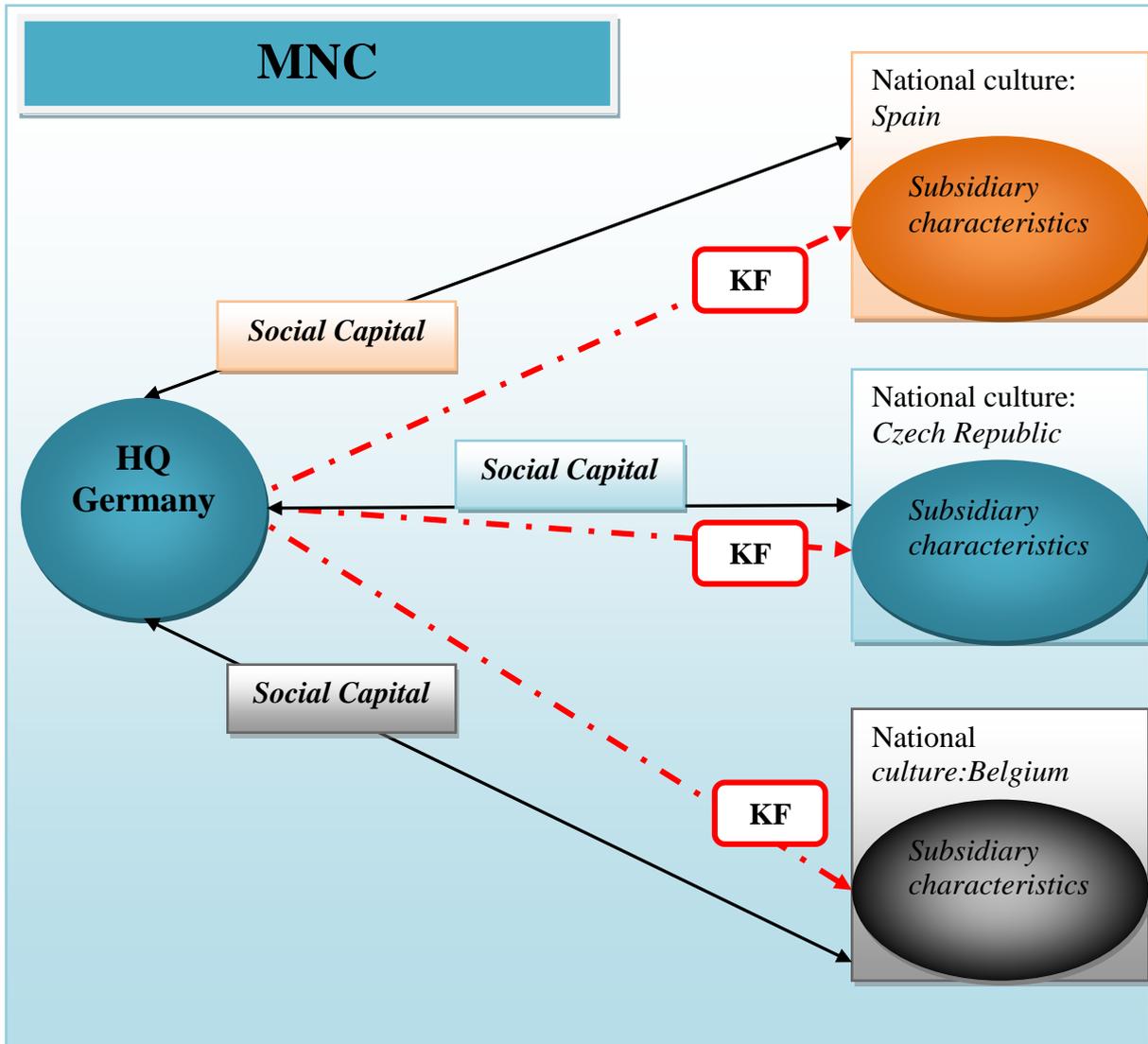
Finally, there is more knowledge inflows when a subsidiary is strongly involved in the work processes with headquarter. (Lee & Cho 2004) However, distant location prevents from it due to difference in local markets, high costs of frequent transactions, different time zones and cultures. Distant location makes knowledge transfer more complicated. (Noorderhavn & Harzig 2009) Furthermore, large geographical distance results in difference in markets, capabilities and needs between headquarter and subsidiaries.

Thus, knowledge transferred from headquarter might not seem very attractive for subsidiary due to these differences. Hence, subsidiary will not be very motivated to acquire new knowledge from headquarter. Consequently, large geographical distance affects negatively knowledge transfer from headquarter to subsidiaries. (Noorderhavn & Harzig 2009)

3.6 Theoretical framework

In this section a theoretical framework, dedicated to explore a research problem is developed. There are two research question raised in this study. The first one is focused to explore to what extend knowledge transfer barriers can differ between headquarter and its subsidiaries within the same MNC. Second one is dedicated to understand what factors can impact these differences. At the core of this theoretical framework lie the studies of Szulanski (1996) about knowledge transfer barriers within a company; and research of Riusala and Suutari (2004) dedicated to international knowledge transfer impediments between headquarter and subsidiary (Szulanski 1996; Riusala & Suutari 2004). However, in order to answer the research questions of this study, a present theoretical framework is focused on three sets of factors which can cause a difference in knowledge transfer between headquarter and its subsidiaries. The theoretical framework of this study is presented in the **figure 6**. The abbreviation KF in the figure means knowledge flows.

Figure 6: Theoretical framework of this study



A success of knowledge transfer can depend on cultural difference between headquarter and each particular subsidiary along the dimensions provided by Hofstede. (Hofstede 2001) Lastly, a final type of factors examined in this study are related to each units' unique and specific characteristics, such as its size, age, level of autonomy, mode of entry, degree of control by parent, role for the MNC, subsidiaries' location and distance from headquarter. Furthermore, a present study examined only vertical knowledge flows and didn't take into consideration horizontal ones. Present theoretical framework will be tested on the case study of German company and its subsidiaries located abroad.

3.7 Summary

In the modern business world a success of the MNC's operations depends on efficient knowledge transfer, because it allows companies to gain a competitive advantage. However, knowledge does not flow easily within and the MNC due to existence of knowledge transfer barriers. There are several studies which examined knowledge transfer impediments in detail. One of them stated that already knowledge characteristics such as tacitness and complexity represent a challenge for its transfer. (Bhagat & Kedia 2002) Second research made by Szulanski (1996) discovered that within a single company knowledge transfer depends on source and recipient; their mutual motivation to learn and share; source's credibility; and recipient's absorptive and retentive capacities. An environment where a knowledge transfer occurs also influences its success. Thus, arduous relationships and barren organizational culture affects negatively a knowledge transfer.

Furthermore, majority of the modern companies operate in different countries all over the world, consequently knowledge transfer across borders becomes very important. However, in the international settings knowledge transfer can be even more impeded by difference in the organizational cultures of headquarter and subsidiary; by the laws, policies and norms of countries where they are placed. Furthermore, knowledge transfer can be challenged by various cognitive differences due to cultural perceptions of both parties and various relationships with each other. However, many studies which were made in the area of international knowledge transfer, examined a problem from a perspective that barriers in cross-border settings are the same with all subsidiaries. Therefore, there is a gap in the current research where a need of investigation is present.

Consequently, a present study is aimed to fill this research gap. Thus, it examined a research problem from three perspectives. The first one is a theory of social capital. It states that difference in knowledge transfer impediments can be explained by a variety of relationships between headquarter and each particular subsidiary. This variance is based on structural, relational and cognitive components of social capital, which state that strong networking ties, combined by good relationships and trust, complimented by sharing a cognitive understanding between the parties facilitate the knowledge transfer.

Strong social capital is achieved by frequent communication and personal interaction between a source and recipient.

Furthermore, national cultures of headquarter and subsidiaries play important role in knowledge transfer because they form beliefs, perceptions and values of the parties. Consequently, difference along cultural dimensions such as masculinity/femininity, power distance, collectivism/individualism, uncertainty avoidance and long term/short term orientation, provided by Hofstede represent a major source of knowledge transfer difficulties in cross-national transfer. Difference in national cultures is further complicated by diverse languages which the parties have. Therefore, strong English language skill is necessary element for facilitating a knowledge transfer.

Finally, unique subsidiary characteristics can also affect a knowledge transfer consequently causing a difference in its efficiency. Longer years of operation and large subsidiary size stimulate a formation of absorptive capacity, which represents a facilitating factor for a knowledge transfer. Furthermore, subsidiary's autonomy provokes not-invented here syndrome and makes it reluctant towards knowledge receiving. Excessive control and dependence on headquarter can produce a resistance towards headquarters will and knowledge rejection. Large geographical distance stimulates subsidiary's isolation and complicates a knowledge transfer. Mode of entry and subsidiary roles in MNC's operation play a role in knowledge management too. Mergers and acquisitions, demand much less knowledge than greenfield; whereas Integrated Player and Implementer are the most receptive to headquarters' knowledge comparing to Global Innovator and Local Innovator which are characterized by smaller ability to receive and implement a transferred knowledge. A present study addresses all these issues in its research questions; and will examine them on the example of case study with German headquarter operating with its subsidiaries located in Czech Republic, Spain and Belgium.

4. METHOD

This chapter describes a research strategy used in this study. Furthermore, a technique used to collect a data for this research is presented. Moreover, a discussion about reliability, credibility and validity of this thesis is provided. Finally, a data related to this case study (headquarter and its subsidiaries) is briefly presented.

4.1 Research design

Qualitative methods were chosen for the present study, because it allows understanding a researched phenomenon in-depth. Moreover, qualitative methods are more subjective in nature, because they permit to research and investigate a subject in more intangible nature, such as opinions, perceptions, attitudes and values. The research questions of this thesis are “what” study rather than “how many”. (Maylor & Blackmon 2005) Furthermore, qualitative methods are more applicable for case study which was chosen as a research technique for this thesis; and in-depth interviews with employees in headquarter and three subsidiaries is the most appropriate research tactic, where the quality of interviews is more important than the their quantity.

Moreover, the research approaches selected for this study were explanatory and exploratory ones. On one hand, explanatory studies are used in the cases when there is a need to establish and explain the relationships between the variables. (Saunders, Lewis & Thornhill 2007) Explanatory studies try to explain the processes, events in order to understand and relate how they occur. (Yin 2003) Therefore, the theories related to knowledge transfer barriers were developed and will be tested in a relation to national culture, subsidiaries’ characteristics and social capital. Simultaneously, this research will also test the theories of international knowledge transfer barriers in order to understand whether those factors can also affect a difference in knowledge transfer barriers between headquarter and subsidiaries. On the other hand, this research can be qualified as exploratory study as well, because they used to seek new insights of the phenomenon and to understand what is happening with the subject in the new light. Those studies are applicable in order to understand a problem when there is uncertainty about the nature of this problem. (Saunders, Lewis & Thornhill 2007) Exploratory

studies are undertaken when few previous researches exist and aimed to discover new ideas which will be tested in the future investigations. (Yin 2003) Thus, owing to the fact that all previous researches related to vertical knowledge transfers from headquarter to subsidiaries were presuming that all the knowledge transfer barriers are identical with all the subsidiaries within the same MNC. Consequently, the exploratory nature of this research will help to understand whether those impediments are different in the case of each particular subsidiary and what factors can explain this difference.

Furthermore, a present study is comprised from two types of research approaches. Those are deductive and inductive ones. A deductive approach is applicable for this thesis because this strategy is aimed to develop a theory based on the existing research, then create a hypothesis and test it through selected data collecting technique. (Saunders, Lewis & Thornhill 2007) Therefore, present study used already existing research related to discovered knowledge transfer barriers within a single company; and in the international settings, national culture specifications, social capital and different characteristics of subsidiaries in order to understand whether those factors indeed affect and cause the difference in knowledge transfer barriers of headquarter and its subsidiaries. Consequently, present research will observe, test and confirm whether those discussed theories will stay applicable to the context of this study.

On the other hand, inductive approach is also suitable for this study, because it uses data collecting techniques in order to develop and build a theory. This approach allows understanding why a phenomenon is occurring, rather than what is occurring. (Saunders, Lewis & Thornhill 2007) Simultaneously, present study through in-depth interviews is also aimed to discover which factors can cause a difference in knowledge transfer barriers between headquarter and its subsidiaries and whether they were already described in the previous researches. Consequently, a combination of both approaches inductive and deductive is the most applicable for this thesis, because this study cannot be measured without a theory build by previous research (deductive approach); simultaneously, it cannot exist without discovering new ideas or factors, like it is stated in research questions (inductive research).

In the previous researches, knowledge transfer barriers were examined from both qualitative and quantitative research perspectives. However, this present study will use solely qualitative research approach through case study as a tactic and in-depth unstructured interviews as a research technique. Those approaches, tactics and techniques will be examined in the following sections in more detail.

4.2 Qualitative research method

Qualitative research is different from physical research or investigation on natural sciences, because it can examine social behaviour of individuals. Consequently, this type of research is crucially important for business and management studies, because it can investigate opinions and behaviour of people which comprise organizations. Furthermore, qualitative type of studies address more “what” and “how” questions, than “how many” ones in quantitative researchers. (Maylor & Blackmon 2007; Yin 2003) Qualitative research allows understanding the phenomenon from depth in order to investigate its meaning, rather than a measurement through values, perceptions, motivations, actions and interactions which occur between people, groups and organizations. (Maylor & Blackmon 2007)

Consequently, owing to the characteristics of qualitative research, it is the most applicable for this study, because it will permit to investigate opinions and beliefs of employees in headquarter and subsidiaries concerning whether there is any differences in knowledge transfer barriers in each subsidiary. Moreover, this research type will allow understanding in the best manner through in-depth investigation what factors can cause these differences; if any differences exist.

4.3 Research strategy

A case study is a research strategy aimed to examine a particular phenomenon which is undertaken within real life context using multiple sources of evidence for its conduct. (Yin 2003) Moreover, the boundaries between studied phenomenon and its context are not clearly evident. Thus, this research strategy is highly useful and applicable in order to gain a deep understanding of the research subject and processes being enacted. Hence, a case study as a research strategy is the most suitable for the selected research

approaches, because it simultaneously permits to test existing theory and also provide the source for new insights and further research questions. (Saunders, Lewis & Thornhill 2007)

Consequently, a case study research strategy is the most applicable for the present study, because difference in knowledge transfer barriers between headquarter and its subsidiaries are best examined on the example of a particular company; and factors related to this difference can be best investigated within the context where and how this MNC operates. Finally, case study will permit to test a build theory of social capital, national culture of the parties and subsidiary characteristics as potential factors for differences in knowledge transfer barriers between headquarter and its subsidiaries; simultaneously it will allow getting new possible insights and ideas related to the stated research questions raised in this study.

4.4 Data collection

The most suitable research technique used in cases studies are interviews. (Yin 2003) Consequently, this data collecting tactic was selected for this thesis as well. Moreover, in order to understand the research questions stated in present study, semi-structured interviews were selected as a research technique.

Semi-structured interviews give some flexibility for the participants and interviewer itself; despite of having a list of themes to be covered during it, the order of the questions can be changed depending on the conversation's flow with each particular interviewee; and some topics can be further elaborated based on the responses in order to discover deeper a research question. On the other hand, some of the questions can be skipped if they were already answered during the interview through the other questions. (Saunders, Lewis & Thornhill 2007) Therefore, semi-structured interviews were chosen as data collecting technique for this thesis.

Moreover, semi-structured interviews are the best applicable technique which suits for explanatory and exploratory studies, because they allow to "*find out what is happening and to seek new insights*" (Saunders, Lewis & Thornhill 2007: 313). This citation

describes its belonging to exploratory studies. In explanatory studies semi-structured interviews used to understand the relationships between variables in order to investigate the research topic in-depth. (Saunders, Lewis & Thornhill 2007)

Furthermore, face-to-face interviews are considered as the most effective mean of conducting semi-structured interviews. They allow establishing a direct contact with interviewee and receiving more accurate data. Furthermore, face-to-face interviews permit to see the interviewee's reactions to the research questions and enable a researcher to interpret the replies in more correct way. Thus, they enable to receive both verbal and non-verbal data. However, face-to-face interviews are the most expensive ones, due to costs of time, money and travels. (Saunders, Lewis & Thornhill 2007) Thus, when it was possible to conduct face-to-face interview, they were organized. Generally, there were twelve interviews organized, and six of them were face-to-face interviews. Face-to-face interviews were organized with employees in headquarter.

On the other hand, in case when the respondents are not able to present at the interviews' venue, than telephone and skype interviews are the best possibilities for the interviews' conduct. Those interview techniques are very efficient, because they enable to reach a person despite of the distance between interviewer and interviewee; and permit to save time and avoid unnecessary travelling. (Hair, Bush & Ortinau 2009) Therefore, when it was impossible to reach an interviewee, then a telephone interviews were conducted. In total, there were six telephone interviews organized, in addition to six face-to-face ones. Telephone interviews were conducted with employees in the subsidiaries. Unfortunately, owing to strict labour union's laws, skype interviews and conferences are not allowed in the case company. Consequently, phone interviews were a single option for the interviews arrangement.

In the present study in order to reply the research questions in the most accurate way, twelve interviews were conducted in total. Twelve interviews is a reasonable amount in order to investigate a research problem raised in this study broadly and to reply the research questions in the most comprehensive manner. Furthermore, owing to the fact that research questions involves a participation of both headquarter and subsidiaries,

then the interviews were conducted with employees in headquarter-Germany; and with individuals employed in company subsidiaries-Czech Republic, Spain and Belgium.

A main criteria for selecting the interviewees for the research was that they have to deal with subsidiaries (in headquarter) and with headquarter (in subsidiaries) regularly. Furthermore, in order address validity and reliability issues, the interviews were divided into two categories. One half of total amount of interviews were conducted with managers in headquarter and its subsidiaries; the other half (6 interviews) were conducted with regular employees who dealt with headquarter (in subsidiaries); and with subsidiaries (in headquarter) on daily basis. This measure was undertaken in order to analyse and compare the replies of headquarter employees against the answers of individuals working in the subsidiaries. This measure allows understanding whether the opinions of headquarter differ from perceptions of subsidiaries. The answers of managers both in headquarter and subsidiaries were compared against the replies of regular employees in both parent and daughter units in order to investigate whether their replies vary regarding the same topic.

The research was arranged during the summer months from June to August when a researcher had an internship in German headquarter. Moreover, all the interviews were conducted mostly in July when the researcher got acquainted with the company, its structure and operations. General length of the interview was between 45 to 90 minutes. All the interviews were recorded and then decoded in the written text. The researcher spent a considerable type on analysis of those texts. Furthermore, there were follow up discussions also organized if some themes' mentioned in the interviews where more clarification were needed. There was one pilot interview conducted to test the wordings of the questions in order to ascertain that interviewees would understand them and would provide the answers in the expected directions.

All twelve interviews were conducted in English language, because all the interviewees had different nationalities and native languages. Thus, English was selected as the most convenient way for communication which was suitable for both the interviewer and interviewees. Finally, the following tables summarize all the needed data related to the

interviewees; and present their backgrounds (*table 1* and *table 2*). The first table represents interviewees working in headquarter.

Table 1: Interviewees and their backgrounds (headquarter).

Headquarter					
<i>Function</i>	<i>Subsidiary responsible for</i>	<i>Nationality</i>	<i>Language of communication with subsidiary</i>	<i>Years of working in the company</i>	<i>Gender</i>
Manager A	Subsidiaries' CEO; Working with all 3 subsidiaries	German	German (with Belgium); English (with Spain and Czech Republic)	11	Male
Manager B	General manager; Working with all 3 subsidiaries	German	German (with Belgium); English (with Spain and Czech Republic)	9	Male
Manager C	General manager; Working with all 3 subsidiaries	German	German (with Belgium); English (with Spain and Czech Republic)	7	Male
Employee A	Working with Czech Republic	German	English	14	Male
Employee B	Working with Belgium	English	German	3	Male
Employee C	Working with Spain	Peru	Spanish	6	Female

Functions, areas of responsibilities, nationalities, genders, and other factors of interviewees working in subsidiaries are presented in the *table 2*

Table 2: Interviewees and their backgrounds (subsidiaries).

Subsidiaries					
<i>Function</i>	<i>Responsibility</i>	<i>Nationality</i>	<i>Language of communication with headquarter</i>	<i>Years of working in the company</i>	<i>Gender</i>
Czech Republic					
Manager A	Responsible for whole subsidiary's operation	Czech	English	4	Male
Employee A	Responsible for office work, dealing with HQ	Czech	English	4	Female
Spain					
Manager B	Responsible for whole subsidiary's operation	Spanish	Spanish/English	4	Male
Employee B	Responsible for office work, dealing with HQ	Czech	Spanish/English	4	Female
Belgium					
Manager C	Responsible for whole subsidiary's operation	Belgian	German	22	Male
Employee C	Sales representative dealing with HQ	Belgian	German	5	Male

Furthermore, both headquarter and subsidiary interviewees had mostly identical interview guides, having a few individual questions specific for subsidiaries and some

special ones relevant only to headquarter. Those interview guides are available in the Appendix 1, which is located after the reference chapter.

The interview questions had a following structure. At the beginning of an interview there were open questions concerning interviewees' opinions related to a type of knowledge which is transferred to subsidiaries, amount of knowledge transferred, existence of knowledge transfer impediments from headquarter to subsidiaries, etc. Then, there were the questions related to whether those barriers are similar/different in the case of each particular subsidiary. After that, there were more closed questions, related to particular factors which can affect this difference, such as quality of relationships between headquarter and subsidiaries' employees; cultural difference between individuals working in parent and daughter units and their cognitive understanding of each other; effect of specific subsidiary characteristics on knowledge transfer and its following implementation. Subsidiary features included such attributes as, different age, size, autonomy and dependency level, distance, location, roles, mode of entry, etc. All those questions were based on the theoretical framework which was built in this study. There were some unexpected findings answers discovered during the interviews. The interview guide, for both headquarter and subsidiaries, is provided in the Appendix part.

4.5 Data analysis

Proper data analysis using a correct technique is an important part of every research, because it permits to achieve high level of validity and reliability of the research allowing a study to be more credible. In this thesis Kolb's learning cycle as a data analysing technique were used. This method is also referred to semantic or content analysis. (Maylor & Blackmon 2007)

The first stage of Kolb's learning cycle starts with a *concrete experience*. (Maylor & Blackmon 2007) In the case of this analysis, the first stage started with research based transcripts of interviews. All the interviews were transcribed into English. General length of interviews was ranging from 45 to 90 minutes. All the interviewees provided a researcher with their opinions about knowledge transfer barriers in the cases of each

particular subsidiary and possible factors which can affect it. Those opinions were supported by facts and examples which interviewees faced while they were dealing with their foreign partners (headquarter-subsidiary; subsidiary-headquarter).

Furthermore, second stage of data analysis according to Kolb is a *reflective observation*, which includes three different activities. The first step in those activities in familiarization, it means becoming familiar with all collected data. This step is very important, because re-familiarization is a main key to high quality analysis in the qualitative research. (Maylor & Blackmon 2007) Consequently, after all 12 interviews a researcher spent a considerable time to re-read all the interviews in order to become familiar with the data again. During this stage, a researcher highlighted all patterns in the interviewees' answers which were repetitive. All the interviewees mentioned that indeed knowledge transfer was different among its three subsidiaries. The most commonly repeated named factors which affect this difference were subsidiary age, size, its autonomy, trust and willingness of subsidiary managers to cooperate.

Second step in reflective observation is spending time with issues and data. At this stage, a researcher is reflecting what is happening rather than looking for something in particular. (Maylor & Blackmon 2007) During this stage, an interviewer categorized repetitive answers in the separate groups in order to discover distinctive patterns. All the interview questions were based on the theoretical framework build in this study. Each of the questions tried to find out knowledge transfer barriers between headquarter located in Germany and its subsidiaries in Czech Republic, Spain and Belgium; whether those barriers differ in the case of each particular subsidiary located in those countries and what factors, by the interviewees' opinions affect it. Consequently, all the replies were categorized according to them and researcher constantly looked for patterns based on criteria. Moreover, there were some unexpected answers as well. Those unexpected answers formed a separate group according to main research categories. All the research findings will be provided in the following subchapters (Findings and Discussion).

A final activity was to *summarize* and *reorder* a data in order to reflect the patterns which were found during the research. Consequently, all the data were conceptualized

through extracting, presenting and reflection of key themes discovered in the interviews. (Maylor & Blackmon 2007) Thus, during this stage a researcher identified the main themes in collected data related to knowledge transfer barriers which a case MNC meets during the operation with its three subsidiaries; and determined the main factors which affect it by the interviewees' opinions.

A final stage in the Kolb's learning cycle is to *experiment* with the collected data in order to discover whether a particular concept occurs. A particular concept means discovering whether any patterns appear from the collected data. During this stage a researcher can try to understand whether those patterns fit to the build theories and models which were described in the literature review. (Maylor & Blackmon 2007) Thus, at the present study, the researcher tried to analyse whether the most common knowledge transfer barriers, discussed in the literature review appear, then compared them across all three subsidiaries in order to understand whether they differ between them; finally, the researcher identified the most commonly repeated patterns related to what factors affecting the difference in knowledge transfer barriers from Germany to Czech Republic, Spain and Belgium. Those patterns were compared against the theoretical framework created in the literature review.

4.6 Validity, reliability and generalizability

An important part of every research is evaluating how valid and reliable its results are. Nevertheless, both terms of validity and reliability are used simultaneously and construct the qualitative research. Reliability is referred to what extend a data collected or the results of analysis will be repeated by conducting a research again using the same data collecting technique. There are several threats for reliability which are referred to participant error and observer bias. (Saunders, Lewis & Thornhill 2007) Therefore, in order to avoid interviewee's biases and to make the research results in the most accurate manner, an interviewer explained the meaning of all terms which were used during the interview.

Moreover, interviewer clarified the questions and sometimes rephrased them in order to be sure that an interviewee understood them correctly; and to be able to receive the most

correct answers. Furthermore, the interviewer assured a participant that all replies will be kept strictly confidentially. On the other hand, in order to avoid interviewer errors, researcher formulated the questions in the most neutral manner and asked the questions in the same tone of voice in order to avoid “leading to the answer”. Researcher analysed a received data with the most independent attitude in order to make the most reliable results.

On the other hand, *validity* is referred to a degree the results appear to be what they should be. It means the extent a researcher gets the access to the interviewees’ knowledge, experience, ideas; and able to infer a meaning that a participant intended to answer. (Saunders, Lewis & Thornhill 2007) Therefore, in order to understand how valid a present study is, it is reasonable to ask whether it really found whether knowledge transfer barriers differ between a headquarter and its subsidiaries within the same MNC; and what factors can affect this difference. The valid findings will be consistently presented and supported by quotations.

However, validity has a wide range of concepts in qualitative research. Thus, validity can be viewed from three angels, such as construct validity, external and internal ones. *Construct validity* means a correctness of operational measures of this study. (Yin 2003) Consequently, all interview questions were taken from build framework based on theories from the previous researches. Similarly, a pilot interview was conducted in order to test an appropriate wording to understand a relevance of a conceptual measurement in a relation to research outcome. Finally, all the interviews were recorded and followed the interview guide.

Furthermore, *internal validity* is referred to a quality of results’ interpretation. (Maylor & Blackmon 2007) Thus, all the data which was collected from the interviews was carefully classified, re-read, coded and categorized. Then, empirical findings were compared against a theoretical framework. Moreover, Kolb’s learning cycle was used in order to ensure that all the findings are consistent along the cases. (Maylor & Blackmon 2007) Finally, interviews’ results received from managers in headquarter and

subsidiaries were compared against the answers got from discussions with employees working in headquarter and subsidiaries which deal with each other on the regular basis.

On the other hand, *external validity* is referred to a possibility to generalise the research results to a bigger population in the similar research context. It means that if a research has strong external validity, then it can be easily generalised to the other organizations which operate in similar settings. (Yin 2003) However, in the qualitative research a generalizability of the results should be seen as working proposals on the applicability of findings with similar, but not identical research conditions. (Maylor & Blackmon 2007) Consequently, a purpose of this thesis is not to generalise findings based on factors which might affect a difference in knowledge transfer barriers between a headquarter and its subsidiaries based on a theoretical framework build in this study; but rather to provide some suggestions and conclusions which will be applicable to the case studies having similar settings and conditions. Finally, in order to avoid subjective generalisation based on the case of particular company, the answers of headquarter and subsidiaries, together with replies of employees on different levels were compared.

Generalizability means a degree the received results can be generalised to the whole population. This term can also mean an extent the findings can equally apply to the other research settings or other organizations. (Saunders, Lewis & Thornhill 2007) However, owing to the fact that a research strategy of this thesis is a case study and the results of this research will be based on the single and unique organization, consequently the aim of this study is not to produce a theory that will be generalizable to all organizations. However, an explanatory nature of this research undermines that some of its statements are based on already existing theory, consequently this research can either prove or not some existing findings. On the other hand, exploratory nature of this thesis means that some undiscovered results can be also found. It means that this study can produce some outcomes which were not yet found in the similar research settings. Consequently, taking into account exploratory and explanatory natures of this study, some generalisations can be made if there will be some further research with similar findings.

4.7 Case company X

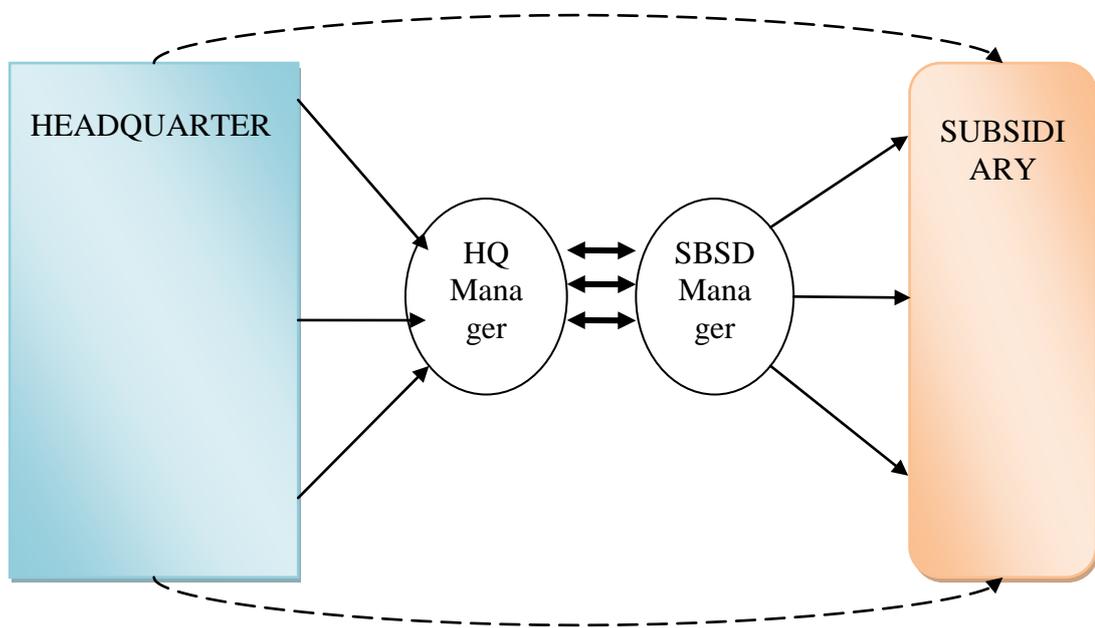
Company X is a system supplier for hardware and DIY stores both in Germany and in Europe. The company specialises on selling such product groups as: tools, garden equipment, ironmongery and sanitary fittings. Company X has the widest product assortment comprised of 26.000 items which it delivers to its customers. All this product assortment is divided into two divisions: Metal and Sanitary. The company focused on exceptional customer service, providing high quality products and speed of delivery. Company X emphasises on meeting customers' requirements in the best possible manner; provides products' warranties and offer after sales service. The company regularly receives the rewards for its outstanding service and products' quality. (Company X 2011)

Company X has its headquarter located in the northern part of Germany. It has 495 employees. The firm works and delivers mostly to big DIY chains, such as OBI, LeroyMerlin, Praktiker, etc. The company operates also abroad, having its products presented almost in all European countries. Moreover, Company X has three subsidiaries located in Spain, Czech Republic and Belgium. (Company X 2011) The company has very long operational history and was formed in 1976. Later, in 1997 Company X was acquired by German Y Group. Annually, Company X has meetings with Group Y where it presents all financial reports, different figures, future plans and strategies. Financial and sales figures are delivered by subsidiaries to headquarter on monthly bases. All those documents are made in English language. The biggest turnover comes from Germany. Consequently, German market is very important for the company. (Product catalogue of company X)

The company has one CEO and five members of board directors who are responsible for sales, purchasing, finance, logistics and international activities. Usually, Company X had each department (Metal and Sanitary) responsible for its own area of operations only in Germany. On the other hand, the company had a separate Export Department dealing with all subsidiaries with all assortments. However, when a research was conducted in this organization, there was a company's restructuration. Since then, employees from both Metal and Sanitary departments became responsible for both

German and international markets. Export department was also restructured; and employees who dealt directly with subsidiaries had become parts of those divisions as well. This measure was made in order to become more internationally oriented and shift a focus from headquarter with its local market towards its subsidiaries and their operations. Knowledge transfer process which occurs in the company is presented in the **figure 7**.

Figure 7: Knowledge transfer process in Company X.



This figure shows that knowledge is transferred from different departments in headquarter to subsidiaries. Moreover, significant amount of knowledge, ideas and experiences is transferred by headquarter managers to subsidiary managers during personal meetings. Afterwards, the subsidiary managers transfer this knowledge further to employees; and implement it there.

Furthermore, Company X is represented in many countries in Europe. However, in Czech Republic, Spain and Belgium it has three subsidiaries. The oldest one is

subsidiary in Belgium. It is located in central part of Belgium in the city called Mechelen. It was formed in 1991 and it continuously operates in the market for 22 years. The subsidiary was formed as an acquisition of another company by Company X. Its general manager has been working in this subsidiary before the acquisition and continues to lead the company now. The subsidiary is small in size having 7 people employed there. A structure of all subsidiaries is similar; it means that there is a general manager, two employees working in the office and sales representatives. Usually, this subsidiary had given the highest profit to the company among the other subsidiaries. However, recently the financial figures started to decrease.

Two other subsidiaries in Czech Republic and Spain were formed recently in 2006 and 2009. They were both founded through greenfields. Both general managers in those subsidiaries were newly recruited when those units were formed and they both continue to lead those companies. All three subsidiaries have mostly identical structures. Thus, subsidiaries in Spain and Czech Republic have similar organizational structures as a Belgium one, having one general manager, an employee working in the office and sales representatives. Thus, all three subsidiaries are small in sizes. In particular, in Spain there are 4 employees working; and in Czech Republic there are 7 people employed. All three subsidiaries perform profit generation functions and their managers concentrate on exploiting local market opportunities and increasing sales.

5. FINDINGS

This chapter of the thesis will describe the findings which were received during the research. A major purpose of this research was to investigate knowledge transfer process initiated by headquarter to its subsidiaries within the same MNC. It was aimed to investigate knowledge transfer impediments which can occur during this process. However, the research questions raised in this study had a purpose to understand whether this knowledge transfer barriers differ with each particular subsidiary. Furthermore, second research question stated in this study was dedicated to investigate what factors can affect these differences in knowledge transfer barriers between a parent and daughter units.

Those research questions were approached from three angles. The first one evaluated quality of relationships between headquarter and its subsidiaries, which can cause a variety of knowledge transfer impediments between the parties. This part of theoretical approach was based on the framework developed by Nahapiet & Ghoshal (1998) about social capital. According to this framework, there are three dimensions of social capital, such as structural, relational and cognitive. All those three social capital elements were addressed in the research through the semi-structured interviews.

Secondly, due to the fact that knowledge transfer occurs between the parties located in different countries, thus cultural difference as a possible knowledge transfer impediment was investigated. National cultural difference was evaluated based on Hofstede's (2004) dimensions of culture. According to Hofstede's theory, Germany (headquarter) and its subsidiaries in Czech Republic, Spain and Belgium are placed differently along those cultural dimensions, which can cause various knowledge impediments with each particular subsidiary.

Finally, difference in knowledge transfer impediments can be caused by various subsidiaries' characteristics. Majority of subsidiaries' characteristics were based on the following researches: Gupta & Govindarajan (2000), (1991), (1992); Harzig & Noorderhavn (2006), (2009) and Ambos, Andresson & Birkinshaw (2009). Those

studies stated that subsidiary age, size and entry mode affect a level of subsidiaries' knowledge stock consequently determining an amount of needed knowledge. Subsidiary's autonomy and level of control identify a degree of subsidiaries' resistance towards headquarters' knowledge. Subsidiaries' location, roles, distance from headquarter and local market conditions stipulate an efficiency of knowledge transfer and implementation. Consequently, on the example of a case company having a headquarter in Germany with subsidiaries in Czech Republic, Spain and Belgium, the research questions will be addressed from the perspectives of all those factors which can affect a difference in knowledge transfer between a parent and daughter units within the same MNC.

5.1 Knowledge transfer barriers from headquarter to different subsidiaries

This subchapter will be focused on answering the first research question dedicated to understand whether knowledge transfer barriers differ among the subsidiaries when a headquarter transfers the knowledge. Thus the first three questions of the interview guide were aimed to understand what kind of knowledge a headquarter transfers to subsidiaries; and whether it transfers the knowledge equally to all subsidiaries; to which subsidiary a knowledge transfer is the most easy/difficult one; and what knowledge transfer barriers occur with each subsidiary.

5.1.1 Type of knowledge transferred

The first question of the interview guide was dedicated to understand what kinds of knowledge are transferred; and to which subsidiaries it occurs. All the respondents in headquarter and subsidiaries (n=12) stated that on daily basis, subsidiaries receive/send large amount of explicit knowledge related to new product launches, particular product features, its prices, etc. Furthermore, they receive an explicit knowledge and decisions about Y Group which is equally transferred to all subsidiaries. These types of knowledge subsidiaries receive from different headquarter departments, such as purchasing, logistics, finance, marketing etc. Usually, this explicit, independent and simple knowledge, subsidiaries receive via emails and phone calls.

“Ninety per cent of communication which comes from headquarter is about daily working. I mean emails about items, promotion, etc. I think it is about ninety per cent of the communication.” (Opinion of subsidiary A)

“Company X is our supplier. So, we receive every day more or less 3-4 emails depending on daily information. We have different emails with different proposals, articles, new collections and prices.” (Opinion of subsidiary B)

The same replies had the interviewees in headquarter regarding that all subsidiaries receive explicit knowledge equally.

“Automatically all subsidiaries receive equal amount of knowledge. They all receive the same amount of knowledge about the products; they are all informed at the same time.” (Opinion of headquarter)

However, during the personal meetings when headquarter managers come to visit subsidiaries, then they transfer more tacit knowledge and best practices.

“Normally, we transfer best practices. We show how to sell special assortments, transfer a technical knowledge and help for unit’s operations. Generally, they need more information, more details and backgrounds to keep not only the business running but to make them to be able to sell better and to be more successful.” (Opinion of headquarter)

Simultaneously, subsidiaries have the same opinion regarding that during personal meetings, headquarter managers transfer more ideas and experiences.

“When we have some discussions or meetings, it is all about ideas, new projects and prospects for the future. When headquarter managers come personally, they transfer more ideas.” (Opinion of subsidiary A)

5.2 Similarity in knowledge transfer barriers

During the analysis there was an interesting finding detected. All the participants in headquarter (n=6) stated that there are certain knowledge transfer barriers which are specific for all subsidiaries. It was also found that there are some knowledge impediments which were specific for particular company’s units.

Firstly, all the respondents (n=12) both in headquarter and subsidiaries mentioned that significant knowledge transfer barrier which was applicable to all subsidiaries was difference in language between the parties. All interviewees believe that language difference also consumes great amount of time and efforts for translation. Hence, language is a significant barrier in knowledge transfer.

“The most important barrier is probably the language. The most information here is giving out in German. So, most of the people who are unfamiliar with the language have problems. So we have to work on translating that.” (Opinion of headquarter)

“When we get the emails in German language, it is a problem, because no one here speaks German. It is also a problem to translate it to our language. It would be better if we could receive the mails in English.” (Opinion of subsidiary A)

Moreover, language difference has much more complicated nature, because variety of cultures, and native languages results in diversity of cognitive schemata’s which employees in headquarter and subsidiaries have; then a meaning of the knowledge can be lost or misinterpreted.

“Language is very important barrier, because our foreign subsidiary directors and us speak different languages, that is why they can just show that they understood what we said, but actually they did not.” (Opinion of headquarter)

“All the knowledge which is sent to us is in German. Someone who translates that is not a professional translator; he might translate only text, not the email’s content. Thus, a lot of things can be lost in translation.” (Opinion of subsidiary A)

Furthermore, second mentioned impediment was market difference between Germany and all subsidiaries. There was an interesting finding that market difference does not impede a transfer of knowledge. However, it impedes knowledge implementation locally in subsidiaries’ markets.

“Law difference was never a barrier for us to send an email or to transfer knowledge personally. It has never been a problem in my work practice.” (Opinion of headquarter)

“Yeah, we can receive the knowledge despite of regulations’ differences, but implementation of some ideas is impossible.” (Opinion of subsidiary)

All interviewees in subsidiaries (n=6) stated that market difference is a significant barrier for knowledge transfer, because it impedes knowledge implementation.

“Sometimes, it is difficult to implement the knowledge which a headquarter transfers. The main reason is market difference, habits’ difference, price difference.” (Opinion of subsidiary A)

“A market is very different here. For example in Germany customers look for quality; in our country customers look for a price. Then, it is quite difficult to implement the knowledge a headquarter transfers to us.” (Opinion of subsidiary B)

“In our country, there are a lot of small customers. In Germany, they usually work with large chains. That is why not all the knowledge from headquarter is suitable for us.” (Opinion of subsidiary C)

Furthermore, a third knowledge transfer barrier named by interviewees was difference in national cultures (n=12). However, there was also an interesting finding that headquarters managers believed that cultural difference does not represent a significant impediment for efficient knowledge transfer between headquarter and subsidiary managers. However, cultural difference can be barrier when knowledge is delivered to subsidiaries’ employees.

“Culture is not a barrier for knowledge transfer for subsidiaries’ management. They know how Germans think and we know how Spanish, Czech and Belgium people think. It is more challenging to deliver the knowledge to sales reps, because they are not in very often contact with us. Thus, it is very difficult for them to understand what we want and for us to realize what they think.” (Opinion of headquarter)

Furthermore, interviewees in headquarter and subsidiaries believe (n=8) that cultural difference does not affect a transfer of explicit knowledge.

“Culture does not affect ta knowledge which we transfer in emails, because everyone understands the terms margins, turnover, payment days and invoices.” (Opinion of headquarter)

“I don’t have any difficulties in my daily work in using the knowledge which headquarter transfers me on daily basis. It is all very understandable. My national

culture does not have any influence on it or represents any obstacle.” (Opinion of subsidiary)

On the other hand, all subsidiaries’ interviewees (n=6) believe that cultural difference affects knowledge implementation and speed of applying it in their local markets.

“Every culture has its own heritage and habits which sometimes are impossible to understand, such as why in Germany things work in one way and cannot work in our country in same way when they transfer knowledge.” (Opinion of subsidiary A)

“Our and German mentalities are different. Therefore, sometimes it is slightly difficult to implement the transferred knowledge, because it is not always possible.” (Opinion of subsidiary B)

“Culture determines the priorities which a person puts for himself. I am from X country, and I like to do things quickly. Spain is more relaxed and it takes a bit longer time for them to implement the knowledge, comparing to Czech Republic. Belgium is quite fast in implementation. ” (Opinion of headquarter)

Furthermore, it was mentioned that transmission channels can also impede transfer of knowledge. All subsidiary interviewees (n=6) stated that existing knowledge transfer mechanisms are inefficient. They sometimes prevent knowledge delivery to subsidiaries or increase time to perform some tasks.

“It would be great to receive the offers immediately from headquarter in editable version that we can work with it. Unfortunately, we don’t have any intranet for a quick and direct connection.” (Opinion of subsidiary A)

“We have the system, but it is very inflexible and difficult, with limited amount of possibilities. If we have any changes with the products, I have to adjust it manually. It takes a lot of time.” (Opinion of subsidiary B)

“There is a difficulty with software. If I am staying connected to German server, I can’t use Skype or open my email, because it closes all other connections to internet. Thus, I can’t receive any knowledge during this time.” (Opinion of subsidiary C)

However, there was an unexpected finding. During the research the interviewees (n=12) told that many knowledge transfer barriers a headquarter creates itself. All the

interviewees stated that parent company and its employees are too concentrated on German market; consequently they are not willing to create a right knowledge which would be applicable and useful for the subsidiaries. Interviewees stated that headquarters' employees are not motivated enough to meet subsidiaries needs which prevents a knowledge transfer to subsidiaries.

“It might be that some employees in the headquarter are lacking motivation. It might be that they are more interested to work for a local market; and they don't see the benefits of working with foreign countries and foreign subsidiaries.” (Opinion of headquarter)

“Not all the knowledge is falling to us. I have discovered that there are some items which can be sold great here, but no one had told us about them; and they have been in the assortment for already half of year. Headquarter is not very motivated to work with us.” (Opinion of subsidiary B)

“We don't have very good contacts with other departments and do not receive much knowledge from them.” (Opinion of subsidiary A)

Interviewees in headquarter (n=6) stated that concentration on German market and low level of motivation prevents headquarter employees to transfer a knowledge in English language too. It creates a significant impediment for successful knowledge transfer and prevents them from using it actively.

“Here, a lot of colleagues are able to speak English, but they are not willing to try. Our colleagues in foreign markets are not native speakers, and it is easier to understand their language, because we can use easier words. But a lot of guys in Company X Germany are not so open-minded; they are not trying to write emails in English or to call to subsidiaries.” (Opinion of headquarter)

“It is boring to ask many times and still do not get the answer.” (Opinion of subsidiary)

5.3 Difference in knowledge transfer barriers

In the previous subchapter it was discussed that there are similar knowledge transfer barriers with all subsidiaries, such as cultural, linguistic and market differences, combined with inefficient transmission mechanisms. Nevertheless, this case study had

showed that knowledge transfer barriers can also differ with each particular subsidiary. All headquarter interviewees (n=6) mentioned that headquarter transfers the knowledge equally to all subsidiaries; but the most problematic transfer occurs to Belgium, whereas the easiest ones happens to Czech Republic and Spain.

“The way how we transfer the knowledge is similar regarding all subsidiaries. But it depends on a subsidiary. It is easier to discuss some new things with Czech Republic and Spain, than with Belgium.” (Opinion of headquarter)

The reasons in these knowledge transfer differences was younger ages of managers in both Czech Republic and Spain; recent formation of those two units; and their personal attitudes towards headquarter and its knowledge. On the other hand, long years of operation of Belgian unit, its autonomy, past success, senior age and personal attitudes result in less knowledge transfer efficiency to the subsidiary.

“Czech Republic and Spain are more receptive and respective; they apply the knowledge quickly, as soon as they receive it. Whereas in Belgium there is more scepticism, he is usually too busy to reply your emails.” (Opinion of headquarter)

“It is always easier to teach new colleagues, like Spain and Czech Republic, because they are willing to change. Belgium is working for very long time based on the past success. Thus, it is very difficult for them to understand now that something has to be changed.” (Opinion of headquarter)

There was also an interesting finding that age of the subsidiary managers and years of working in one position play a role in the efficiency of knowledge transfer. It means that it is easier to transfer the knowledge to younger managers in Czech Republic and Spain, than to Belgian one, due to his more senior age.

“Both subsidiary managers in Spain and Czech Republic are open-minded because they are younger, they are from our generation. They do not work in the company that long like manager in Belgium.” (Opinion of headquarter)

“The most problematic knowledge transfer is to Belgium, because it is hard to teach old dog new tricks; when he is doing things for 10-15 years he doesn't want to hear anything from younger people in Germany.” (Opinion of headquarter)

“Belgium wants to do everything by himself, instead of having people coming from Germany and saying what to do. There is a certain barrier, personal barrier” (Opinion of headquarter)

Furthermore, it was found that more knowledge is also required for Czech Republic and Spain; whereas Belgium needs much less support, due to age of formation and pass success of Belgium.

“More strategic decisions receive Spain and Check Republic, due to the fact that they are smaller and younger; whereas Belgium is more advanced, it receives a lot of awards regarding its performance, so it has fewer requirements for the knowledge or strategic help.” (Opinion of headquarter)

On the other hand, all subsidiaries’ interviewees (n=6) expressed their motivation to learn more knowledge from headquarter. However, again Spain and Czech Republic needed more tacit knowledge, such as experiences, ideas, and best practices; whereas more experienced unit required more explicit, practical and operational knowledge related to new prices, products, catalogues.

“We would like to have more opportunities to receive more new ideas, new prospects, and more knowledge about the markets from other countries.” (Opinion of subsidiary A)

“Knowledge is never enough. We need more knowledge concerning the articles, presentations, and marketing. We don’t have all the information that is actually available and existing in Germany.” (Opinion of subsidiary B)

Consequently, it is clear that is it more difficult to transfer the knowledge to Belgium comparing to two other units in Czech Republic and Spain. The reasons of these knowledge transfer difference will be examined in the following subchapter in more detail.

5.4 Factors affecting difference in knowledge transfer barriers

The first subchapter was dedicated to answer the first research question stated in this study. Therefore, this part is focused on analysing factors which might affect differences

in knowledge transfer. Literature review was concentrated on analysis of knowledge transfer barriers from few angles: difference in social capital and variances in subsidiaries' characteristics. Consequently, those factors will be examined in more detail.

5.4.1 Social capital

It was already earlier revealed that knowledge transfer occurs easier to Spain and Czech Republic; than to Belgium. These differences can be explained by social capital and its structural, relational and cognitive elements. All subsidiaries' interviewees (n=6) stated that they have good relationships with headquarter managers, who come to visit them. Below, there are some examples of strong structural and relational social capital with Spain and Czech Republic.

“The relationships are always human relationships. We have very good, friendly and close relationships with manager A, B and C, who are coming to visit us. Our meetings are always cooperative and this knowledge is important to us.” (Opinion of subsidiary A)

“The relationships are very good with Export department; they come to visit us every month. It is very important for us because they learn our business. If I need something I can easily call A or B manager. They are going to visit our customers, transfer best practices and help us to sell.” (Opinion of subsidiary B)

On the other hand, owing to the fact that Belgian subsidiary had a lot of success in the past; then it was not very often contacted. Therefore, it resulted in weaker ties with headquarter and loss of trust.

“We have been living too long by the past success. Hence, we haven't been in the contact with Belgium for some years, so it is very difficult to get these relationships again. You always have to be in contact and show people that you are interested”. (Opinion of headquarter)

“We are not so credible for them anymore. Employees are not willing to adapt something new there.” (Opinion of headquarter)

“100% trust is impossible, because we are not sure that headquarter understands the problems locally. There is always a gap in decisions in Germany and needs of local market.”(Opinion of subsidiary A)

Furthermore, all subsidiaries' interviewees stated (n=6) that stated that with those employees in headquarter, with whom subsidiaries do not have often contact, they do not have good and strong relationships. This is a good example of absence of cognitive and relational social capital with those departments. Thus, it is difficult for subsidiaries to understand their knowledge and intentions. It also affects a level of trust to headquarter.

“Sometimes, there are some big changes and they are not understandable for us; what is the right reason for change; or no one even informs us about those changes.” (Opinion of subsidiary A)

“They make decisions regarding products and pricing without asking. I don't understand how they can do it without even discussing with us whether these prices and products are acceptable.” (Opinion of subsidiary B)

“It is not very easy to convince sales representatives about the usefulness of knowledge which headquarter delivers. They do not see any advantage of using it. So, sometimes it is difficult to explain them and keep them motivated.” (Opinion of subsidiary C)

5.4.2 Transmission channels

Almost all interviewees (n=10) also mentioned an importance of knowledge transfer mechanisms in building the relationships between each other. They consider personal meetings as the most important factor for transfer of tacit knowledge. Emails, Skype and telephone were considered as the manner to transfer more explicit knowledge.

“Writing emails and speaking on the phone are not enough. Those means are good to transfer some quick and not complicated knowledge. The best way is a personal contact when you have to deliver something more complex, best practices and ideas for implementation.” (Opinion of headquarter)

“Through Skype I can get a quick reply and do not wait until I get an email answer. But Skype is mostly for routines and personal meetings are for building the relationships.” (Opinion of subsidiary)

Research showed that the best way to transfer knowledge is through personal meetings with headquarter managers. Video conferences also facilitate knowledge transfer. It showed that personal meeting strengthen all dimensions of social capital: cognitive, relational and structural. They also help to build trust, create an identity with the whole company and connect subsidiaries’ employees to the headquarter.

“Annually we have a sales meeting here in Germany; and all subsidiaries’ employees are coming here. We show them that we know them, they see the company. It helps to bring the connection between them and us.” (Opinion of headquarter)

“It is good that headquarter employees come to visit us, and we could go to Germany. It helps us to understand their decision making, mentality. We understand them more; and there is more cooperation.” (Opinion of subsidiary A)

“After personal meeting and getting to know each other, it is always easier to communicate and ask someone about the help.” (Opinion of subsidiary B)

However, in the case of Belgian subsidiary the situation is different. Not-invented here syndrome and belief that it possess enough knowledge results in low motivation of knowledge receiving. Therefore, Belgium believes that the best way to transfer knowledge is by email; personal meetings should be kept at a limited level.

“Meetings with headquarter one or two times per year is enough. If we are going to have it more often, then no one will have a time for it.” (Opinion of subsidiary C)

“Main knowledge transfer channel should be email. If we get it in any other electronic format it is also fine. It is not necessary to have someone here to explain it, because we know our local operations and market very well. When we get everything by email, we are satisfied.” (Opinion of subsidiary C)

“I always call to Belgium, because sometimes writing emails is useless. You don’t know when they will reply it, in one day or in one week.” (Opinion of headquarter)

5.4.3 Subsidiaries' characteristics

This subchapter will be focused on analysis of different subsidiaries' characteristics and whether they have any effect on the efficiency of knowledge transfer by headquarter.

5.4.3.1 Language skills

Furthermore, in the previous subchapter it was stated that language difference between participants creates a variety in cognitive schemata resulting in possible misunderstanding and misinterpreting. Simultaneously, it represents a challenge if knowledge source and recipient do not speak the same language because the communication does not occur. Therefore, interviewees stated that good level of English and German skills are important for efficient knowledge transfer.

“Belgium CEO speaks fluently German. That is why there is no problem with communication. Our Czech and Spanish subsidiaries do not speak it. Thus, it is difficult for them to use the knowledge.” (Opinion of headquarter)

Difference in language affects also a cognitive understanding and knowledge message can be misinterpreted, because language represents a main medium of communication.

“We have a colleague X and he doesn't speak German and then we saw that very often he understands us wrong. I think that the language is very important.” (Opinion of headquarter)

Therefore, in nowadays business world, it is crucial to speak English. However, presence of good English skills is crucial for efficient knowledge transfer.

“It is complicated when you want to bring something to the sales reps and we can't speak with them directly, because they don't speak English. Then they get only translated and filtered information by their management.” (Opinion of headquarter)

“Usually a main intention of a message is clear, but we speak different languages, and my level of English is not so good, so it can be difficult to understand sometimes.” (Opinion of subsidiary B)

Moreover, there was an unexpected finding that level of English language proficiency influences knowledge usage and implementation too.

“Some of our employees who do not understand the knowledge due to language skills might not use it as well as they could. Thus, maybe that is why they can't implement it.”
(Opinion of headquarter)

5.4.3.2 Geographical distance

There were several interesting findings in this section. On one hand, interviewees had stated that geographical distance is not a barrier for transfer of explicit knowledge.

“I don't think that distance is a problem for knowledge transfer. In this modern time we have telephone, Skype, Internet and Outlook, so we can get in contact very easily. So, this is not a problem.”(Opinion of subsidiary A)

On the other hand, geographical distance was seen as a significant barrier for transfer of explicit knowledge by the opinions of all interviewees (n=12).

“The best way to transfer, ideas, experiences and knowledge is through a personal meeting. But when the distance is too long, you can't go there every day. This is a big barrier.” (Opinion of headquarter)

“It would be nice to meet more often. But we are located far from each other.”
(Opinion of subsidiary B)

However, there was an interesting finding, because headquarter interviewees (n=6) consider that the barrier is not only the distance, but subsidiary's reachability.

“If you taking the direct plane from Hannover to Barcelona, then you are faster in Barcelona then in Ostrava (Czech Republic). You have to fly to Prague, then to Ostava and then by car to Opava. This takes more time then travelling to Spain.” (Opinion of headquarter)

“The problem is not only in a distance, but also how conveniently you can get there, how quickly. To get to Belgium it would take 10 hours by car, to get to Spain only 2

hours by plane. Then, you need to make a decision about getting there; how much it worth it.” (Opinion of headquarter)

5.4.3.3 Subsidiary age

All the headquarter employees (n=6) stated that subsidiary age is important factor for knowledge transfer, because for older subsidiary, less knowledge is needed; whereas younger subsidiaries require much more headquarters’ support.

“Subsidiary in Belgium and its employees are working very long time. Thus, they have fewer questions. Spain and Czech Republic were recently established, and they need us to develop something together.” (Opinion of headquarter)

“Belgium is very old company, they know a lot of things, they have a lot of experience and they don’t need the same amount of experience as our young companies.” (Opinion of headquarter)

Furthermore, this finding is supported by subsidiaries’ opinions too (n=6). It means that recently established subsidiaries in Czech Republic and Spain are very motivated to learn, cooperate and demand a headquarters’ support; whereas subsidiary in Belgium is needs much less parent’s attention.

“It would be nice to have more meetings that we will be able to receive more knowledge about products, practices, ideas from headquarter, other countries and markets.” (Opinion of subsidiary A)

“We need more support or tips to prepare some special offers, selling practices, because we are not experienced in that. That is why it is very important for us to have constant contact with Germany.” (Opinion of subsidiary B)

“When we receive the knowledge from German it is all very clear, what we have to deliver and what we have to look after.” (Opinion of subsidiary manager C)

Moreover, it was also found that according interviewees’ opinions they see headquarter as an important source of knowledge. Therefore, its knowledge is important for subsidiaries.

“In Germany is very experienced. Thus, the knowledge which we receive from them is always important for us.” (Opinion of subsidiary A)

“I see it as an advantage that we have such a professional team in Germany which can give us not only their expertise regarding running the company, but also give some ideas and advices.” (Opinion of subsidiary B)

“Headquarters’ knowledge is always interesting for us, because it has a lot of market and business experience.” (Opinion of subsidiary C)

5.4.3.4 Subsidiary size

The research showed that subsidiaries’ size is an important factor for their operations, because all interviewees (n=12) stated that owing to small size of subsidiaries, they need to have much headquarters’ support to perform functions which they don’t have in their units owing to limited number of employees.

“Subsidiaries are very small; you can’t build many departments due to their sizes. That is why those functions are done in Germany; and they need our expertise.” (Opinion of headquarter)

“We definitely need headquarters’ knowledge about products, catalogues, marketing, because we don’t have a department here, we are only few people.” (Opinion of subsidiary A)

Moreover, due to subsidiaries’ small sizes, lack of time becomes very important issue for knowledge implementation. Thus, they need much headquarters’ support.

“In Germany, there are a lot of departments and people. Here we are only few persons. We have to be in contact with customers, to do business, to work sales reps. We are lacking time for it.” (Opinion of subsidiary B)

“There is not enough personnel and time in our subsidiary. Therefore we concentrate only on the most important work aspects and ideas here which come from headquarter.” (Opinion of subsidiary C)

5.4.3.5 Roles of subsidiaries

All interviewees believe (n=12) that subsidiaries perform sales and profit's generation role for headquarter. Moreover, they are focused on seizing local market opportunities.

“Each subsidiary is in charge of its own country, its sales and market. They discover local opportunities in their countries. Their major role is to make sales and profit for Germany.” (Opinion of headquarter)

Moreover, subsidiaries roles are aligned with the type of knowledge a headquarter delivers, because it is tailored to their needs and provide high returns.

Subsidiaries are concentrated on sales and delivering higher turnover to Germany. That is why our task is to provide them with knowledge which will help them to sell. (Opinion of headquarter)

“Headquarter delivers mostly sales related knowledge. We are happy to receive it; and implement it quickly, because it helps us to sell.” (Opinion of subsidiary A)

5.4.3.6 Mode of entry

Both interviewees in headquarter and subsidiaries (n=12) believe that mode of entry and subsidiaries' formation affect a level of knowledge need. Findings showed that Spain and Czech Republic need more knowledge because they were formed as greenfield. However, Belgium was founded by acquisition; therefore it requires much less knowledge from the parent.

“We had to work harder in terms of teaching our Spanish and Czech subsidiaries because they were newly formed. We had to build everything from the scratch and deliver a lot of our knowledge which we had in Germany.” (Opinion of headquarter)

“Belgium was already experienced, because it got a lot of expertise, local market knowledge, customer contacts and product assortment from the acquired company.” (Opinion of headquarter)

“We were new in this business and we did not have any base to rely on, because we were just formed. Thus, we used all the knowledge and headquarters’ experience which they gave us.” (Opinion of subsidiary A)

“It was an advantage for us that we were joined to another company, because they had already fixed logistics, finance, customers and products. It was perfect and helped us to deliver higher returns.” (Opinion of subsidiary B)

5.4.3.7 Level of subsidiaries’ dependency/autonomy

All the interviewees (n=12) stated that they work independently from the headquarter. It means that they have a sufficient amount of decision making authority and dependency on the parent does not represent an impediment for its knowledge transfer.

“All our subsidiaries work independently. They can make decisions about assortments and are not obliged to implement all our knowledge.” (Opinion of headquarter)

“General decisions about the assortment are made by headquarter, but on the daily work we decide what and how to do.” (Opinion of subsidiary A)

“Small decisions we can make here and bigger ones we make with headquarter.” (Opinion of subsidiary B)

However, on the other hand, interviewees believe (n=6) that Belgium subsidiary works the most independently. The reason of it is that it has been operating in the market for long time; and their past success. However, it also affects their employees' attitudes towards knowledge transfer from headquarter.

“Headquarters’ knowledge is always interesting for us. However, we can choose and filter it by ourselves which one is the most interesting for us.”(Opinion of subsidiary C)

“Belgium has been working more many years independently without big connection to headquarter. Therefore, in their mind-set is that they can do everything by themselves. So, it is not easy to bring them knowledge and try to convince them to use it.” (Opinion of headquarter)

5.4.3.8 Control

Subsidiaries have a certain level of headquarters' control. However, this control is concerns figures and financial statement, because the whole company belongs to bigger Y Group. However, interviewees (n=12) do not see it as a problem, because all the solutions are found by the mutual discussions and agreements with headquarter.

“In some cases subsidiaries are forced to implement some decisions, because they come from Y Group and we all belong to them. Generally, we are discussing it altogether with our colleagues in foreign countries in order to find common solutions.” (Opinion of headquarter)

“We are making annual plans with subsidiaries about how to work with customers and assortments. However, everything is decided together.” (Opinion of headquarter)

Subsidiaries (n=6) also consider that headquarters' control is acceptable. They believe that headquarters' requirements reasonable and based on discussion.

“I think that all regulations and reporting are reasonable. Furthermore, I haven't had any problems discussing with headquarter my initiative regarding managing my company, prices and offers to customers.” (Opinion of subsidiary A)

“I see the level of control as smooth and acceptable. I don't have any problem with that, because all the instructions are negotiable. It works fine and we are not pushed for any big changes.” (Opinion of subsidiary B)

6. DISCUSSION

The purpose of this study was to examine knowledge transfer barriers from headquarter to subsidiaries. Previous research resumed that those impediments are identical between all subsidiaries. Therefore, the goal of this study was to identify whether those barriers differ with each particular subsidiary; and what factors can affect these differences. Furthermore, in order to answer those research questions there were a theoretical framework built, which was concentrated on examination of social capital and quality of relationships between headquarter and subsidiaries. It also evaluated national cultural difference and its effect on knowledge transfer. Finally, this theoretical framework analysed various subsidiary characteristics and how they can influence a success of knowledge transfer and its implementation. There were following units' characteristics examined: size, age, mode of formation, geographical distance, role for headquarter, its dependency or autonomy; and level of headquarter imposed control. The purpose of this chapter is to combine a theoretical part written in the literature review and research findings.

6.1 Knowledge transfer barriers

This chapter will answer the first research question stated in this study; whether knowledge transfer barriers from headquarter to subsidiaries differ within the same MNC. Literature review explains that the first pioneer of Knowledge Management, Grant (1996), produced a theory about knowledge-based view of the firm stating that organizations consist of individuals, who are a prime owners of knowledge. Therefore, knowledge sharing and transfer becomes a prime importance for the companies in order to achieve and sustain their competitive advantage. (Grant 1996) Furthermore, other researchers Bhagat and Kedia (2002) stated that there are different kinds of knowledge, where the explicit one is easily codified, whereas tacit knowledge is highly personalized. Explicit knowledge is usually transferred through scripts, emails, manuals, reports; whereas tacit knowledge is usually transferred during personal meetings and contacts. The authors believe that tacit knowledge is the most difficult to transfer, but is represents the biggest value for the companies, because it will allow them to receive more competitive advantage. (Bhagat et al. 2002; Kogut & Zander 1993) Thus, there is

more likelihood that tacit will be transferred from headquarter to the subsidiaries. (Leyland 2006)

The present research showed that headquarter transfers both types of knowledge: explicit and tacit. In particular, on regular basis, units receive significant amount of explicit knowledge transferred through emails and phone calls. This knowledge is related to new product launches, particular product features, its prices, etc. Furthermore, they receive the explicit knowledge and decisions about Y Group. It helps to ensure subsidiaries' efficient operation on their daily work. Furthermore, the research also indicated that during personal meetings and subsidiaries visits headquarter managers deliver more tacit, complex and systematic knowledge. They bring new ideas, experiences and best practices which from parent company and other units. Therefore, present research supported the arguments in literature review that the most difficultly transferred knowledge is delivered in personal visits and explicit one can be transferred in emails. However, present research simultaneously contested the existing literature, finding that both types of knowledge, such as tacit and explicit are needed and important for efficient subsidiaries operation; and both of them are equally transferred from headquarter to subsidiaries.

Furthermore, in the present study, knowledge transfer barriers were examined from the perspective of two fundamental frameworks made by Szulanski (1996) about knowledge transfer barriers within a single organization; and research made by Ruisala and Suutari (2004) related to impediments in international knowledge transfers. In Szulanski's eclectic model he indicated that knowledge stickiness can depend on characteristics of knowledge, its source, recipient and the context in which the source and recipient are placed. (Szulanski 1996) He discovered that major barriers in internal knowledge transfer are knowledge-related factors, such as recipient's lack of absorptive capacity, casual ambiguity and arduous relationships between the source and recipient. Furthermore, fundamental study made by Ruisala and Suutari (2004) stated that there are four types of barriers which are specific for all subsidiaries in MNC. Those are impediments related to knowledge itself, due to its difficulty in teachability, complexity and tacitness. Then, difference in organizational cultures related incompatibility of

norms and practices between the parent and unit companies play a negative role. Relational aspect expressed in excessive control and subsidiary dependence, loose of trust and identity impedes knowledge implementation. Finally, differences in norms, laws and regulations between two countries where the parties are located also impede transfer of knowledge. (Ruisala & Suutari 2004) However, both studies had limitations that Szulanski's research was made almost fifteen years ago and were conducted only in 8 companies which were primarily American ones; whereas Ruisala and Suutari study had only expatriates' opinions from Finland and all the foreign affiliates were located in a single country-Poland. (Ruisala & Suutari, 2004; Szulanski 1996)

Nevertheless, both studies presumed that there are same types of barriers specific to all individuals or all subsidiaries within MNC. However, present study showed very interesting finding. During the research it was found that there are some *knowledge transfer barriers* which are *applicable for all subsidiaries*; and some knowledge impediments which are *specific only for particular units*. Thus, the barriers which were applicable to all subsidiaries were: difference in *culture, language, market*; and *transmission channels*.

6.1.1 National culture

Previous research stated that *cultural variety* impedes knowledge transfer due to differences in cognitive schemata, national values and communication. It results in parties' less willingness to share and apply the knowledge. (Schlegelmilch & Chini 2003) Cultural difference also affects the absorptive capacity of the receiving unit, because similarities in culture make it easier to understand and apply the new knowledge in the receiving unit. Therefore, cultural difference makes the knowledge transfer more costly, less effective and less successful. (Teagarden, Meyer & Jones 2008)

However, existing literature has a limitation, because it did not make any differentiation related to what type of knowledge was transferred between the parties. In the previous academic research regarding knowledge transfer and cultural difference, a general term "*knowledge*" was used without differentiation between tacit and explicit. However,

present research made a differentiation whether there is a transfer of tacit or explicit knowledge. Therefore, based on the current research it was found that national culture does not affect the transfer of explicit knowledge due to existence of common international business terms, such as margin, turnover, payment days, product characteristics, etc. Those expressions are understandable despite of any culture of origin. Thus, the findings showed that explicit knowledge transferred via emails is not affected by cultural difference.

On the other hand, present study found only partial support about the effect of cultural difference on transfer of tacit knowledge which was so widely expressed in the existing literature. It was only partially supported that knowledge transfer is impeded by cultural difference, because in the current study only subsidiary managers believe that cultural difference can affect knowledge transfer in terms of its implementation; whereas headquarter managers do not see culture as knowledge transfer barrier. This finding can be explained by the fact that headquarter managers had built very strong relationships with subsidiaries' CEOs. Therefore, both of them do not see that cultural difference can affect the knowledge transfer, because strong personal ties and good social capital can help to overcome cultural differences. On the other hand, it was found that culture indeed impede knowledge implementation locally, because subsidiary managers have to use it in their countries and deliver it to their employees. Thus, they can observe that culture indeed can impede knowledge implementation. It was also found that culture affects the difference in understanding between headquarter and subsidiaries' employees which was caused by their linguistic differences. Thus, this finding supports indirectly the existing literature that cultural difference results in different cognitive grounds between individuals by causing misunderstanding between them, which again can impede the knowledge transfer. Consequently, this statement requires further research.

Nevertheless, in the present research it was found that it is easier to transfer the knowledge to Czech Republic and Spain; than to Belgian subsidiary. Moreover, Belgian unit requires more explicit and practical knowledge, whereas Czech Republic and Spain need more tacit one. This difference can be also partly explained by Hofstede's cultural

dimensions between Germany and Belgium, Spain and Check Republic. In the academic literature, Hofstede's research states that variety along cultural dimensions create a barrier in knowledge transfer between the parties placed differently along those dimensions. (Leyland 2006)

Thus, cultural dimensions of countries where headquarter and subsidiary are located are provided in the *table 3*. Moreover, deviations of cultural dimensions of Belgium, Spain and Czech Republic from cultural dimensions of Germany are provided in the parenthesis. Therefore, based on the those scores in Hofstede's scale, the closest to Germany is Czech Republic (67) points in deviation; then, there is Belgium (86) scores in deviation; finally, the most distant culture from Germany is Spain (95). Those scores were calculated by adding numbers in parenthesis despite of the index in front of the numbers in order to receive a numerical deviation of each country from Germany.

Table 3: Cultural dimensions of countries in the research

Country/Cultural dimension	PDI	IDV	MAS	UAI	LTO
Germany	35	67	66	65	31
Belgium	65 (+30)	75 (+8)	54 (-12)	94 (+29)	38 (+7)
Czech Republic	57 (+22)	58 (-9)	57 (-9)	74 (+9)	13 (-18)
Spain	57 (+22)	51 (-16)	42 (-24)	86 (+21)	19 (-12)

Source: The Hofstede Centre 2010

In the literature review, there was an extensive discussion about Hofstede's cultural dimensions. Thus, the following paragraph will be related to evaluation of present countries' cultural dimensions presented in the *table 3* together with the statements discussed in the literature review.

According to the existing research, Power Distance (PDI) is the extent to which members of society are willing to accept the power. (Hofstede 2001) Thus, in large PDI

cultures a decision making is centralized and combined with autocratic management style. On the other hand, in small PDI countries decision making is based on the compromise and negotiation between the parties. (Wilkesmann, Fischer & Wilkesmann 2009) Thus, small PDI index in Germany means that the implementation of transferred knowledge is based on the negotiation between German headquarter with subsidiaries; whereas middle and upper middle PDI index in subsidiaries undermines that the units expect to receive relative amount of knowledge to be implemented by their own initiative; and to have some amount of knowledge which they are obliged to use. Thus, present research had proved findings in existing literature because it explored that when German headquarter sends the knowledge to subsidiaries, implementation of some knowledge is optional depending on the subsidiaries' will and the other half is compulsory, like decisions of Group Y. On the subsidiaries' side, the research had shown that they value this style of knowledge management, because based on the respondents' opinions, they appreciate that they are not forced to implement all the knowledge and understand that some of it have to be used compulsorily. Furthermore, based on the explanations of cultural dimensions provided by Hofstede, high PDI index in Belgium can also partly explain the finding in the research that for subsidiary manager in Belgium is quite difficult to accept the knowledge transferred from headquarter by managers who are younger than him, because he might not perceive them as a credible source of knowledge due to their age.

Furthermore, MAS identifies a degree of assertiveness, performance, ambition, achievement and materialism in the society. It determines the extent to which people of the society are aggressive and competitive to each other. In feminine cultures, the society promotes cooperation. (Hofstede 2001) Thus, according to the literature, high MAS index has only Germany, which determines its passion for achievement and strong desire for progress. On the other hand, all MNC subsidiaries have slightly less indexes in MAS dimension. Spain has the lowest index among the others which means that this subsidiary has more features from Feminine culture and might look for cooperation rather than competition. However, in the actual research, it was not found a direct prove of the existing literature regarding MAS, because current study showed that both Czech Republic and Spain are very cooperative despite of their MAS indexes.

Then, the other cultural dimension identified by Hofstede was Uncertainty Avoidance. This dimension is referred to degree a society relies upon social norms, rules and procedures in order to reduce the unpredictability of future events. (Hofstede 2001) High UAI index in Belgium can explain the fact that they like to do business in the standard way without looking for innovations or new paths. Thus, they are not willing to accept the transferred knowledge because they might view it as the invasion into their existing routines. Thus, headquarter should persuade them to do so. On the other hand, Czech Republic has the lowest UAI index among the other subsidiaries, which undermine their relative flexibility and openness to do a business in new and different ways. Present research supported findings in existing literature, because indeed how the research showed, that the easiest transfer occurs to Czech Republic and the most difficult one happens to Belgium.

In the literature review, Collectivism refers to extent to which individuals of the society express pride, loyalty and cohesiveness in their families and organizations. (Hofstede 2001) In the individualistic cultures, the knowledge is viewed as personal property, whereas in collectivistic cultures, the knowledge is perceived as MNC's property. Thus, in individualistic cultures the source and recipient of knowledge may be concerned with assessing the individual benefits related to initiation of knowledge transfer and its implementation; whereas in collectivistic ones, knowledge is usually transferred through personal ties. (Leyland 2006) In the present case, it only partially proved facts from existing literature, because the highest level of IDV in Belgium can explain the fact that it is not willing to share the knowledge with other units and prefers to make the decisions about own operations itself without headquarters' intervention. Furthermore, high IDV index in Germany can result in relative unwillingness of headquarter employees to share the knowledge with the subsidiaries. However, in the both situations there also can exist other factors which can cause those situations, such as not-invented here syndrome in headquarter; long-years of operation in Belgium and senior age of its subsidiary manager.

Finally, members of Long-Term Orientation societies are more willing to work for the long-term goals and more willing to participate actively in knowledge management

processes, which do not usually generate immediate results. (Hofstede 2001) Individuals from short-term oriented cultures intent to strive for quick outcomes; thus can stop the knowledge management processes due to the lack of immediate evidence of its effectiveness. (Michailova, Kenneth 2003) In the present case study, both Germany and Belgium are located in low-middle LTO; whereas both Spain and Czech Republic are placed on the low LTO. Therefore, present research can partially prove the existing literature by observing that indeed there is the quickest knowledge implementation in both Spain and Czech Republic in order to get quick value of its realization, whereas in Belgium it is relatively slower. However, again this situation can be cause by other factors, such as age and personality of all subsidiaries' managers, type of knowledge transferred, etc.

Consequently, based on the previous discussion it is possible to conclude that present research had partially and indirectly proved the existing literature about the fact that culture has a significant effect on knowledge transfer between parties located in very different countries. It is also possible to state that there exist other additional factors which affect the efficiency of knowledge transfer.

6.1.2 Linguistic difference

Existing literature tells that difference in languages creates a variety in cognitive schemata. Thus, if the parties don't speak the same language they will not understanding each other resulting in possible miSaunderstanding and misinterpreting. (Chen, Sun & McQueen 2010) Consequently, knowledge transfer is easier when the knowledge is expressed in common language. (Grant 1996)

Present research fully supported the existing literature related to the fact that commonality in language significantly facilitates the knowledge transfer. Moreover, existing literature has a limitation because it does not distinguish on what type of knowledge language difference has the impact; and what kind of impact it has. Thus, present research had revealed the finding which was not described in the literature before. Current research found that inability to speak the common language also

significantly prolongs a time for knowledge transfer of explicit knowledge, because it has to be translated either by the source or recipient. Therefore, knowledge transfer of explicit knowledge becomes longer with high probabilities for biases. This statement was not discussed in the literature earlier.

Furthermore, Berner-Rasmussen and Björkman (2005) state that fluent language proficiency of the parties who participate in the transfer process is positively related to the efficiency of transfer. The authors argue that common language facilitates trust building and improves cognitive understanding between them. (Berner-Rasmussen & Björkman 2005) Thus, ability to speak foreign languages and high level of English skills, have a positive effect on knowledge transfer between the parties. (Javidan et. al 2005)

Present research also supported the existing literature by finding many evidences that language difference affects significantly transfer of tacit knowledge because it impact its understanding by the receiving units. Furthermore, this study also got a finding which was not discussed earlier in the literature, which means that inability to understand transferred tacit knowledge provoked by linguistic difference affects its following implementation in the unit in question. It means that if the recipient does not understand the knowledge, then there is an unlikely possibility that it will be implemented and used in the unit. Finally, this study supported the existing literature that high level of English language proficiency improves knowledge transfer between the parties.

6.1.3 Market difference

In the model describing international knowledge transfers written by Ruisala and Suutari (2004) it is stated that significant impediments can be created by *social barriers* expressed by normative, regulatory and cognitive differences between the parent and subsidiary. Thus, to *regulatory barriers* are referred to difference in laws and regulations between sending and receiving country. (Ruisala & Suutari 2004) If a transferred knowledge does not comply with local values, roles, beliefs and views of the

subsidiary then its implementation can be impeded. (Ruisala & Suutari 2004) Finally, if host and home country employees have not developed a cognitive understanding between each other, then individuals either do not understand or misinterpret the meaning of the knowledge. (Ruisala & Suutari 2004)

Present research had two very significant findings. The first finding was new and was not described in the academic literature before. It means that this study discovered that market difference do not have a significant effect on transfer of knowledge. In particular, it was discovered that laws cannot restrain knowledge transfer during personal meetings or constrain headquarter from sending emails. However, on the other hand, it was found that market difference influence significantly the implementation of transferred knowledge locally. Thus, it means that present research partially supported the findings provided by Ruisala and Suutari (2004), because based on the interviewees' opinions difference in laws, market structure, customers' purchasing behaviour, price levels create difficulty in knowledge transfer and implementation. All interviewees stated that their own market characteristics are very different from Germany and from other subsidiaries. Consequently, these differences impede significantly knowledge implementation. Furthermore, normative and cognitive dimensions of social barriers were also found in the present research, when subsidiary interviewees confirmed that difference between Germany and their own units might causes misunderstanding and difference in values, which simultaneously complicates the knowledge transfer.

6.1.4 Transmission channels

In the literature review it was stated that rich communication channels such as information technologies and user friendly software are very useful mediums for transfer of codified and explicit knowledge. (Appleyard 1996) They effectively stimulate a formation of social capital. (Holtbrügge & Berg 2004) Transmission channels help to reduce a social dilemma by decreasing a necessary time for sharing the ideas and making it more simple. (Cabrera & Cabrera 2002) Present research proved an academic literature that efficient transmission channels help to transfer explicit knowledge. However, in this study it was found that inefficient transmission channels

prolong knowledge transfer and its implementation. Therefore, in this case study, they represent a challenge for efficient knowledge transfer.

6.1.5 Headquarters' role

Academic literature explains how important role a headquarter has. It means correct resources' allocation, delegation of decision making rights' to its subsidiaries, which determine a good prerequisite for effective knowledge transfer. (Ciabuschi, Martin & Ståhl 2010) Hence, a great degree of headquarters' involvement, support and facilitation of knowledge transfer is needed to make the transfer successful. (Leyland 2006)

However, in the existing literature it was not yet discovered that headquarter itself can create significant obstacles for initiation and knowledge transfer process. Current research showed that *headquarter sometimes creates a knowledge barriers* itself, because headquarter can be very much *concentrated on own local market* not taking into account local situations in subsidiaries, consequently creating knowledge which will be problematically or only partly applicable in the subsidiaries. Moreover, headquarter *employees* might not see a benefit of cooperating with subsidiaries and *lacking a motivation* to either transfer the knowledge or transfer it in the right format, like sending it in language, understandable for subsidiaries which significantly prevents knowledge transfer. Therefore, it is possible to conclude that headquarter also can create a knowledge transfer barriers in the initiation stage which makes them inapplicable or problematically applicable in the subsidiaries, due to low motivation of employees, "silos effect", and not-invented here syndrome and senior management myopia.

On the other hand, there are some barriers which are *solely specific* to a particular *subsidiary* and do not apply to others. The research indicated that to some subsidiaries, knowledge transfer occurs easier than to the other ones. The reasons for that are: differences in relationships between headquarter and each subsidiary, specific subsidiary characteristic. Those factors will be elaborated in more detail in the following subchapters.

6.2 Factors affecting knowledge transfer

In the previous chapter it was discussed that there are knowledge transfer barriers which are specific for all subsidiaries in the international knowledge transfer. However, there are also barriers which correspond only to particular subsidiary. Furthermore, second research question raised in this study was dedicated to understand what factors can affect the efficiency of knowledge transfer. Consequently, as the research showed that those factors determine the fact that knowledge transfer barriers are not identical with all subsidiaries. The following subchapters will examine them in more detail, combining theories provided in the literature review and results of the research's findings.

6.2.1 Relational difference and social capital

Academic literature determines the value of social capital because through network of relationships, participants can create, provide and deliver knowledge. (Nahapiet & Ghoshal 1998) Social capital comprises from three elements: structural, cognitive and relational. Structural social capital refers physical linkages between the people and units. Researchers state that it facilitates a trust building between parties and stimulate the transfer of tacit knowledge. (Tsai & Ghoshal 1998) Relational social capital focuses on personal relationships and friendships. It represents a significant prerequisite for trust and identity building among subsidiaries' employees. (Ruisala & Suutari 2005) Cognitive social capital means shared languages, codes of interpretations. It helps to establish shared understanding which stimulates more close and intense knowledge exchange. (Gupta & Govindarajan 2000) Academics state that social capital is so important for cross-border knowledge transfer because it leads to higher absorptive capacity, decreases "not-invented here" syndrome, and improves the motivation to learn the knowledge. (Li 2005)

Present research indicated that the relationships between headquarter and its subsidiaries can differ. The reason of it can be difference in social capital. This study also confirmed the existing literature that through close personal ties, more tacit knowledge is transferred. Moreover, it also showed that frequent personal interactions stimulate formation of social capital and create the trust. Present study indicated that with Spain

and Czech Republic the relationships are very good, thus they are very motivated to receive and apply the knowledge; whereas with Belgian subsidiary relationships are more distant. It was found that due to lost contact with that subsidiary for certain time it is very difficult now to rebuild the relationships. Thus, current research confirmed that relational social capital significantly stimulate trust formation and motivation to learn the knowledge.

Moreover, present study further confirmed existing researchers about effect of structural social capital on trust building and knowledge transfer. Indeed, this study showed that owing to the fact that subsidiary employees do not have very often contact with headquarter employees (only with headquarter managers); and Belgian employees did not have frequent communication with headquarter within several years, therefore, interviewees indicated that there is not enough trust to the headquarters' intentions, will and knowledge.

Furthermore, the effect of cognitive social capital on knowledge transfer was also supported, because without knowing German managers very well and consequently absence of common understanding, it is difficult for subsidiaries' employees to conceive them and headquarters' intentions. In conclusion it is needed to state that this research indicated that social capital can play a significant role in efficiency of knowledge transfer by causing the difference in relationships between headquarter and its different subsidiaries, simultaneously facilitating and impeding it. Finally, this research showed that knowledge transfer occurs not only between the companies, like headquarter and subsidiary, but it proceeds on the personal level between two or more people involved in the transfer.

6.2.2 Geographical distance

In the literature review, previous research stated that large geographical distance plays a negative role in the knowledge transfer from headquarter to subsidiaries, because the further the country is located, the less knowledge is transferred there. (Ambos & Ambos 2009) However, this research provided interesting finding which was not discussed in the previous studies. Existing literature did not distinguish what type of knowledge

should be transferred from headquarter to subsidiaries and just stated general term knowledge. However, this research had shown that distance is not a barrier for transfer of explicit knowledge, owing to advanced development of technologies which companies can use to facilitate its transfer, like Internet, Skype, telephone, and other user friendly software used by modern companies in business. However, to transfer a tacit knowledge there is a need of personal contact and personal meetings, therefore in this case geographical distance become a significant barrier.

Furthermore, there was also interesting finding in this research. In the literature review the researches stated that further a subsidiary is located; then there is less probability that the knowledge will be transferred in it resulting in subsidiary's isolation. (Harzig & Noorderhavn 2006) However, this research showed that not only a distant location, but also a subsidiaries' reachability plays role in the efficiency of knowledge transfer, because a subsidiary can be located in the neighbour country, but the public communication and transportation can be so inconvenient that it would be easier and quicker to get to some other further located units in the shorter time. Therefore, subsidiaries' reachability also plays an important role in knowledge transfer. Nevertheless, in this research all the subsidiaries were located in Europe. Therefore, it is difficult to make an ultimate conclusion regarding subsidiary's location and its isolation from headquarters' knowledge. Thus, there is a need for further research in a relation to geographical distance with the case study where the parties will be located in further located countries.

Finally, present research did not find the support for previous studies related to headquarters' location in more advanced country and consequently the attractiveness of its knowledge to subsidiaries. (Gupta & Govindarajan 2000) However, it might be explained by the fact that again subsidiaries in the case country were located in European Union which makes them relatively equal from development view. Therefore, there is a need for further research to examine this fact when the parties will be located in more dramatic economical difference.

6.2.3 Subsidiaries' age

There was a discussion in the literature that older subsidiaries have longer operational time, therefore they have more knowledge stock; thus they have bigger absorptive capacity. (Lee & Wu 2010) Younger subsidiaries have a shorter operational time and less experience which results in difficulty to absorb a new knowledge. Thus, they need more support from the knowledge source. (Martinkenaite 2011) Hence, younger subsidiaries require bigger amount of attention from headquarter and control for knowledge implementation. (Javindan 2005)

Present research also proved this theoretical discussions showing that indeed younger subsidiaries having less knowledge stock require more headquarters' support and attention; whereas long years' operating subsidiaries having more knowledge base need much less headquarters' assistance. Furthermore, it was earlier stated that knowledge transfer occurs between individuals involved in this process, rather than only between companies. Then, this research had very interesting finding that long years of working in the particular subsidiary, combining with years of performing the same task can result not only in becoming an independently operating subsidiary, but also results in not acceptance and resisting of knowledge due to lack of motivation in learning new ways of operation and innovation on personal level. The interviewees had indeed indicated that because general manager in Belgium is much older than managers in other subsidiaries, and managers in headquarter, it is very difficult for him to accept the knowledge and start to learn new ways of working, and be adaptable to new market conditions and circumstances.

On the other hand, subsidiary managers in Czech Republic and Spain are much younger, and correspond to the age of managers in headquarter. Thus, it is much easier to transfer knowledge to them because they are much more motivated to learn and apply it quickly. However, it is also needed to remember that both Czech and Spanish subsidiaries are young and started to operate only several years ago. Consequently, it is very difficult to state definitely whether this relational barrier occurs owing to a special features of person's character and his age, or due to long years of working experience.

Therefore, it would be significant to state that generally this is a combination of those two factors, meaning that if the person is young and new to the company or position what he/she is occupying, then he/she is more motivated to learn the knowledge and more open to new ideas; whereas long years of performing the same tasks, working in the same organization complemented by senior age complicate significantly knowledge transfer.

Finally, it is important to mention that study made by Szulanski (1996) is also applicable here, because it tells that source's credibility for the recipient influences his motivation to learn and implement the knowledge. (Szulanski 1996) Consequently, this research had found the support of the Szulanski's findings because both Czech Republic and Spain indicated that they view German headquarter as very experienced source of knowledge, whereas Belgian unit believed that they have enough of own knowledge and did not consider headquarter as valuable knowledge source. Nevertheless, it is again very difficult to state ultimately whether only credibility of the source plays a role in this matter. On the other hand, it is wise to conclude that here is again a combination of factors, like age of the subsidiaries and their managers; level of unit's independency, etc.

6.2.4 Subsidiaries' size

Furthermore, existing research indicated that subsidiaries which have a bigger size, have more organizational resources that is why they have higher organizational slack, larger absorptive and retentive capacity which allow them to implement the transferred knowledge easier. (Holtbrügge & Berg 2004) Smaller subsidiary's size results in fewer amounts of resources and absorptive capacity. Thus, they will need more knowledge, support; attention and implementation's facilitation from headquarter. (Gupta & Govindarajan 2000)

Similarly to subsidiaries' age, the results of this study had also proved the findings in existing literature about subsidiary's size. It indicated that owing to small size of daughter units they constantly need a parent's support to perform functions which they do not have in their units. Consequently, in the current study there was an interesting

finding that owing to a small size of subsidiaries, they have lack of time for knowledge implementation. Therefore, subsidiaries use and implement the most strategic knowledge which headquarter transfers to them. Thus, again this finding proves existing literature that subsidiaries need headquarters' support to perform some functions or tasks which they are lacking in their units in order to save time.

Furthermore, there also was a sequential finding related to the previous discovery regarding transmission channels. It was earlier discussed that frequent personal meetings, Skype conferences and telephone calls are important mechanisms for knowledge transfer. However, this research indicated that software which an MNC uses is also very important, because it can either facilitate or prevent knowledge delivery to the subsidiaries. Owing to the small size and lack of resources, they need more time for knowledge implementation. Therefore, inefficient transmission channels prolong the knowledge transfer and consume even more time for its implantation. It affects the efficiency and performance of the subsidiaries. Therefore, transmission channels should be on excellent level in order to facilitate knowledge transfer and its implementation when subsidiaries are small.

6.2.5 Mode of entry

There was a discussion in the literature review that mergers and acquisitions, due to their formation by joining to another company and getting its prior knowledge, will have more knowledge stock and higher absorptive capacity comparing to greenfield. Previous research explained that greenfield has less market knowledge due to the fact that a subsidiary is formed from the scratch. Thus, knowledge transfer will be more difficult to greenfield due to lack of organizational stock and experience comparing to mergers and acquisitions. (Gupta & Govindarajan 2000) Mode of entry also affects amount of knowledge needed for the successful operation of these entities. The greenfield subsidiaries need more attention, support and knowledge from the headquarter; whereas merged or acquired subsidiaries will demand less knowledge inflows. (Noorderhaven et. al 2009)

Present study partly proved those theoretical statements. On one hand, it was found that indeed acquired subsidiary requires less knowledge than two other ones. It got significant amount of experience and knowledge stock from the acquired company which significantly stimulated its profitable operation. Whereas two other subsidiaries demand much more knowledge and support from headquarter owing to their mode of formation. On the other hand, this research did not find the support for the previous studies telling that it is easier to transfer knowledge to acquisitions and more difficult to greenfield. Moreover, none of the headquarter interviewees were employed at the moment when Belgian subsidiary was formed. Thus, it is impossible to observe whether it was easier to transfer the knowledge to it during that time, comparing to the two other ones. Thus, present research had found only partial support of the existing literature.

6.2.6 Subsidiaries' roles

Earlier researchers discovered that knowledge flows within the organization depend on subsidiaries roles. (Leyland 2006) Literature review explained that Integrated player is highly engaged in knowledge inflows and outflows to the whole MNC. Contributor is interested in high knowledge outflows. Implementer will receive significant amount of knowledge from the parent company and Local Adapter will receive the least amount of knowledge inflows. (Wang & Suh 2009; Gupta & Govindarajan 2000) Moreover, Qin and Ramburuth (2008) state that more knowledge is transferred to subsidiaries which are younger and have less capabilities. Thus, the subsidiaries which perform implementer's role receive more knowledge from headquarter. (Qin & Ramburuth 2008)

Current research showed that all the subsidiaries in this case study perform Implementers' roles and sales generation functions from their countries. Thus, this researched proved the finding of Qin and Ramburuth (2008) that headquarter tries to transfer the biggest amount of knowledge to its Implementers' subsidiaries. However, owing to the fact that all subsidiaries perform the same role for headquarter therefore, it is difficult distinctly to conclude whether and how other subsidiaries' roles will affect the knowledge flows from headquarter. Thus, this case study only partially confirmed general discussion about subsidiaries' roles written by Gupta and Govindarajan 2000.

6.2.7 Subsidiaries' autonomy/dependency

Riusala & Suutari (2004) explained that excessive dependence on headquarter can create negative feelings in the minds of subsidiary employees resulting in resistance towards headquarters' knowledge acceptance and preventing its implementation. (Riusala & Suutari 2004) Present research indicated that in the investigated case study dependence did not become an issue in knowledge transfer. The reason is that all subsidiaries has a significant amount of decision making power and all subsidiary concerns and obligations are discussed together with them in order to find common solutions. Consequently, despite of the fact that subsidiaries are relatively dependant of headquarters' knowledge, this factor did not show an evidence of the previous research that dependency can create a barrier in the knowledge transfer. However, it is needed to notice that headquarter and those two dependant subsidiaries have very good relationships and strong relational capital between them. Therefore, this good established relational capital between the parties can mediate a dependency factor and facilitate knowledge transfer.

Furthermore, previous research discovered that subsidiary's autonomy affects negatively knowledge transfer from headquarter, because it results in subsidiaries' resistance to accept and apply the headquarters' knowledge. (Gupta and Govindarajan 2000) Thus, those subsidiaries might have lower level of efficiency and underperformance. (Ambos, Andresson & Birkinshaw 2009) Autonomy also result in resistance in personal attitudes of subsidiary managers which make them reluctant to receive the knowledge from headquarter. (Gupta & Govindarajan 2000)

This research had supported the previous findings described in the literature review. This study showed that indeed autonomy results in subsidiary management's personal resistance towards headquarters' will and knowledge implementation. Current research also indicated that autonomy provokes not-invented-here syndrome which has a negative effect on knowledge transfer and relationships between headquarter and subsidiary. Present research also supported the reasons of autonomy formation which were provided in the literature review. It begins to be obvious that long years of

operation and significant market knowledge become major reasons according to which autonomy is formed. It also proved that autonomy can result in lower level of operation, like a present case study had shown.

However, there was an unexpected finding which was not discussed in the existing literature. It is that autonomy can be formed by the fact that a subsidiary was not connected to headquarter for a long time by absence of attention by headquarters' management because it had a successful operations. Thus, autonomy and not-invented here syndrome results in loss of trust and credibility of headquarters' will and low level of motivation to apply and use its knowledge. Thus, this finding indicated that close, cooperative personal ties and strong social capital are very important factors for subsidiary's operation.

6.2.8 Control

Existing literature refers that social type of control related to headquarters' observation whether subsidiary follows the objectives by visiting headquarter managers facilitates knowledge transfer. On the other hand, it was found that bureaucratic monitoring limits the subsidiaries' behaviours which can result in reluctance towards acceptance of headquarters' transferred knowledge and increase the probability of opportunistic behaviour. It restricts abilities of subsidiary, its independency and can stimulate simulative implementation and sabotage (O' Donnell 2000)

In this case study MNC uses a soft control when cooperates with its subsidiaries. This research also showed that soft control is a very effective mean to follow whether all directions are implemented and to establish good relationships with subsidiaries' managers and employees, because individuals working in headquarter comes to visit the units on regular basis which stimulates knowledge transfer and formation of social capital. Moreover, this research found that soft measure of control is acceptable and represents a positive factor by stimulating a formation of social capital and facilitating knowledge transfer. Therefore, present research supported the theory that soft control is an efficient manner for knowledge transfer and has very positive effect on knowledge

exchange. The findings of the research can be summarized in the *table 4* and depicted in **figure 8**.

Table 4: Empirical results of this research

<i>Research questions</i>	<i>Existing academic research</i>	<i>Results of present research</i>	<i>Comments / New findings</i>
1. Difference in KTB between HQ & subsidiaries.	All KTB are identical between HQ & subsidiaries.	Partially supported.	-Some KTB are identical for all units : difference in <i>market, language and culture</i> . -Some KTB are different with specific unit due to: <i>social capital difference and subsidiary characteristics</i> (age, size, role, mode of entry, autonomy/dependency, control, geographical distance.)
Culture	Cultural difference impedes knowledge transfer. (Schlegelmilch & Chini 2003; Teagarden, Meyer & Jones 2008; Leyland 2006; Hofstede 2001; Wilkesmann, Fischer & Wilkesmann 2009; Michailova, Kenneth 2003)	Partially supported. Existing literature gap-usage of one term “knowledge”.	-National culture does not affect the transfer of explicit knowledge. -It does not affect a transfer of tacit knowledge if there is strong social capital. -Cultural difference affects only implementation of tacit knowledge due to difficulty in understanding between parties.
Language	Difference in	Fully	-Language difference

	<p>languages creates a variety in cognitive schemata resulting in misunderstanding. It impedes knowledge transfer. (Chen, Sun & McQueen 2010; Grant 1996)</p> <p>-Ability to speak foreign languages combined with high level of English skills have a positive effect on knowledge transfer. (Berners-Rasmussen & Björkman 2005; Javidan et. al 2005)</p>	<p>supported.</p> <p>Fully supported</p>	<p>prolongs the transfer of explicit knowledge due to need of translation.</p> <p>- Inability to understand transferred tacit knowledge affects its following implementation in the unit.</p>
Market difference	<p>-Law and market difference impede KT. (Ruisala & Suutari 2004)</p>	<p>Partially supported.</p>	<p>-Law difference does not affect KT.</p> <p>-It affects knowledge implementation locally.</p>
Transmission channels	<p>-Help to transfer explicit and codified knowledge.</p> <p>-Stimulate a formation of social capital.</p> <p>- Help to reduce a social dilemma. (Appleyard 1996; Holtbrügge& Berg 2004; Cabrera & Cabrera 2002)</p>	<p>Fully supported.</p>	<p>-In this case study, inefficient transmission channels impede knowledge transfer and prolong its implementation.</p>
Headquarters' role	<p>-It has a role for resources' allocation, delegation of decision making rights', support and facilitation of knowledge transfer.</p>	<p>Fully supported.</p>	<p>-HQ can create a KTB itself by concentrating on local market.</p> <p>-HQ employees can lack motivation to transfer the knowledge, by this mean</p>

	(Ciabuschi, Martin & Ståhl 2010) (Leyland 2006)		creating additional KTB.
2. Factors affecting the difference in KTB.	Culture, Social Capital, Subsidiary characteristics.	Partially supported.	- Difference in Social capital (structural, relational, cognitive) between HQ and its various units. -Subsidiary characteristics' (age, size, role, mode of entry, autonomy/dependency, control, geographical distance.)
Social capital: <i>structural, relational, cognitive.</i>	-Network of relationships where participants can create, provide and deliver knowledge. -On international level: it leads to higher absorptive capacity, decreases "not-invented here" syndrome, improves motivation. (Nahapiet & Ghoshal 1998; Li 2005)	Fully supported. -Fully supported.	-Transfer of both types of knowledge. -KT occurs not only between parties: HQ & subsidiary; but it proceeds on the personal level between two or more people. -Spanish and Czech subsidiaries are more motivated to learn and apply the knowledge, than Belgian unit due to stronger social capital.
<i>Structural SC</i>	-Physical linkages between people and units; facilitates a trust building and transfer of tacit knowledge. (Tsai & Ghoshal 1998; Nahapiet & Ghoshal 1998)	Fully supported.	-Absence of frequent communication results in loss of trust. -Contact with Belgian subsidiary was lost for several years; now it is difficult to build the trust

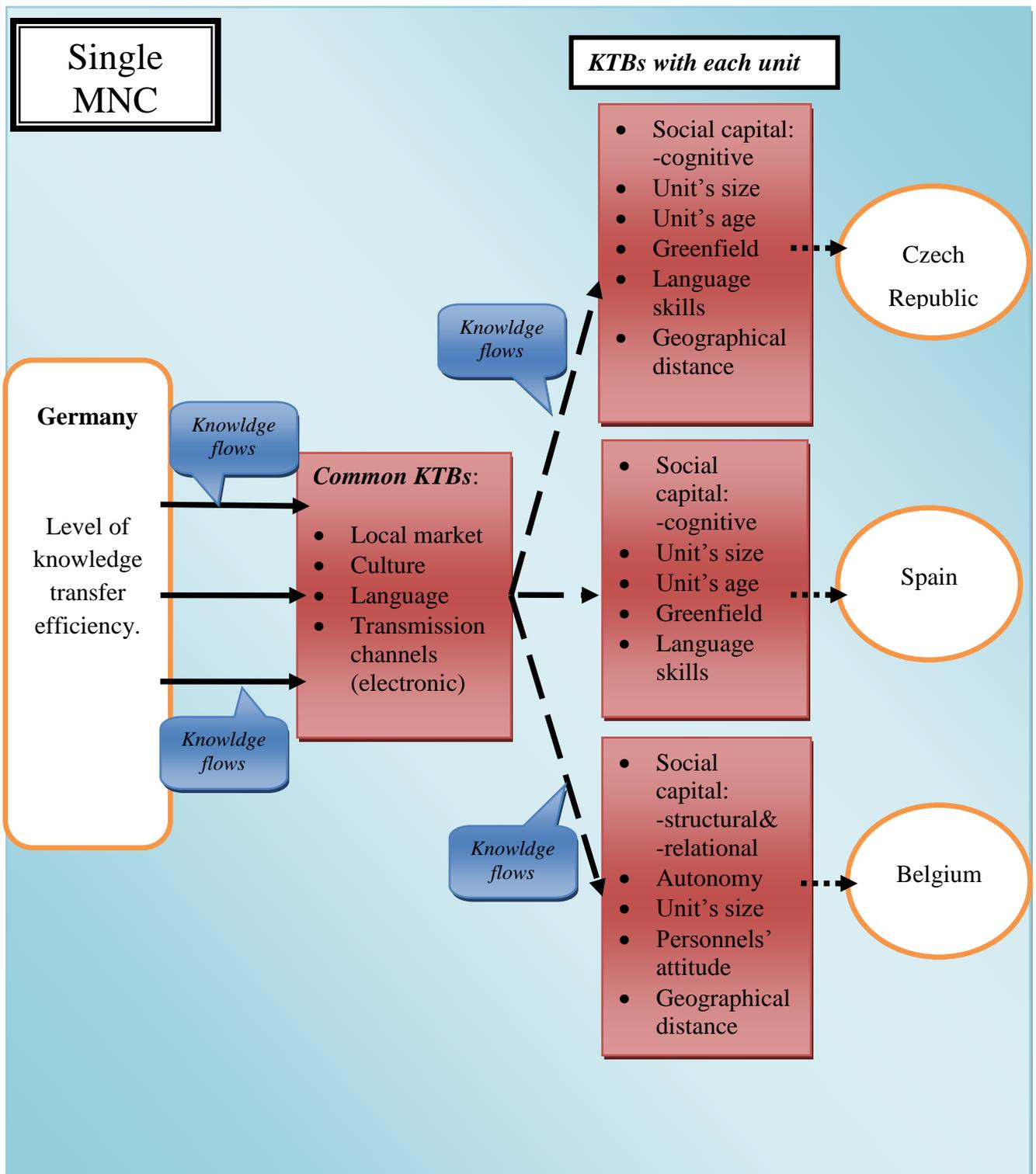
			in its employees for HQ intentions.
<i>Relational SC</i>	-It focuses on personal relationships and friendships; helps in trust and identity building. (Ruisala & Suutari 2005; Nahapiet & Ghoshal 1998)	Fully supported.	-Efficient mean for tacit knowledge transfer. -Through personal meetings between HQ and subsidiary managers, more tacit knowledge is transferred.
<i>Cognitive SC</i>	-Shared languages, codes of interpretations. It helps to establish shared understanding which stimulates intense knowledge exchange. (Gupta & Govindarajan 2000)	Fully supported.	-Difficulty in understanding headquarters' knowledge without a regular contact with German employees.
Subsidiaries' characteristics:	-Age, size, role, mode of entry, autonomy/dependency, control, geographical distance affect KT.	Fully supported.	-All those units' characteristics affect KT in different ways. (See below)
<i>Geographical distance</i>	-Large geographical distance affects negatively KT, because the further the country is located, then less knowledge is transferred there. (Ambos & Ambos 2009) -Further a subsidiary is located, less probability that knowledge will be	Partially supported. Existing literature gap-usage of general term "knowledge". Not supported, because all units were placed in	-Distance is not a barrier for transfer of explicit knowledge, due to advanced IT: Internet, Intranet, Skype, telephone, other software. -It affects transfer of tacit knowledge due to need for personal contact. -Level of unit's reachability plays role in KT: closer location, but inconvenient & long

	<p>transferred there, resulting in subsidiary's isolation. (Harzig & Noorderhavn 2006)</p> <p>-Headquarters' location in advanced country results in knowledge attractiveness for "less advanced" subsidiaries. (Gupta & Govindarajan 2000)</p>	<p>Europe; need for further investigation.</p> <p>Not supported, because all subsidiaries were located in European Union; need for further investigation.</p>	<p>time for transportation (countryside); further located unit, but quick & fast communication (capital).</p>
<i>Subsidiary age</i>	<p>-Older subsidiaries have more knowledge stock and bigger absorptive capacity; younger ones the opposite. Thus, younger units need bigger amount of attention from HQ for KT and its implementation. (Javindan 2005, Lee & Wu 2010, Martinkenaite 2011)</p> <p>-Source's credibility influences recipient's motivation to learn the knowledge. (Szulanski 1996)</p>	<p>Fully supported.</p> <p>Fully supported.</p>	<p>-KT occurs between individuals, rather than between companies.</p> <p>-Long years of individual's experience of working in one unit, in one position and his senior age can result resisting a KT & lack of motivation to implement it.</p> <p>-If units believe that HQ is an experienced source of knowledge then they are eager to learn & implement it. (Spain & Czech Republic)</p>
<i>Subsidiary size</i>	<p>-Bigger sized units have larger absorptive and retentive capacity. Thus, they can implement transferred knowledge easier. (Holtbrügge & Berg</p>	<p>Fully supported.</p>	<p>-Due to small subsidiaries' size, they have lack of time for knowledge implementation. Thus, they need significant HQ help to perform</p>

	2004) Smaller ones need more HQ support & attention. (Gupta & Govindarajan 2000)		functions which they don't have in their units. -If units are small, then transmission channels should be on excellent level in order to accelerate knowledge transfer.
<i>Mode of entry</i>	-Mergers and acquisitions will have higher absorptive capacity. -It is easier to transfer the knowledge to mergers & acquisitions (Gupta & Govindarajan 2000) -Greenfield units need more attention, support & knowledge from HQ. (Noorderhaven et. al 2009)	Fully supported. Not supported. Need for further research. Fully supported.	-Acquired subsidiary (Belgium) received a lot of knowledge from existing company. -None of the headquarter interviewees were employed at the moment when Belgian subsidiary was formed. -Greenfield subsidiaries (Spain and Czech Republic) need more knowledge due to their formation from scratch.
<i>Subsidiaries' roles</i>	-Knowledge flows within the organization depend on subsidiaries' roles. -Units performing implementer's role receive more knowledge from HQ. (Leyland 2006; Wang & Suh 2009; Gupta & Govindarajan 2000; Qin & Ramburuth 2008)	Not supported. Need for further research. Fully supported.	-All the subsidiaries in this case study perform Implementers' roles. -HQ tries to transfer the biggest amount of knowledge to its Implementers' subsidiaries
<i>Autonomy/ Dependency</i>	-Dependency creates resistance in	-Not supported.	- All subsidiaries, in this case study, have a

	<p>acceptance of HQ's knowledge. (Riusala & Suutari 2004)</p> <p>-Unit's autonomy affects negatively KT, because it results in unit's & management's resistance for knowledge acceptance & application.(Gupta & Govindarajan 2000)</p> <p>-Autonomic subsidiaries might have lower level of efficiency resulting in underperformance. (Ambos, Andresson & Birkinshaw 2009)</p>	<p>Need for further research.</p> <p>-Fully supported.</p> <p>Fully supported.</p>	<p>significant amount of decision making power.</p> <p>-Autonomy results in loss of trust & credibility of HQ, low level of motivation, not-invented-here syndrome; negative relationships.</p> <p>-Thus, strong social capital helps to overcome autonomy.</p> <p>-Autonomy results in lower level of operation in long term run.</p> <p>-It is formed by long years of operation & past success due to lack of HQ's attention.</p>
<i>Control</i>	<p>-Bureaucratic monitoring results in reluctance of knowledge acceptance and probability of opportunistic behaviour. (O' Donnell 2000)</p> <p>-Social control means observation whether subsidiary follows company objectives & implements knowledge by HQ managers' visits in the unit.(O'Donnell 2000)</p>	<p>Not supported. Need for further research.</p> <p>Fully supported.</p>	<p>- In this case study MNC uses a soft control when it deals with its subsidiaries.</p> <p>-Soft control is an effective mechanism to follow whether knowledge is implemented in the unit.</p> <p>-It stimulates social capital's formation & facilitates knowledge transfer.</p>

Figure 8: Empirical framework of this study's results.



7. CONCLUSION

In the conclusion is it possible to state that this research has significant theoretical and managerial contributions, because previously existing academic research presumed that all barriers related to knowledge transfer are identical with all subsidiaries. It did not consider different factors which can affect knowledge transfer with each particular subsidiary. Thus, this “equal” knowledge transfer barriers approach also affected business and managerial attitudes meaning that all knowledge transfer process are identical with all headquarter units and do not require tailoring or adaptation.

In the literature review this research examined several factors which can affect variety in efficiency of knowledge transfer. Those factors were: difference in culture and language; variety in relationships and social capital (structural, cognitive and relational); the last factors which were examined were subsidiaries’ characteristics, like size, age, mode of entry, subsidiaries’ roles, autonomy/dependency, geographical distance and control. After the research this study made a serious discovery for the academic world which ultimately affects its business application also for different MNCs operating internationally. This research showed that there are general sets of barriers which can be applicable for all subsidiaries, such as transmission channels, market difference, linguistic and cultural variety. On the other hand, this study indicated that knowledge transfer barriers can also differ with each particular subsidiary. The empirical research showed that main factors affecting difference in knowledge transfer with various units were all dimensions of social capital and different subsidiary characteristics, such as size, age, autonomy, geographical difference, mode of formation. The effect of such characteristics as control, subsidiary roles, and dependency did not find a support and require a further research owing to the settings specific to this particular case study. Nevertheless, both research questions of this study were answered and made significant discoveries for business and academic world. The results of this study will be discussed in more detail in theoretical contribution and managerial implication parts.

7.1 Theoretical contribution

Knowledge management topic represented an important research question for the academics for last twenty years. Consequently, there were a lot of studies made in this area before. Moreover, barriers in knowledge transfer became an important subject for investigation. However, in all previous studies related to knowledge transfer barriers, academic research presumed that knowledge transfer barriers are identical for all subsidiaries with which headquarter deals. However, present study made a significant contribution to the existing literature, discovering that there are knowledge transfer barriers, like market, cultural and linguistic difference between headquarter and subsidiary which will always represent a difficulty in any knowledge transfer, because those factors in each unit will be always different from headquarters.

In the previous academic literature, it was discussed that cultural difference between the parties impedes knowledge transfer. However, there was a gap in the literature, because it presumed that all types of knowledge are affected by culture in the same way. Therefore, this study made a significant theoretical contribution by finding that cultural difference does not have an impact on transfer of explicit knowledge. On the other hand, cultural difference impedes the implementation of tacit knowledge, because the effect of culture on transfer of tacit knowledge was only partially supported and need a further investigation.

Furthermore, linguistic difference affects negatively knowledge transfer, as it was discussed in the previous literature. However, this research also showed that language not only impedes transfer of knowledge, but also prolongs it the transfer of explicit knowledge; whereas simultaneously, the implementation of tacit knowledge might be questioned, due to recipients' inability to understand it due to difference in language. Those findings were not discovered and discussed before in the existing literature.

Finally, this research showed that law and market difference does not affect a transfer of explicit knowledge. It only impedes the implementation of tacit knowledge locally, owing to difference between markets of headquarter and subsidiaries. This is very

significant finding for academic world, because in the previous literature, there was only a common assumption about impact of market difference on knowledge transfer without detailed explanation.

Furthermore, in the existing literature there is only a limited amount of studies discussing a role of headquarter in knowledge transfer. There are only some studies telling that main purpose of headquarter is resources' allocation, flows of knowledge direction and decision-making rights' delegation. Therefore, generally this topic remained undiscovered in the nowadays academic world. However, this research made a significant contribution to existing literature by discovering that knowledge transfer barriers can appear already on the initial stage of transfer, caused by headquarter itself. The reasons for it can be strong concentration on headquarters' local market and its needs; silo-effect and not-invented here syndrome; management myopia and inefficient transmission channels. Thus, this research made a significant finding in this field and created a step towards new area of research related to role and effect of headquarter on efficiency of knowledge transfer.

On the other hand, simultaneously with existence of common barriers which will be faced by headquarter with all its subsidiaries; there are also barriers which can vary depending on the case of each particular subsidiary. This research showed that there are several factors which affect these differences, such as various strength and stock of social capital with each subsidiary; and units' unique characteristics, like age, size, mode of entry, autonomy, geographical distance, etc. All those variables affect knowledge transfer in different manner, creating an important contribution to the existing research.

Therefore, current research proved the importance of strong social capital presented in the existing literature and showed how significant are all dimensions of social capital for successful knowledge transfer. Present research indicated that strong structural social capital facilitates trust building, relational capital stimulates transfer of more tacit knowledge and finally cognitive social capital improves understanding between parties. Moreover, present research made a new finding by which means made a significant contribution to the existing literature about social capital theory and international

knowledge transfer between the companies, like headquarter and its units. This research had found that despite of the existing literature's view on cross-border knowledge transfer which should occur between the companies, in fact knowledge transfer processes between individuals, where social capital and quality of relationships play a major determining role for efficiency of knowledge transfer. Consequently, this research provided a new approach towards investigating international knowledge transfer and effect of social capital on it by studying it from individuals' view, like from employees and management perspective.

In the existing literature there was a broad discussion regarding the effect of subsidiaries' characteristics on knowledge transfer. Owing to the fact that modern MNC's operate in many and sometimes distant countries, then geographical distance was one of the important characteristics which was examined in this study. Nevertheless, this research had shown that large geographical distance represents a barrier to transfer of tacit knowledge, because it demands personal contact due to its nature. On the other hand, a negative effect of large distance between the parties can be minimalized by developed and advanced transmission channels, because then a need of personal meetings is decreased due usage to advanced technologies. In this topic, there was also a significant finding which was not yet discussed in the literature before, that not only a large distance has an effect on knowledge transfer, but also a units' reachability. Consequently, this finding opened a new area for the further research in future.

Furthermore, this research had also proven the existing literature statement that younger subsidiaries due to less amount of experience and knowledge stock need more headquarters' support, than the older ones. However, this study had a significant theoretical finding that long years of operation in one subsidiary, performing the same task combined with senior age can create resistance on management's personal level without willingness to change and accept a headquarters' knowledge. This is finding supports a discovery in this research that knowledge transfer occurs on the personal level, objecting an existing literature that knowledge transfer proceeds between the companies.

There was an interesting finding which complements previous studies related to subsidiaries size and its influence on knowledge transfer. This research proved that smaller subsidiaries having less resources and capabilities need more knowledge than the bigger ones, having bigger absorptive capacity. However, this research showed an ultimate importance of headquarters' role when MNC has small sized subsidiaries. Headquarters' role in a relation to subsidiaries size was not discussed in the literature before. Consequently, this research made again a new theoretical contribution in the research field related to subsidiaries' characteristics, headquarters' role and its effect on knowledge transfer.

There was a discussion in academic literature that long years of operation stimulate a formation of autonomy of subsidiary. This research had proven this statement. However, this research had discovered a new complementing finding to this existing research that absence of headquarters' attention due to high amount of belief that a subsidiary performs well results also in formation of autonomy and loss of trust toward headquarters' will. This research also found that autonomic subsidiaries after several years of successful operation can significantly decrease in efficiency without knowledge input from headquarter. Thus, this finding again confirmed significance and positive effect of social capital on knowledge transfer; and signifies the importance of headquarters' role in managing its daughter units.

There were several findings in this research which either supported already an existing literature or require further elaboration in the future studies owing to the limitations in the existing case study. First of all, it was proved that mergers and acquisitions have more knowledge stock owing to existing resources in the acquired company. Thus, those subsidiaries demand less knowledge than greenfield ones. Furthermore, there was a lot of research in existing literature regarding subsidiaries role and corresponding knowledge flows from headquarter. This research had found that headquarter transfer significant amount of knowledge to its implementers subsidiaries, due to their local market's importance. However, this topic requires further elaboration; because all the subsidiaries in this case study performed same implementers' roles for headquarter. Moreover, in the existing literature there was a dual view on control. On one hand it

was considered as negative feature limiting subsidiaries' autonomy. On the other hand, it was viewed as a positive measure to build relationships with subsidiaries and observe whether all objectives of MNC are fulfilled. This study found that soft control indeed has a positive impact on connections and ties building with subsidiaries and helps to transfer the knowledge.

In a conclusion, it is possible to say that this research had made significant contribution to the existing academic literature by making several important finding and creating steps into new areas for future investigations.

7.2 Managerial implication

This research made a lot of significant finding and contributions to the theoretical research. Therefore, it has a lot of important managerial implications, which can be used by modern companies.

First of all, this study has a significant managerial implication that strong social capital helps to overcome many knowledge transfer barriers which are provoked by cultural and linguistic differences; strong personal ties help to break not-invented here syndrome, increase a motivation to learn and implement the knowledge. Therefore, it means that companies should have significant amount of investment into meetings, common trainings, expatriation and other practices where people meet personally; there should also be a significant instalment of efficient transmission channels because by those means strong social capital is build which in turn helps to overcome various knowledge barriers and facilitate the transfer.

Present research also showed that eventually transfer of knowledge occurs between individuals, rather than just companies, underlying a significance of relationships' quality and social capital between them. Consequently, this research again proved for the companies how important is to invest into good relationship's building between MNC's employees because it ultimately stimulates knowledge flows, makes a transfer and knowledge implementation more effective.

Moreover, this research indicated the importance of the company to invest into its employees' language skills, because as the research had shown that linguistic difference represents a significant barrier in knowledge management in the MNC, because inability to understand the knowledge results in resistance of its application by the unit. Language difference also prolongs the transfer of explicit knowledge. Thus, it is important for MNCs to invest funds into increasing English language skills of its all employees regarding where they are employed, either in headquarter or in subsidiaries, because good English skills of all employees will stimulate them to contact more often, because they will be more comfortable speaking this language; it will promote trust between parties and facilitate understanding. It will ultimately results into more frequent knowledge flows between them, quicker transfer and more efficiency in the knowledge implementation in the units.

Furthermore, owing to this researcher's finding that market difference does not affect a transfer of explicit knowledge and impedes only tacit one; headquarter should again invest into effective transmission channels having advanced software, simultaneously adapting tacit knowledge which it transfers to its subsidiaries already on the initial stage in order to make its implementation quicker and more effective.

This research showed that headquarter can create significant amount of knowledge transfer barriers as well. Therefore, modern companies should firstly concentrate and investigate how efficiently head office is operating within the whole MNC. They should firstly optimize the processes, improve transmission channels, emphasize on the company's corporate culture, employees' motivation and their communication with each other. They also should acknowledge a work of middle and senior management and choose a right combination of Human Resource Management practices. All these measures will help to overcome many knowledge barriers already on the initial stage, will facilitate building healthier work environment in the head company and improve knowledge flows to the daughter units.

Different subsidiaries' characteristics discussed in this study have many interesting implications for the business usage as well. It is a well-known fact that one of the

factors which determine subsidiaries' location is importance of local market and its resources' advantage. Therefore, many MNCs can open their units in distant locations, where large geographical distance affects negatively knowledge transfer. Thus, this research again showed that for modern companies it is very important to have advanced technologies to communicate efficiently with its distant units; and indicated that for managers deciding on entering new market with new subsidiary there, they should also emphasize how convenient this unit can be reached, because then difficulty in accessing it can be a barrier for often unit's visits. Consequently, this research can advise companies to open their units in countries' capitals, because in that case it will be much easier to reach them by taking a plane.

This research stated that younger subsidiaries need sufficient amount of headquarters' support. Consequently, implication for companies is that headquarter having newly formed subsidiaries should emphasize on helping and supporting them with many different aspect of business and direct more knowledge flows. Nevertheless, this research also had found that performing the same task, operating in the same subsidiary for many years and senior age of employees result in personal resistance of headquarters' knowledge. Thus, headquarter having subsidiaries with different age should dedicate right amount of its attention towards younger and older subsidiaries, meaning that it should transfer significant amount of knowledge to younger ones; however remembering about older ones, and perform relationships' supporting actions. In this case. headquarter will be get a double benefit by supporting younger units and avoiding autonomy with older ones.

This research showed that due to small size, subsidiaries have lack of time to implement all knowledge and perform all functions need for subsidiaries' efficient operation. Consequently, they have to outsource some functions from headquarter due to lack of time and local resources. Therefore, this research showed that companies having small subsidiaries have to optimize as better as possible internal processes in the headquarter; to deliver needed knowledge from functions which they are missing; motivate employees that they would deliver knowledge as tailored as possible to the local subsidiary's market in order to help them to implement quicker. Furthermore, this

research also made a significant finding for modern companies who work with small subsidiaries, because it found that owing to small size, transmission channels should be excellent and operate in the most efficient way in order to facilitate rather than impede knowledge transfer. Consequently, modern MNCs should constantly invest into new, upgraded and advanced technologies in order to support smaller subsidiaries and make the transfer successful.

Finally, as the research showed that soft measure of control is very efficient mean of building strong social capital and observe whether all procedures, knowledge goals and objectives of the company are followed. Therefore, modern MNCs should use this mean of control toward their units. In the conclusion, it is possible to state that the most important elements for efficient international knowledge transfer are building strong social capital, because it helps to overcome many barriers; then importance of headquarter role and its willingness to transfer the knowledge; good English skills of all employees in the organization; efficient, user-friendly and advanced transmission channels; and right combination of Human Resource Management practices. Those measures are very important for more efficient knowledge transfer and healthier operation of MNC.

7.3 Limitations of the study

The main limitation of this study is that research was conducted in the case company, with subsidiaries having similar characteristics, such as they all were small in size, performed similar marketing and sales role for the headquarter; located relatively closely; two of them had almost the same age. Therefore, the findings and conclusion were partially biased by those subsidiary characteristics of the case company.

Moreover, current thesis was based on the case study of the company having its units in the close geographical location and similar cultural settings. Therefore, again the findings and conclusions could be partially distorted due to that.

Furthermore, the present research solely concentrated on the investigation of horizontal knowledge transfer barriers which were flowing from headquarter to subsidiaries. Thus,

it did not evaluate knowledge impediments which could occur within vertical flows occurring between subsidiaries.

Finally, this study was concentrated on knowledge transfer between the units, like headquarter and subsidiary. Therefore, it did not take into consideration knowledge transfer between employees of those units.

7.4 Suggestion for future research

Present research was concentrated on horizontal knowledge flows from headquarter to subsidiaries. Consequently, further research can be focused on investigation of vertical flows and knowledge transfer barriers occurring between the subsidiaries. It can allow understanding whether the same type of factors which present the knowledge impediments in horizontal flows from headquarter would repeat in vertical ones between subsidiaries. Moreover, this research can also permits to investigate which barriers occur when subsidiaries transfer the knowledge solely between each other without headquarters' intervention.

Further research can take into account that eventually knowledge flows proceed between individuals which interact with each other. Therefore, future research can investigate and test knowledge transfer barriers described by Szulanski but in the international level and to understand which of the barriers discovered by him can occur in the cross-border and cross-cultural settings.

Finally, owing to the fact that present research was conducted in the case company having subsidiaries with similar characteristics, located relatively closely geographically and having comparatively close cultural speciation, performing the same roles for headquarter. Therefore the future research can be organized in the case study which has its units with different settings, when subsidiaries have various characteristics: located in distant countries with diametrically different cultures, performing different roles for the parent unit, having different modes of formation, with different levels of dependency. Therefore, this research can add more finding into existing academic literature related to international knowledge transfers.

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APPENDIX 1*Interview guide for headquarter:*

1. Does it transfer equal amount of knowledge to all its subsidiaries/type of knowledge?
2. In the case of which subsidiary, knowledge transfer is the most problematic/efficient one?
3. What are the knowledge transfer barriers in the case of each subsidiary?
4. What kind a relationships headquarter has with subsidiaries?
5. Do you think that subsidiaries' employees understand the transferred knowledge?
6. Do you think that differences in national cultures between headquarter and subsidiaries affect the knowledge transfer?
7. Do you think that difference in language can affect the knowledge transfer?
8. Do you think that difference in laws and regulations affect the knowledge transfer?
9. Do you think that geographical distance between headquarter and subsidiary affects the knowledge transfer?
10. Do think that subsidiary's age affect the knowledge transfer?
11. Do you think that subsidiary's size affects the knowledge transfer?
12. Do you think that subsidiaries' role affect the knowledge transfer?
13. Do you think that subsidiary's independency/dependency affects the knowledge transfer?
14. Do you think that headquarters' control can affect the knowledge transfer?
15. Do you think mode of entry affect the knowledge transfer?

Interview guide for subsidiaries:

1. Do you consider that you receive enough knowledge/ type of knowledge?
2. Is it easy to implement transferred knowledge in your subsidiary?

3. What are the knowledge transfer barriers in your subsidiary when headquarter transfers knowledge to it?
4. What kind a relationships headquarter has with subsidiaries?
5. Do you think that subsidiaries' employees understand the transferred knowledge?
6. Do you think that differences in national cultures between headquarter and subsidiaries affect the knowledge transfer?
7. Do you think that difference in language can affect the knowledge transfer?
8. Do you think that difference in laws and regulations affect the knowledge transfer?
9. Do you think that geographical distance between headquarter and subsidiary affects the knowledge transfer?
10. Do think that subsidiary's age affect the knowledge transfer?
11. Do you think that subsidiary's size affects the knowledge transfer?
12. Do you think that subsidiaries' role affect the knowledge transfer?
13. Do you think that subsidiary's independency/dependency affects the knowledge transfer?
14. Do you think that headquarters' control can affect the knowledge transfer?
15. Do you think that mode of entry affect the knowledge transfer?