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Facilitating faster Knowledge Transfer in the MNC:

A case study of Volvo Car Corporation's matched pairs system in Shanghai

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Abstract

Internal transfer of knowledge is critical for firms' survival, particularly in highly competitive markets where successful firms are those that rapidly transfer knowledge internally. Although knowledge transfer has been studied thoroughly over the past decades, limited attention has been given to the speed of knowledge transfer. Recent research has identified social capital as essential to achieve faster knowledge transfer, but the understanding of how firms can organize and manage the knowledge transfer process in order to achieve faster knowledge transfer remains unknown. This study intends to address this theoretical gap by describing and analyzing how firms manage and organize their work in order to facilitate faster knowledge transfer and what important factors to consider in this process are. The research is based on 13 interviews with managers with in-depth knowledge on the matched pairs system at Volvo Car Corporation in Shanghai, China. The main findings indicate that in order to achieve higher levels of social capital and hence faster knowledge transfer, firms need to adopt different organizational mechanisms over time and in different functions. In contrast to earlier research, the findings of this study further suggest that beyond a certain level of social capital, more social capital does not necessarily have a positive impact on the speed of knowledge transfer.

Keywords: Knowledge transfer, Social capital, Organizational mechanisms, Matched Pairs System, China, Volvo Car Corporation

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1 INTRODUCTION

1.1 Background

It is widely recognized that firms' ability to transfer knowledge internally is critical for their ability to build competitive advantage (Szulanski, 1996; Grant, 1996a). This is particularly true in highly competitive markets, where successful firms are those that effectively manage knowledge (Nonaka & Takeuchi, 1995) and rapidly transfer knowledge internally (Gupta et al., 2008). Previous research has gone into great depth on various aspects of knowledge transfer, the benefits it yields for firms and the difficulties associated with it. Most studies have acknowledged that it is a difficult and cumbersome process that requires firms to prepare and adapt their organizations and behaviors properly before reaching success in their knowledge transfer efforts. Although speed is one of the key factors behind successful knowledge transfer for many firms, limited attention has been given to this aspect. As of today, it is still largely unknown how firms can facilitate faster knowledge transfer.

Zander & Kogut (1995) seem to be among the first to specifically focus on the speed of knowledge transfer. In their study, they argue that the degree of codification and how easily capabilities are taught have a significant influence on the speed of transfer. Their research, however, focus mainly on the characteristics of the knowledge. Research within this field commonly distinguishes between four determinants of knowledge transfer: characteristics of knowledge, of senders, of receivers, and of the transfer context (Szulanski, 1996; Minbaeva, 2007). In a more recent study by Chen & Lovvorn (2011), stronger emphasis is given to the relational context in the knowledge transfer process. They argue that the ability to effectively manage the knowledge transfer process and the structuring of relationships in a way that facilitates the development of higher social capital are important to promote faster and more successful knowledge transfer. The thought is that through organizational structures individuals are intentionally or unintentionally brought together to interact on frequent basis, which consequently foster relationships and shared cognition. Their results imply that in order to facilitate faster knowledge transfer, firms need to pay close attention to organizational mechanisms that foster higher levels of social capital. Previous studies have put a great deal of

emphasis on the characteristics of knowledge in knowledge transfer, yet the characteristics of knowledge can be difficult to influence. Therefore, the following study will instead give greater attention to the relational context where social capital is a useful analytical concept to adopt.

There is plentiful of earlier evidence on what is sometimes referred to as *"the organizational advantage"* (Ghoshal & Moran, 1996; Nahapiet & Ghoshal, 1998), meaning that firms as social communities are superior to other institutional arrangements in the creation and transfer of knowledge (Nonaka & Takeuchi, 1995; Kogut & Zander, 1996). Nahapiet & Ghoshal (1998), for instance, claim that organizations, through their more dense social capital, have an advantage in creating and sharing knowledge and knowing capability of a social collectivity (i.e. intellectual capital). Their view is that firms enable all four factors of significance for the development of social capital: time, interaction, interdependence, and closure. They argue that: (1) social structures need stability and continuity over time for social capital to develop, (2) mutual interdependence stimulate social identity and encourage norms of cooperation and risk taking, (3) that strong, multidimensional and reciprocal linkages of interaction is a precondition for social capital, and (4) that norms, identity and trust develop when social structures are separated through boundaries.

An interesting case to study is Volvo Car Corporation's (VCC) newly established China headquarters in Shanghai (VCC Shanghai), which can help to explain how firms are actually organizing and managing the knowledge transfer process specifically to achieve faster knowledge transfer. In August 2010, Zhejiang Geely Holding Group (Geely) completed the acquisition of VCC from Ford Motor Company (Ford). The acquisition effectively made China VCC's second home market and initiated the establishment of the Shanghai headquarters. VCC Shanghai created a mirror organization of VCC's structure in Gothenburg (VCC Gothenburg) in key functional areas (Volvo Car Corporation, 2011a). Recognizing the opportunities arising from the acquisition by Geely and the fierce competition within the automotive industry, VCC has set up ambitious targets in terms of production and sales in its China strategy. To meet these targets, VCC need to rapidly transfer knowledge between VCC Gothenburg and VCC Shanghai. In order to accelerate knowledge transfer between its Swedish and Chinese managers, to utilize both VCC knowledge and China knowledge, VCC has adopted a matched pairs system (MPS), a concept

earlier applied by Ford in its *"One Ford"* strategy (Pope, 2008). This system has been implemented in certain departments and managerial levels, assigning one Swedish manager and one Chinese manager the same responsibilities. With little evidence on other cases of firms using similar mechanisms to achieve faster knowledge transfer, a detailed study on the use of the MPS is called for.

1.2   Purpose and research questions

The purpose is to address the importance of organizational mechanisms for faster knowledge transfer within MNCs by describing and analyzing how firms manage and organize their work in order to achieve faster knowledge transfer and what the experienced benefits and challenges are. By drawing on the literature concerning internal knowledge transfer within MNCs (e.g. Kogut & Zander, 1992, 1993, 1996; Szulanski, 1996; Minbaeva, 2007), and social capital as a facilitator of knowledge transfer (Nahapiet & Ghoshal, 1998; Tsai & Ghoshal, 1998; Chen & Lovvorn, 2011), the ambition is to add to the knowledge of organizational mechanisms for faster knowledge transfer. Through an empirical exploration of the implementation and utilization of the MPS at VCC Shanghai, and with a review of the available theories on knowledge transfer and social capital, this study aims its findings towards managers and researchers engaged or interested in the speed of knowledge transfer. More broadly, the study can contribute to the knowledge management literature.

More specifically, the research takes a point of departure in a comprehensive case study and the following research questions:

(1) How can the MPS facilitate faster knowledge transfer in the MNC?
(2) What are the important factors to consider in the implementation and utilization of the MPS?

1.3   Delimitations and limitations

There are several delimitations and limitations to this study, stemming from e.g. restrictions in access to firms and time limitation. The major points are: (1) generalization issue, (2) selected literature, (3) no outcome measurements, and (4) reliability and validity.

First, as the study focus on one firm (VCC), in one particular industry (automotive industry), conducted in one subsidiary unit alone (VCC Shanghai), and as the interviews are conducted with a relatively limited sample (13 managers) with limitations in terms of different nationalities (Sweden, China, the US), the findings are tentative and open to interpretation, and should be considered as a basis for further investigation and discussions. It is acknowledged that the findings could be expected to have been different under other circumstances, as the managers' reported experiences are likely to be influenced by their specific backgrounds and the relatively narrow setting in which they work.

Second, the literature reviewed in this study is selected primarily based on recent findings on the role of social capital for the speed of knowledge transfer (Chen & Lovvorn, 2011) and focus is given to the specific factors highlighted in this literature. There are numerous of other factors which could have been included in this study as well, however, other factors is not regarded as the additional information would become too difficult to review properly due to time limitation. An important aspect which was considered for inclusion, but is not, is that the transfer and creation of new knowledge is highly interlinked (Nonaka, 1994).

Third, as no outcome measurements are developed, it is not possible to evaluate the potential gains in the speed of knowledge transfer resulted by the organizational mechanism in focus (MPS). Instead the study focuses on the interpreted effects of the mechanism on the speed of knowledge transfer. Based on previous findings in research (Chen & Lovvorn, 2011), it can be expected that certain organizational mechanisms can increase firms' social capital and result in faster knowledge transfer. It will, however, be up to further investigations to develop reliable measurements that can evaluate the actual increase in the speed of knowledge transfer.

Fourth, it is acknowledged that the reliability and validity of this study could be flawed due to that the studied MPS at VCC Shanghai is still in a dynamic and developing stage. It may be the case that the representations provided by the managers vary over time as their knowledge of the MPS increases and that other managers, not included in this study, could provide different representations. It is also acknowledged that the topic at hand is still largely unexplored and that the *"true"* underlying factors for faster knowledge transfer remain to be verified.

2 LITERATURE REVIEW

Superior performance rests upon firms' ability to build competitive advantage. By doing what they do differently and more efficiently than their competitors, firms stay ahead in the continuously increasing competition arising from the dynamic and constantly changing environment brought about by globalization (Porter, 1996). This ability is particularly imperative for multinational corporations (MNCs) as they, with respect to their inherent nature, are exposed to a wider range of competitive forces compared to firms operating solely in individual domestic markets. Geographically dispersed operations, however, also allows MNCs to exploit knowledge available throughout the entire set of units within the organization (Ghoshal & Bartlett, 1988).

As reflected in the extensive body of literature on the knowledge-based view of the firm, knowledge is commonly regarded as the main resource possessed by firms and their most important tool to achieve sustainable differentiation and competitive advantage (Kogut & Zander, 1992; Nonaka, 1994; Grant, 1996a; Gupta & Govindarajan, 2000). Grant (1996a: 110) broadly defines knowledge as *"that which is known"* and indeed the concept of knowledge is broad and contains different types of knowledge. While some scholars have applied the notion of individual knowledge in an organizational learning context, arguing that organizations can learn only in two ways - by learning from their members or by adding new members with previously missing knowledge (Simon, 1991; Grant, 1996a), others have instead focused on what is called organizational knowledge, meaning that individuals within organizations develop their individual capabilities by adopting historically developed collective knowledge from the organization (Kogut & Zander, 1992; Nonaka, 1994; Szulanski, 1996; Tsoukas & Vladimirou, 2001). Most studies focus on one of these types of knowledge (individual or organizational). This study, however, will take into consideration both individual knowledge that members of an organization have obtained from outside the organization and organizational knowledge that has been shaped and shared within the organization over time.

The general line of thought in the literature on knowledge within organizational contexts is that firms being more efficient in managing and transferring knowledge internally are likely to experience strategic advantages and therefore greater performance. Managing and transferring

knowledge within firms, however, are among the most significant managerial implications in the modern international business environment and is generally considered to be slow, costly, and uncertain (Kogut & Zander, 1992).

2.1   Knowledge transfer

Even though it is uncontested that the objective of all knowledge transfer efforts is to successfully transfer knowledge from the sender to the receiver, there are different approaches taken by scholars to define this concept. These approaches have mainly focused on either the process or the result of knowledge transfer. Some consider successful knowledge transfer to be the degree to which the transmitted knowledge is internalized in the recipient, meaning that the recipient obtains commitment to, satisfaction with, and ownership of the transferred knowledge (Kostova, 1999; Cummings & Teng, 2003). Others view it as the replication of knowledge (Kogut & Zander, 1992, 1993, 1996; Szulanski, 1996). What they hold in common, however, is that successful knowledge transfer is crucial for all MNCs in order for them to remain competitive in the global competition. By exploiting unique and valuable knowledge created in widespread locations within the organization, MNCs can enjoy a greater set of tools to compete with. The ability to create and make use of unique and inimitable knowledge will ultimately differentiate one MNC from another. To achieve successful knowledge transfer, however, is also one of the most challenging missions in international business.

2.1.1 Determinants of knowledge transfer

Previous studies have outlined four determinants of knowledge transfer: characteristics of knowledge, of senders, of receivers, and of the transfer context (Szulanski, 1996; Minbaeva, 2007). The majority of earlier research has discussed the challenges associated with knowledge itself and the receiver's capacity to absorb what is transferred. In recent years, however, it has been acknowledged by scholars that the other determinants of knowledge transfer merits further attention.

Researchers focusing on the characteristics of knowledge are commonly concerned about the degree to which knowledge is either tacit or explicit. Tacit knowledge, on the one hand, is normally seen as more difficult to articulate and codify, and therefore becomes problematic to

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transfer from one place or individual to another. The tacitness, however, also makes knowledge harder to imitate, thus making tacit knowledge one of the most strategically valuable assets for firms (Spender, 1996). Explicit knowledge, on the other hand, results in the opposite advantages and disadvantages, being more easily transferred but having less strategic significance.

Research on senders and receivers of knowledge instead direct attention towards the concepts of disseminative and absorptive capacity. Disseminative capacity refers to the willingness and ability of a sender to share knowledge with others, where both are required for successful knowledge transfer to take place (Minbaeva, 2007). There are a number of reasons behind individuals desire not to share what they know in certain occasions, where feelings of personal ownership, time constraints, and fear of free-riders and public scrutiny serve as important examples of issues (Husted & Michailova, 2002). Similarly, absorptive capacity refers to the receiver's willingness and ability to absorb the knowledge transferred by others (Minbaeva et al., 2003). Even though the sender may have the motivation and ability to transfer knowledge, the transfer process will fail unless the same is valid for the receiver and vice versa. These issues, however, can partly be prevented or resolved through proper management mechanisms. Minbaeva et al. (2003) suggested that organizations can improve the absorptive capacity by applying specific Human Resources Management (HRM) practices towards employees' ability and motivation. They found, more specifically, that training, performance appraisals, performance-based compensation, and internal communication were HRM practices that can create and develop absorptive capacity. Husted & Michailova (2002), who investigated the possibility of improving senders' willingness to share, distinguish between organizations with different levels of hostility towards knowledge sharing. They argue that low hostility can be overcome or reduced if employees are encouraged and stimulated to share knowledge and through the alignment of incentives and structures, while organizations with high hostility, or *"immune system"*, need to force knowledge sharing between employees.

Although the characteristics of knowledge, senders, and receivers incorporate many of the important factors in the knowledge transfer process, the context in which the knowledge is transferred cannot be ignored. As noted by Szulanski (1996), organizational contexts can be either *"barren"* or *"fertile"*, meaning that knowledge transfer processes working in some

organizations, in terms of structures, systems, and behaviors, may not work in other organizations. Most scholars seem to be in agreement that there need to be formal and informal social networks within organizations and infrastructures facilitating communication between the network actors in order to achieve knowledge transfer. Minbaeva (2007: 578), for instance, states that *"knowledge transfer is possible only when close relationships are established between senders and receivers."* These social networks, or *"communities of interaction"*, could in turn result in the amplification and development of new knowledge (Nonaka, 1994).

2.2 Social capital

The social capital concept initially emerged from community studies highlighting the importance of crosscutting personal relationships developed over time for trust, cooperation, and collective action – all critical for the survival and functioning of city neighborhoods (Jacobs, 1965). Since then, it has been used frequently by sociologists, political scientists, and economists (Adler & Kwon, 2002). In more recent years, social capital has been acknowledged as a useful concept to explain certain aspects in organizational settings and has therefore increased in popularity among researchers within the field of organization studies.

As expected, considering the multidisciplinary use of the social capital concept, there are numerous definitions developed over the years. One of the commonly accepted definitions of social capital was developed by Coleman (1988: 98), who states that it *"is not a single entity but a variety of different entities, with two elements in common: they all consist of some aspect of social structures, and they facilitate certain actions of actors - whether persons or corporate actors - within the structure."* In a later study of the role of social capital for the creation of intellectual capital in organizations, Nahapiet & Ghoshal (1998: 243) define social capital as *"the sum of the actual and potential resources embedded within, available through, and derived from the network of relationships possessed by an individual or social unit."* What most of the available definitions holds in common is that they all refer to the value of social structures and actors ability to benefit from those structures (Bourdieu, 1985; Baker, 1990; Burt, 1992; Putnam, 1995; Fukuyama, 1997; Brehm & Rahn, 1997; Portes, 1998; Knoke, 1999). This study adopts this common definition on social capital.

2.2.1 Dimensions of social capital

Recognizing that a clarification of the different dimensions of social capital was called for in earlier studies, Nahapiet & Ghoshal (1998) suggest that social capital could be divided into three highly interrelated dimensions: the structural, the relational, and the cognitive dimension. In their view, the structural dimension refers to the overall pattern of connections between actors, the relational dimension to the particular personal relationships actors have developed through interaction, and the cognitive dimension to the resources that provides a shared understanding and meaning among actors.

In previous research, each dimension of social capital has been composed of various important attributes (cf. Nahapiet & Ghoshal, 1998; Tsai & Ghoshal, 1998; Chen & Lovvorn, 2011). There are, however, major commonalities between most attributes outlined by different scholars. In their study, Chen & Lovvorn (2011) detail their view on social capital and the attributes on which it is based on, more specifically:

- **Structural dimension:** Formal (liaison positions, task forces, and permanent committees) and informal (informal transmission channels created by interpersonal familiarity, personal affinity, and convergence in cognitive maps) mechanisms;
- **Relational dimension:** Trust (good faith and honesty), commitment (level of effort), reciprocity (expectations of rewarding exchange), and identity (state of attachment);
- **Cognitive dimension:** Articulated goals (goal acceptance and internalization) and organizational culture (understanding of how to act).

As mentioned, all of these dimensions are highly interrelated. Nahapiet & Ghoshal acknowledge this by claiming that *"the dimensions and the several facets of social capital are likely to be interrelated in important and complex ways"* (1998: 250), but that they *"separate these three dimensions analytically"* (1998: 243). Formal or informal mechanisms (structural dimension) enable individuals to, intentionally or unintentionally, come together to interact on frequent basis and subsequently stimulate trust, commitment, reciprocity, and identity (relational dimension), as well as the acceptance and internalization of goals and a shared understanding of how to act in a certain context (cognitive dimension) (Chen & Lovvorn, 2011).

2.2.2 The role of social capital for faster knowledge transfer

As stated above, the social capital concept has been found to be applicable to a wide range of research areas. Acknowledging that no previous research had succeeded in explaining why organizations seemed to be better than other forms of institutional arrangements in terms of knowledge transfer and creation, Nahapiet & Ghoshal (1998) theorize that the concept of social capital, which earlier has proven to be useful in community studies, could aid to fill this theoretical gap. They claim that organizations, through their more dense social capital, have an advantage in creating and sharing knowledge and knowing capability of a social collectivity. Tsai & Ghoshal (1998) go further by examining the relationship between the three dimensions of social capital and their relation to resource exchange and product innovation within firms. They conclude that social interaction and trust, both manifestations of the dimensions of social capital, are significantly related to the extent of resource exchange and hence product innovation. The results of these studies highlight the important role played by social capital in knowledge transfer and the subsequent creation of value in firms.

Successful knowledge transfer is dependent on structure and hierarchy, where individuals are brought together to interact and exchange knowledge. Through the formation of departments, positions, and programs, formal structure is a *"blueprint"* for activities (Meyer & Rowan, 1977). These structures need stability and continuity over time in order for social capital to develop. Actors having frequent interaction through their positions in a network will naturally develop interdependency and close relationships with those they interact with, leading to increased trust and trustworthiness between them. Without structure, no personal relationships, common goals or understandings would develop, which would in turn impede faster knowledge transfer (Nahapiet & Ghoshal, 1998).

Based on the belief that social capital is crucial for firms in order to rapidly transfer knowledge, Chen & Lovvorn (2011) have developed a framework outlining the relationship between the three dimensions of social capital and speed of knowledge transfer (see figure 1). They argue that higher levels of social capital within firms could help to alleviate the conflicts and cultural misunderstandings arising from the complexities associated with transferring knowledge across borders. This would in turn result in a more efficient knowledge transfer process. By facilitating

the development of higher social capital through effectively managing the structure of relationships within the organization, firms can promote faster and more successful knowledge transfer.

Figure 1. Social capital's influence on the speed of knowledge transfer within the MNE.
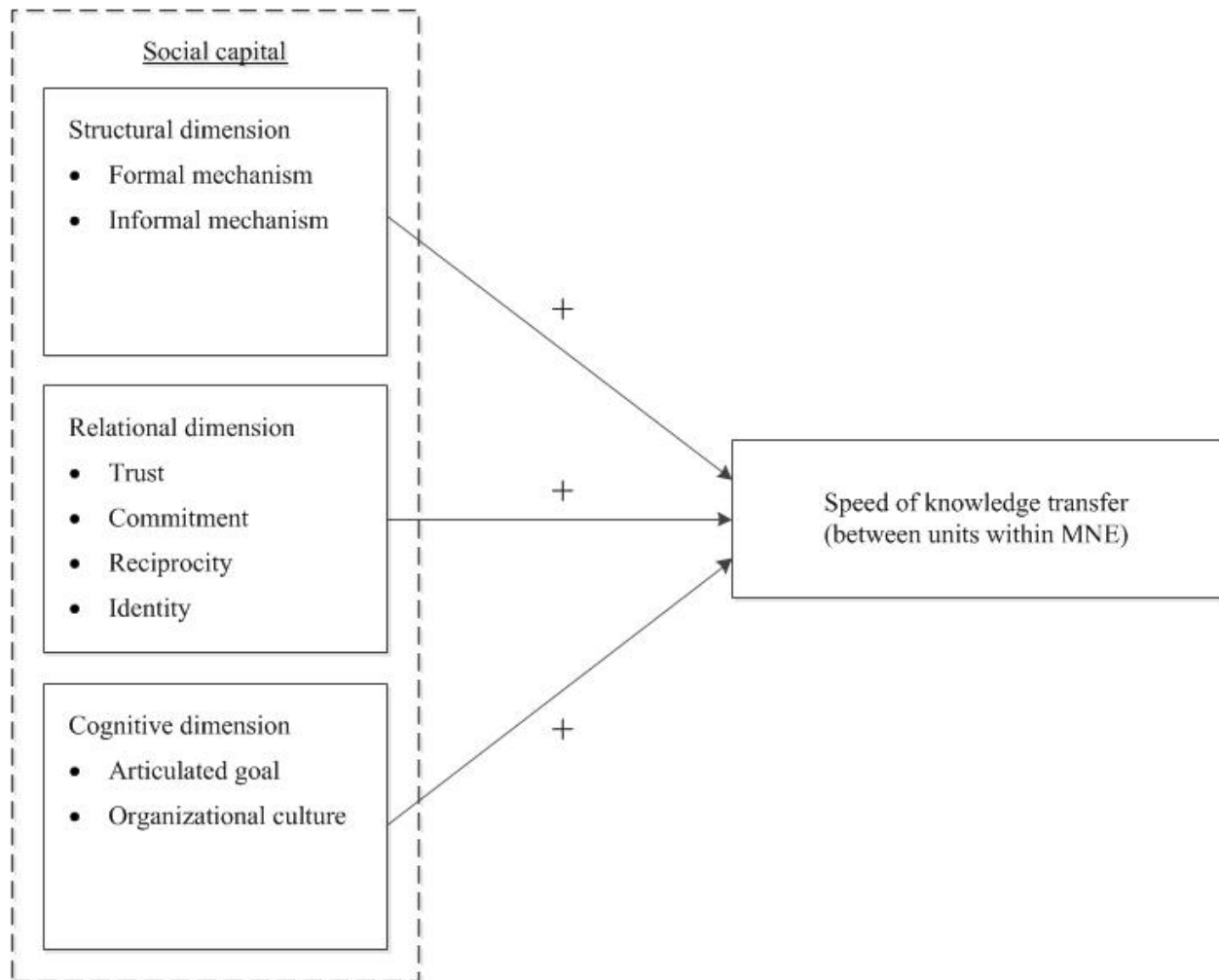
Source: Chen & Lovvorn (2011)

2.3   Organizational mechanisms for faster knowledge transfer

Based on what have been outlined so far, it is evident that firms can achieve faster knowledge transfer by increasing their social capital (Chen & Lovvorn, 2011). What is still unknown at this point is how firms can facilitate faster knowledge transfer. In other words, what organizational mechanisms can be adopted for the purpose of transferring knowledge faster and how can those

mechanisms be properly implemented and utilized? This study intends to explore these questions through a conceptual framework based on the literature review and thereafter apply this framework to a case study as outlined under the methodology section. Before presenting the conceptual framework of this study, however, it is important to define what constitutes an organizational mechanism.

There are plentiful of definitions used in research, where a few selected ones are presented here (see Pajunen, 2008 for a more comprehensive overview of this concept). The organizational mechanisms concept has for instance been used in relation to corporate socialization mechanisms which can build interpersonal familiarity, personal affinity, and convergence in cognitive maps (Gupta & Govindarajan, 2000), to discuss mechanisms that can integrate globally dispersed operations (Govindarajan & Gupta, 2001), to explore HRM practices that increase absorptive capacity (Minbaeva et al., 2003). There are also different approaches taken to define this concept. Machamer et al. (2000: 3) means that organizational mechanisms are *"entities and activities organized such that they are productive of regular changes from start or set up to finish or termination conditions."* Bechtel & Abrahamsen (2005: 423) provide a further definition, arguing that an organizational mechanism is *"a structure performing a function in virtue of its component parts, component operations, and their organization. The orchestrated functioning of the mechanism is responsible for one or more phenomena."* This study adopts the latter of these definitions and considers the MPS or other organizational mechanisms which result in one or more phenomena within firms as examples of such mechanisms. Moreover, from the sender's and receiver's point of view, this study also sees the process of knowledge transfer as a learning process. The notion of organizational mechanisms can therefore be seen as similar to what others have called *"learning landscape"*, or more specifically the portfolio of empirical instances adopted and implemented by a firm (Prencipe & Tell, 2001: 1380). In this regard, an organizational mechanism is a portfolio of formal and informal mechanisms adopted and implemented to fulfill a certain purpose, in this case faster knowledge transfer.

2.3.1 Own conceptualization based on the reviewed literature

By applying the three dimensions of social capital as an analytical tool to evaluate the *"orchestrated functioning"* of a certain organizational mechanism applied by a firm, it is

possible to identify important aspects for that particular mechanism in terms of facilitating faster knowledge transfer. Such an evaluation includes the identification of *"component parts, component operations, and their organization"*. This leads to the theoretical conceptualization of this study outlined in figure 2.

Figure 2. Organizational mechanisms for faster knowledge transfer.
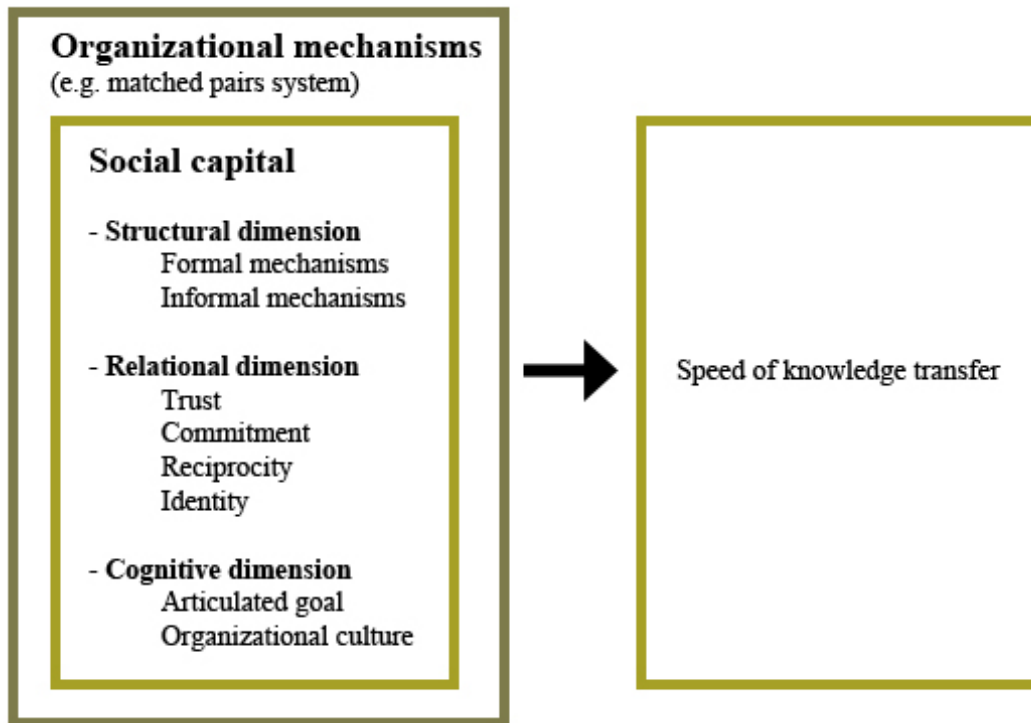
Source: Own conceptualization

When analyzing the structural dimension of an organizational mechanism, it is important to investigate the channels of interaction in this organizational mechanism. This includes the identification of *"the overall pattern of connections between actors - that is, who you reach and how you reach them"* (Nahapiet & Ghoshal, 1998: 244), the stability of the mechanism over time, its role as a platform to foster strong relationships between the actors (relational dimension), and its impact on shared goals and values (cognitive dimension). In other words, by evaluating the state of the relationships and shared goals and values, it is possible to determine the suitability of the structure for faster knowledge transfer.

3 METHODOLOGY

All research starts with a question. Depending on the nature of the question, different methods and approaches are more or less suitable to use in order to investigate and in turn come to an answer to it. Each method and approach has advantages and disadvantages that need to be considered by the researcher before deciding on which one to chose. This section will outline the methods and approaches applied in this study and elaborate on the thoughts and decisions taken in the process of preparing and conducting it.

3.1 Research approach

This study focuses on how MNCs can use the MPS to achieve faster knowledge transfer and what the important factors to consider in the implementation and utilization of this system are. Although there is extensive research done on knowledge transfer, methods used by firms to enhance the speed of the knowledge transfer process still remains limited. In this sense, this study has an exploratory nature.

If the researcher, as in this study, wants to capture the perspectives of people and the contextual conditions in which they live, then a qualitative research approach is suitable to adopt. By using this approach, it is possible to provide detailed illustrations of events as experienced by the participants in the study and thereby gain a more profound understanding of the phenomenon in focus. This approach is particularly useful if the question at hand takes the researcher through uncharted territories, where new insights provided by the participants could aid the development of an emerging stream of research (Yin, 2011). By contrast, to capture the complexity in unfolding events, when knowledge remains scarce, would be difficult with the help of a quantitative research approach, which focuses on the degree to which something occurs or not (Jonker & Pennink, 2009). Important to note, however, is that most research include a combination of the two approaches, as the difference between them can be seen more as emphasis rather than a distinct boundary (Stake, 2010).

3.2 Research design

The research design outlines the specific methods used by the researcher to get hold of the data necessary to answer the research question, including details on the sample studied, data collection methods applied, and the subsequent method of using, interpreting, and presenting the gathered data.

3.2.1 Research unit

This study took its initial stance in the knowledge transfer and social capital theory, suggesting that higher levels of social capital lead to faster knowledge transfer. As mentioned, little information could be found in previous research on how firms actually facilitate faster knowledge transfer. Commonly, it is preferred to have a diverse set of units to study in order to explain a phenomenon and in turn come to robust and trustworthy conclusions (Merriam, 1998). An important aspect in this regard, however, is to what extent the researcher has access to units relevant for the study at hand.

In the initial phase of this study, VCC Shanghai appeared as a suitable case to study in order to explain the relationship between organizational mechanisms and faster knowledge transfer. There are a number of reasons for why this case was appropriate for this study, where the main reasons are:

1) Based on the assumption that VCC is under immense time pressure in the establishment of VCC Shanghai and that this time pressure forces the company to focus on speed (more than other factors important for knowledge transfer), it could be expected that the organizational mechanisms adopted by the company are calibrated for the purpose of quickly transferring knowledge. More specifically, the MPS, which remains unexplored in research, is considered as a particularly useful mechanism to study as it serves this purpose alone;

2) The case illustrates a phenomenon which is still unfolding - the representations of the participants in the study remain clear in mind and the case exemplifies important and ongoing trends within the field of international business;

3) The likelihood of being granted access to VCC and hence enabling the necessary data collection was considered as high, as the faculty and VCC has maintained good relations and cooperation over the years.

3.2.2 Data collection method

There are different available qualitative data collection methods which can help to gain an understanding of a complex phenomenon, including interviewing, observing, collecting and examining, and feeling (Yin, 2010). Interviews have been selected as the primary method to collect data for this study, as the perspectives of participants with in-depth knowledge of the focal topic was sought for. Interviews were conducted with 13 managers working at VCC Shanghai. The initial sample of managers were provided by the faculty staff and these managers in turn suggested further managers they considered suitable to contact (so called *"snowball sampling"*). Out of the 15 managers who were contacted, 14 agreed to be interviewed (one manager had to cancel due to an unexpected business trip). One manager rejected to be interviewed as no confidentiality agreement had been arranged with VCC prior to the interview period. Managers from several departments (R&D, purchasing, HR, marketing and sales, and finance) and nationalities were interviewed in order to have a comprehensive understanding of the MPS and avoid some experiences specific for certain departments or backgrounds. While the majority of the managers work in the MPS, some managers outside this system were included to add further perspectives and context. See appendix 1 for further details on both the characteristics of the respondents and the interviews.

3.2.3 The interview protocol

A researcher can take one of three approaches to structure interviews, more specifically structured/standardized, semi-structured, or unstructured/informal (Christensen et al. 2001). While this study applies a qualitative research approach and seek to capture the perspectives of people and the contextual conditions in which they live, answers to certain questions are critical to ensure a full coverage of all required topics. As such, this study adopts the semi-structured approach for the interviews, where a number of predefined questions related to the literature reviewed were developed together with more open questions to stimulate discussion (see

appendix 2). These questions were continuously revised as new questions arose in the process of collecting data.

As illustrated in figure 3, the interviews commenced with an introduction, where information concerning the research (e.g. purpose and concepts) was presented to the interviewee in order to avoid any misunderstandings. In this stage, the interviewee also provided a brief background on relevant personal and professional experiences. In the following stage the interview focused on the predefined questions relating to the literature. While the initial questions in this stage were narrower, further follow-up questions that emerged from the answers had a more open nature in order to explore certain experiences more comprehensively. Lastly, the interview concluded with a more open discussion, where general questions and comments were raised and discussed in an open manner in order to cover additional aspects which had not been touched upon in the prior stages of the interview.

Figure 3. Interview process.

Source: Own visualization

3.2.4 Analytical procedures

As the researcher starts to collect empirical data, it is important to continuously reflect on and analyze the collected data in order to avoid complications further in the research process (Merriam, 1998). Therefore, in close connection to all interviews, we had discussions on what had been covered in order to summarize any important thoughts and facts.

As all the empirical data had been collected it was organized with the help of the important dimensions of social capital from our literature review, which was done in order to make the subsequent analysis of the data easier to conduct. The answers provided by the interviewees were compared in order to identify any patterns in terms of similarities and differences, including triangulation of important findings. The most important similarities and differences in turn made up the foundation for our analysis.

In certain instances, the collected data were not sufficient to draw any reliable conclusions. In these instances, some of the empirical information was still presented in order to provide a more comprehensive understanding of the case and its complexities.

4 FACILITATING FASTER KNOWLEDGE TRANSFER THROUGH THE MPS: THE CASE OF VCC SHANGHAI

4.1 Brief history of VCC

VCC is a Swedish automobile manufacturer founded in 1927 in Gothenburg, Sweden. Since then, the company has grown to become an internationally recognized brand known mainly for its high safety standards. As of today, VCC has about 19,500 employees worldwide and production facilities located in Sweden, Belgium, and China (Volvo Car Corporation, 2011b). In 1999, VCC was acquired by Ford when AB Volvo (the initial owner of VCC) focused its business on commercial transport solutions.

In August 2010, after more than a decade under Ford's ownership, VCC was once again sold, this time to the privately owned Chinese firm Geely. At that time, no other Chinese firm had ever acquired a foreign premium brand in the automotive industry. Being a significantly younger firm than VCC, Geely was founded in 1986 and has its headquarters located in Hangzhou, China. Nowadays, Geely is one of the leading privately held groups in the automotive industry (Volvo Car Corporation, 2011c).

4.2 The establishment of VCC Shanghai

After the acquisition by Geely, VCC entered a new world of possibilities and challenges. The former management team in Gothenburg was changed to a new one, having stronger international experience and global mind-set than the previous one. At that time, VCC only had local presence in the form of sales and marketing as well as production in joint venture facilities run by Chang'an, Ford and Mazda in Chongqing. VCC had, however, already come far in the plans to set up the remaining functions for its second headquarters based in Shanghai. Since its inception, VCC Shanghai has grown from about 110 to 1,000 employees and in parallel initiated the construction of a new plant in Chengdu and the twofold increase of its number of domestic dealerships. Also, the possibility to set up an additional plant in Daqing is being investigated.

As a part of the significant organizational and strategic developments at VCC since the change in ownership, there has been a strong focus on quickly setting up the local headquarters in Shanghai. As manager D makes clear: *"We have to move fast to beat our competitors."* During the one and a half years that have passed since the acquisition, VCC has established what is referred to as a *"mirror organization"*. In practice, VCC has duplicated key functions from its Swedish headquarters in order to manage important procedures, such as recruitment and product development, on site in Shanghai. Building up this mirror organization has been experienced as a cumbersome process, mainly due to difficulties with recruiting enough qualified personnel and to bear the heavy workload while establishing all new procedures. Manager H explains: *"Recruiting is a bottleneck. We cannot get experienced people quickly enough, that is the problem... We have difficulties to find people who have done this work."* In connection to the acquisition of VCC, Geely assigned its own and newly recruited managers to be deployed to VCC Shanghai, while VCC Gothenburg assigned *"International Service Employees"* (ISE) to transfer managerial and process knowledge to the local operations in Shanghai.

The purpose of setting up the local operations, however, is somewhat unknown among the managers. Manager G summarizes by asking himself: *"What is the reason that they were creating a mirror organization? Transfer knowledge to who? I am curious, I do not know the answer to this. We built a factory in Gent, Belgium. Do we have a mirror organization in Gent?"* Manager J raises similar questions: *"First of all I would say that what you have to figure out is why you transfer something... Just to transfer the knowledge is one thing, but we have to understand the underlying objective. Is it to please the owner? Is it to bring headquarters attention to the specific China needs? Is a matter of finding suppliers? If we do not understand the objective, we can never develop the right strategy. And our objective with setting up this centre has not been clarified... Before we had Chinese owners, nobody said that we should set up [operations] here."* The majority of the managers, however, believe that the increasing importance of the Chinese market for the automotive industry together with demands from the new owner and local political stakeholders are some of the central reasons for this decision.

4.3   The formation of the MPS

As the operations in Shanghai were initiated, the Chinese managers assigned by Geely and the Swedish ISEs assigned by VCC Gothenburg merged in the so called MPS. The MPS is mainly used in the two top managerial levels of a number of functional areas, e.g. purchasing, finance, and HR. These managers carry out *"dual reporting"* to both the head in China and Sweden, and manage their subordinates together. Without any prior meeting, the managers were put together to share the same room, take the same role, get involved in the same tasks, and attend the same meetings. The managers in the MPS often have similar backgrounds and experiences, where the majority comes from similar positions either within VCC or from other automobile manufacturers. The majority of the Swedish managers have a long history within VCC and from being expatriates, while most of the Chinese managers have experience from working in either other automotive or other industrial firms (commonly in the US or China). None of the managers have worked in or know of other firms adopting similar organizational mechanisms, but most of them are instead accustomed to work in manager-deputy manager settings, in which the Chinese managers often holds the latter position.

Similar to the mirror organization, the managers seem not to know of the underlying reasons for why the MPS was actually adopted from the start, although most of them have their own understanding. Manager A says: *"When we first started here, it was a strong trend of the matched pairs... R&D, finance, manufacturing and purchase were set up with the matched pairs structure from the beginning... It was sort of the beginning, a prerequisite for success."* Manager E also mentions that: *"From the beginning it was stated that no person could fulfill the required position. Of course you need to know Chinese, you need to know the Swedish organization, and no one had all this."* Similarly, manager D states: *"I am supposed to be kind of a local expert, from a Chinese perspective."* Manager E feels that: *"We are not actually sure about the purpose of the matched pairs, because it has never been communicated. You can think, you can have your own thinking of what it is, to transfer the knowledge and get the organization working in the correct way. If that actually is the purpose, we do not know... it is not clear for anyone. People think it is clear, but it is not communicated exactly."* What they all agree on is that this system was given from the start, which they *"had to take it"*, and the Swedish manager is supposed to

contribute with knowledge from VCC Gothenburg and the Chinese manager with knowledge from the local environment.

Even though the MPS is the primary mechanism used to facilitate transfer of knowledge between the managers, there are in fact alternative mechanisms adopted in the buildup of the new headquarters in Shanghai. For instance, in the product strategy and vehicle line management (PS&VLM) function, the staffing of the department has been based on complementary skills and competences. Instead of having two individuals with similar experience working together in the same position (as in the MPS), the managers in this function complement each other's skills. In short, an ISE specialized in area A is responsible for area B (in which he is knowledgeable), while the recruited local manager specialized in area B will have the responsibility for area A (in which he is knowledgeable). Both of them then support the other in their respective field of specialization.

4.4   Structural dimension

As mentioned above, the managers in the MPS are required to work tightly together, where they sit in the same office and have the same responsibilities. There is a general feeling among the managers that too little information has been given in regards to how they should work together in the MPS and what is expected of them. Manager F mentions that: *"It would be better if the company had divided the work more officially, so that it is more clear who does what."* As a result, the managers in the different MPS have developed and coordinated their own work together. Some of the managers have chosen to *"hold hands"*, where they try to always discuss and to make joint decisions in all matters. Others have naturally developed separate roles in their shared responsibility, due to competences, preferences, or the difficulties of aligning the work under the immense time pressure. As manager B specifically points out: *"I would like to have things done fast, but my matched pair wants everything aligned. However, the time pressure and requirements from stakeholders make it impossible."* Through their daily e-mails, weekly meetings, and reports to both the head of China and Gothenburg, the managers in the MPS bridge VCC Gothenburg to VCC Shanghai. While the Swedish managers, with stronger personal networks from their time in the VCC Gothenburg organization, are inclined to take care of the

larger part of the contacts with VCC Gothenburg, the Chinese managers often manage most of the daily communication with the Chinese subordinates.

Some of the managers stress the importance of having proper facilities and financial resources in order to avoid miscommunication and inefficiency. They have, at times, experienced that they have lacked certain equipment and tools to do the work that is expected of them, for instance tools and equipment required to maintain efficient communication with VCC Gothenburg. The managers emphasize the importance of face-to-face communication and all of them suggest that the best way of enhancing the understanding of both units is to have long term of exchange assignments in both directions (between Gothenburg and Shanghai). These kinds of exchange assignments have been provided as training schemes before. The Chinese managers have had two-week training programs in Sweden and some staff from Gothenburg have also come to China, more to enlarge the personal networks for these employees rather than to acquire certain skills or knowledge. Manager H mentions that: *"Key persons have been over to Gothenburg, which helps to strengthen relationships."* Due to the constraints in terms of financial resources, however, the managers express that it is too limited time and opportunities for these face-to-face meetings. One thing that could have been done differently (with further financial resources) would be to have more exchange programs. Manager D states: *"That [exchange programs] is the most efficient way of achieving knowledge transfer, working together. You cannot achieve knowledge transfer with only 'hardware'."*

The general view among the managers is that it would be enough to keep the MPS in the two top managerial levels, since the decision making process would become too complex with further layers in the MPS. Manager F mentions that: *"MPS should be limited to a certain level. It does not make sense to have it too low in the organization, otherwise it would create conflicts."* Furthermore, except from limiting the MPS to a certain level of management, most of the managers suggest that the MPS may not fit for all functions. The system has, for instance, been working really well in the finance department, but has not been equally as successful in purchasing or production. One matched pair manager feels that the differences of their function between China and Sweden are large and inputs from both sides are needed. Manager L expresses: *"The strategy should not just be transferring knowledge from Gothenburg... I think we*

need global transfer, however, we need to have the local expertise.” His matched pair colleague, manager M, says: *“It is not only transferring knowledge from Volvo [VCC Gothenburg] to the operations here. It is also clearly needed to transfer competence and knowledge from China [VCC Shanghai] to Volvo [VCC Gothenburg]. It needs to go both ways... I do not think one of us will be able to do a very good job if we are alone.”* Manager A, not working in the MPS, notes: *“Some of the cases [of the matched pairs] work better than others. Especially in finance, as the accounting rules are so different [between China and Sweden].”* These managers suggest that the MPS is more suitable in the functions where the local differences are greater and where the combination of the knowledge from Gothenburg and the local knowledge is particularly important.

All managers have mentioned the vital importance of the informal networks, previously built up by the Swedish and Chinese managers, for knowledge transfer. Manager C, a senior Swedish manager at VCC Shanghai, compares himself with his matched pair colleague in terms of access to these informal networks: *“He has to rely on more of the formal contacts... it is not the same as working with people year after year there [in Gothenburg]. For me, maybe it is the language and so on, he [the matched pair colleague] has closer relationship with the people working here in China.”* Chinese manager K adds: *“If I do not have a matched pair, I have to spend a lot of time to get to know every single people and the process... I do not have any personal contacts in Gothenburg, he [the matched pair colleague] has spent 20 years in Gothenburg, so maybe he knows half of the [900] people. I only know about 20.”* Some managers further points out how they got introduced to each others' informal networks through the MPS. Chinese manager H describes: *“In the beginning there were a lot of e-mails [from Gothenburg] sent to him [the matched pair colleague] only.”* His matched pair colleague, manager I, confirms: *“It was very convenient for them of course, because then they could write in Swedish. We [the matched pair] try to challenge that all the time.”* Manager H continues by telling how they handle the situation: *“Every time he [the matched pair colleague] sees an email sent to him only, he immediately replies that ‘you have to copy my matched pair on this one’... I do the same thing... Many of the Chinese employees only send e-mails to me in Chinese. I immediately reply back and say that we are a matched pair here.”*

4.5 Relational dimension

An important part of the knowledge transfer process is how well the managers in the MPS work together, which is largely determined by the relationship between them. Personalities and personal chemistry between the matched pair managers are seen as decisive factors for the success of their cooperation. Most matched pairs express that they think it is challenging to work so closely together, but find themselves fortunate that their personalities fit well. Manager F states that: *"Our matched pairs work well because of our personalities. We both want to take the best decisions for the team. Sometimes we have to compromise."* Manager H emphasizes that: *"Personal chemistry is the foremost determinant for the relationship, not national culture or anything else. A common value-system is the most fundamental thing, that you hold the same view on certain things."* This manager also feels that if you constantly have your assumptions challenged by someone else and in return challenge the other person's assumptions, you have to continuously reflect on what you are doing and how you do it. In this way the MPS creates a shared understanding of how to do your work. Open-mindedness (general and to other cultures) and the ability to adapt are additional characteristics that are highlighted by the managers as important for the relationship in the MPS.

There are, however, examples of how the relationships within the MPS can turn problematic. Manager B says: *"In a matched pair, one is strong and one is weak [in terms of personality]. Then it is actually not a matched pair, when the strong one takes the lead."* There are also situations when the managers do not agree on how to take decisions, as explained further by manager B: *"To this point, to be honest, it is not as expected. The major challenge is that there are sometimes different opinions... We have all different styles... I like to have things done fast, but my matched pair want everything aligned. That is what is most challenging for me."* Most of the managers experienced similar problems initially, before they had time to discuss and build a shared understanding of how to work together. In some cases the differences became too large and the relationship had to be terminated, resulting in a single manager running the operations. The managers indicate that great commitment is needed to overcome the challenges to work in the MPS and that this extra effort will pay off in the end. Manager D realizes that although the effort required for the MPS *"slows down your efficiency"* and is *"time consuming"*, the benefits are that *"you have a proving ground"* that ensures better decision making.

Trust is discussed as one of the main factors in regards to the development of relationships among the matched pairs, and the managers in turn believe that transparency is one of the most important elements to create trust. Manager D says: *"We trust each other, so we are a hundred percent transparent with each other."* In a separate interview, his matched pair colleague, Manager C, has the same standpoint: *"You really need to put effort into it... and it comes down to trust as well."* Most of the managers feel that they can trust their matched pair colleague and that they have open relationships and fruitful discussions. Other than trust, some of the managers argue that it is important to have a reciprocal relationship in the MPS. As one Swedish manager states: *"Fundamentally Gothenburg should provide the experience and methodology, but the Chinese market here needs additional work."* His matched pair colleague adds: *"So there is actually learning in both directions."*

One issue raised by several managers was the problem of retaining people in the organization, as the local conditions favor individuals who are flexible in the labor market. Compared to VCC Gothenburg, where most managers have remained employed for decades, employees in China tend to change employer frequently and someone who stays in the same firm for more than five years can be considered to be a senior employee. Manager E points out: *"The OEM [Original Equipment Manufacturer] business in China grows so good. Every local employee sees growth in a very short term, like three years. In three years he wants to see something happen; his title, his pay rate... Otherwise, other OEMs will attract him. He will leave."* Swedish manager J expresses his worries over the issue of retaining local managers with international experience: *"He [the matched pair colleague] has his family abroad and is here on his three years assignment... Nobody can make me believe that he will stay more than three years... If we have employed a truly Chinese guy, it would be hard for me to be tight up with him. On the other hand, he would have been more solid to the ground here."* This issue was considered as one of the main problems for maintaining the developed relationships within the organization and therefore for knowledge transfer, as some employees were expected to leave the organization after a certain period of time.

4.6 Cognitive dimension

Shared views and values are serving as important fundamentals in order for the MPS to work in the organizational context. One of the targets with the MPS is to integrate VCC Shanghai with VCC Gothenburg. As mentioned earlier, the purpose of setting up the local operations is somewhat unknown among the managers and while most managers have their own view on the formation of this system, none of them have been informed adequately about the underlying reasons for its implementation. A common problem mentioned by the managers is the language barrier. Manager H specifically points out: *"English is the corporate language and most of the time people speak English. It is easier for Swedish employees since their English level is higher than among the Chinese... You should never underestimate the language barrier, because it can very easily create confusion and misunderstanding."* Most of the managers also highlights that it is frustrating when internal communication is not done in English, which is still quite common. Chinese manager D describes: *"Our Swedish colleagues still prefer, maybe subconsciously, to use Swedish instead of English when communicating with their Swedish colleagues."* Chinese manager F has the same view and adds that the company has not succeeded in creating one global organization: *"Some write e-mails and documents in Swedish, which is not a global organization."* It is a general feeling among the managers of being two organizations, not working in full harmony. Manager E summarizes: *"It should not be two organizations, it should be one. So it is not created a global organization, but a mirror organization."*

Some managers have also experienced what they refer to as *"fear"* in their relationship with VCC Gothenburg. They describe that some of the staff in Gothenburg seem not to be fully aware of the objectives of the local operations in China and that they can feel intimidated by all the changes since the acquisition by Geely. Although all manager think that the headquarters has given good support to VCC Shanghai in general, most of them also mention that there is a certain reluctance to share knowledge in some functions. Manager J describes the conflict between two of his sub-departments, one in Gothenburg and one in Shanghai. Some employees at the Swedish department thinks that the top management would like to close them down and transfer their work to China. The manager quotes his colleagues in Gothenburg: *"Why should we transfer away and make ourselves unemployed?"* Similarly, Manager A states: *"This part of the individuals [who is reluctant to share knowledge] does not see us as a part of the company, so*

they resist sharing the info... It could be seen as some kind of fear, that they used to be responsible for this, but now someone else has this responsibility in China as well." In general, however, most of the managers estimate that this issue is isolated to few individuals and they have experienced an open and positive atmosphere both within the MPS and within the organization as a whole.

Overall, the organizational culture at VCC Shanghai is described as energetic and fast moving, where both the managers and subordinates are eager to learn more. Some of the managers believe this eagerness to develop comes mainly from the local approach to work, but also from the intense competition in the labor market (where knowledge is power), as well as the feeling of being part of something new and growing. One Swedish manager were certain that all ISEs who come to China are driven by the same thing - to develop themselves - which add to the local headquarters determination to learn. The strength of being a young and dynamic organization, however, is somewhat offset by the immaturity that comes with limited experience. As manager I states: *"The problem I can see here is in general that the organization is young and immature compared to Gothenburg. That can frustrate you from time to time."*

4.7   Benefits and challenges with the MPS

Most of the managers have positive experiences of working in the MPS. The common view is that it is an initial tool to establish operations quickly as VCC knowledge and China knowledge comes together and that it can facilitate closer communication between VCC Gothenburg and VCC Shanghai through the utilization of personal networks from both sides. Manager H says: *"Matched pairs are a way to setup quickly and moving fast, but it is tricky business. It needs a lot of attention and care."* Considering the limited experience in the new organization, the MPS is considered as a good way to combine the VCC knowledge brought by the Swedish managers and China knowledge from the Chinese managers. Some managers also think it would have been difficult or impossible to set up VCC Shanghai by themselves, with only one of the perspectives.

Although the MPS is acknowledged as a useful way to set up a new organization initially, Swedish manager E adds that: *"In the long run it is not efficient to have two people doing the same thing, both people signing the same documents and who has to get aligned... I think it has*

been a good thing in the start, but now we are running into more of the daily work and then it is not efficient any more... In the long run it does not work, of course not." Manager A focus on the cost that the MPS bears and has his thoughts on why this system was only implemented in some of the first departments coming to Shanghai: *"I think people started to appreciate that this is not cheap. It is expensive positions we talk about."* Some also mention a slower decision making process as one of the major downsides with the MPS, since it requires constant dialogue and consensus. They also believe that this system can create confusion within the matched pairs or among the subordinates, as the roles and responsibilities are rather unclear. Therefore it can be difficult to know who took certain decisions and who to approach to have things done.

None of the managers know exactly how the operations will change when their two year contracts expire, however, a view shared by all managers is that the MPS will be phased out after serving its purpose. They claim that the MPS will be used until they have reached a point where the organization is established, well-connected to the home organization, and operates well on its own. Chinese manager F, in a matched pair, says: *"This matched pairs setup is going to be two years, we do not know how it will be after two years. Maybe they will go back, maybe there will be some new setup. I do not know. Then I also think they want to make sure our China team can learn all the necessary processes from our matched pairs [before the termination of the MPS]."* Swedish manager E has similar thoughts: *"I do not think that everybody will go home after two years... In purchasing, one got lead and one was deputy. If that will be also adopted in the other areas, I do not know. But of course it will be changes. And for sure, after two years it will not be any matched pairs. It is more efficient to do it in another way."*

5 ANALYSIS

The following section will return to our conceptual framework (figure 2) where the three dimensions of social capital are included as an analytical tool to evaluate the *"orchestrated functioning"* of the MPS at VCC Shanghai. This includes the identification of *"the overall pattern of connections"* (Nahapiet & Ghoshal, 1998: 244) between the actors in the MPS, the stability of the MPS over time, its role as a platform to foster strong relationships between the actors, and its impact on shared goals and values.

5.1 Structural dimension

In terms of structure, the empirical findings suggest that the MPS can be a useful organizational mechanism for firms to adopt for the purpose of transferring knowledge faster. First, the co-location of the managers in the matched-pairs has been positive for faster knowledge transfer, which is illustrated by that the managers work have become considerably less problematic through their close proximity to each other, where they can discuss and reflect on issues as they arise and take action immediately. This finding is in line with the literature, which highlights the benefits of face-to-face communication and of having frequent (intentional or unintentional) social interaction for knowledge transfer (Nahapiet & Ghoshal, 1998; Tsai & Ghoshal, 1998; Chen & Lovvorn, 2011).

Second, our data also suggests that shared decision-making can be both positive and negative in terms of faster knowledge transfer. On the one hand, the additional work associated with shared decision-making, such as discussion, bargaining, and compromising, can reduce the efficiency of knowledge transfer. Moreover, shared decision-making can also create confusion as it becomes more difficult for subordinates to identify the source of a certain decision and choose who to contact in order to have certain things done. On the other hand, shared responsibility for decision-making can help to minimize the number of poor decisions being taken, which in the long run can have a positive impact on the speed of knowledge transfer.

Third, in line with the literature on social capital in relation to knowledge transfer, our findings show that the personal informal networks can be utilized as valuable resources for the managers

in their work by reducing the problems of identifying who to contact and how to contact them in order to obtain certain information or have certain decisions taken. At the same time, these personal informal networks can also be difficult to utilize as the actors within them tend to maintain interaction mainly with those who developed these networks from the beginning. While these findings indicate that the informal networks can be essential for faster knowledge transfer, they also indicate that it can take time before these informal networks can be utilized by an outsider being introduced to them.

Fourth, the empirical findings support the emergent literature on social capital's importance for faster knowledge transfer (Chen & Lovvorn, 2011) by showing that the MPS can facilitate faster knowledge transfer only if the relationships are structured properly. Our data indicate that there are departmental differences in terms of how well the relationships in the MPS work and that it is easier to forge strong relationships in departments where the managers have lot to gain from working closely together. This is also in line with the reasoning in our conceptual framework, suggesting that the knowledge gap between the sender and receiver can be neither too small nor too great, and which propose that each department needs to have properly structured relationships to achieve optimal speed of knowledge transfer.

5.2 Relational dimension

From a relational point of view, the empirical data propose that personality, identity, trust, commitment, and reciprocity are all central relational factors for the MPS to facilitate faster knowledge transfer, as these factors smooth the progress of coordination and cooperation. These findings can be seen in the importance the matched pair managers give to transparent and open relationships, being characterized by significant efforts from both parties to make the relationship work and to come to joint decisions, the expectation of sharing and learning in both directions, as well as similar personal chemistry and value-systems. These findings are aligned with the argument made by Minbaeva (2007: 578), who argues that *"knowledge transfer is possible only when close relationships are established between senders and receivers"*, as well as with the factors outlined in social capital theory.

Another important aspect found in our data is that it is important for firms to make sure that the established relationships are managed in a way that the people within them are remain in them for a long period of time. Relationships take long time to develop and unless firms succeed in employing the right people for these relationships, in terms of e.g. personality, and in retaining people in these relationships, it is likely that valuable knowledge transferred can be lost as people leave. Furthermore, if people in these relationships expect that their colleagues will leave after a certain period of time, their disseminative capacity could be influenced negatively. This finding is in line with the arguments put forward in the knowledge transfer literature, highlighting the importance of senders' ability, and in particular their willingness, to transfer knowledge (cf. Minbaeva, 2007).

5.3 Cognitive dimension

Theory holds that common values and beliefs provide harmony of interest in organizations, which in turn facilitates goal and culture internalization and end in faster knowledge transfer (Chen & Lovvorn, 2011). Our findings partly support this reasoning by showing that the lack of information in terms of goals and vision about the mirror organization and the MPS has led to frustration and confusion among the managers since they do not fully understand the overall picture of these structures. This finding indicates that information plays an important role in creating a shared understanding for the purpose of the local operations overall, and in particular for the MPS, and thereby also for the facilitation of faster knowledge transfer.

A similar argumentation can be made in regards to the finding that the incomplete understanding of the local operations and the MPS, caused by the lack of information, made some people skeptical to share knowledge. This finding suggest that information also has a critical role for the convergence in cognitive maps and therefore for the facilitation of goal and culture internalization.

Furthermore, theory suggests that the complexities associated with the transfer of knowledge across national borders *"may contribute to conflict and cultural misunderstanding, which can hinder the flow of knowledge"* (Chen & Lovvorn, 2011: 51). Although our findings to a certain extent show that miscommunication can sometimes arise from contextual differences such as

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cultural traits or attitudes, it can also be seen that national differences are highlighted as less important than differences in personalities. In this regard, our findings could indicate that MNCs, in which managers often are accustomed to work in international settings, are less likely to experience detrimental effects on the speed of knowledge transfer caused by contextual differences between nations.

The theory on social capital suggests that *"stable networks characterized by dense relations and high levels of interaction are conducive to the development of the different facets of the cognitive social capital"* (Nahapiet & Ghoshal, 1998: 252). This claim implies that while organizations with stable networks (like VCC Gothenburg) are likely to be conducive for faster knowledge transfer, young and dynamic organization would not be. By contrast, however, our findings indicate that young and dynamic organizations (like VCC Shanghai), through the energetic and fast moving environment, can be equally as conducive to faster knowledge transfer. In this regard, it seems as if stability is not necessarily the only factor important for high levels of social capital and in turn faster knowledge transfer.

5.4   The conceptual framework revisited

As outlined in our conceptual framework (figure 2), we expect certain organizational mechanisms to be more or less conducive for the facilitation of faster knowledge transfer depending on the different dimensions. In our analysis, we applied this framework to the empirical findings and outlined the MPS and the important factors we could identify from our framework. An interesting finding in our empirical data is that the MPS is only considered as an initial tool and not a suitable long term solution to achieve faster knowledge transfer. This finding indicates that time is a further dimension of significance for firms as they manage and organize their knowledge transfer. Therefore, we have added time as a further important dimension for firms to consider in their endeavor to achieve faster knowledge transfer through the MPS. This aspect is presented in figure 4.

Figure 4. Changes in speed of knowledge transfer over time.
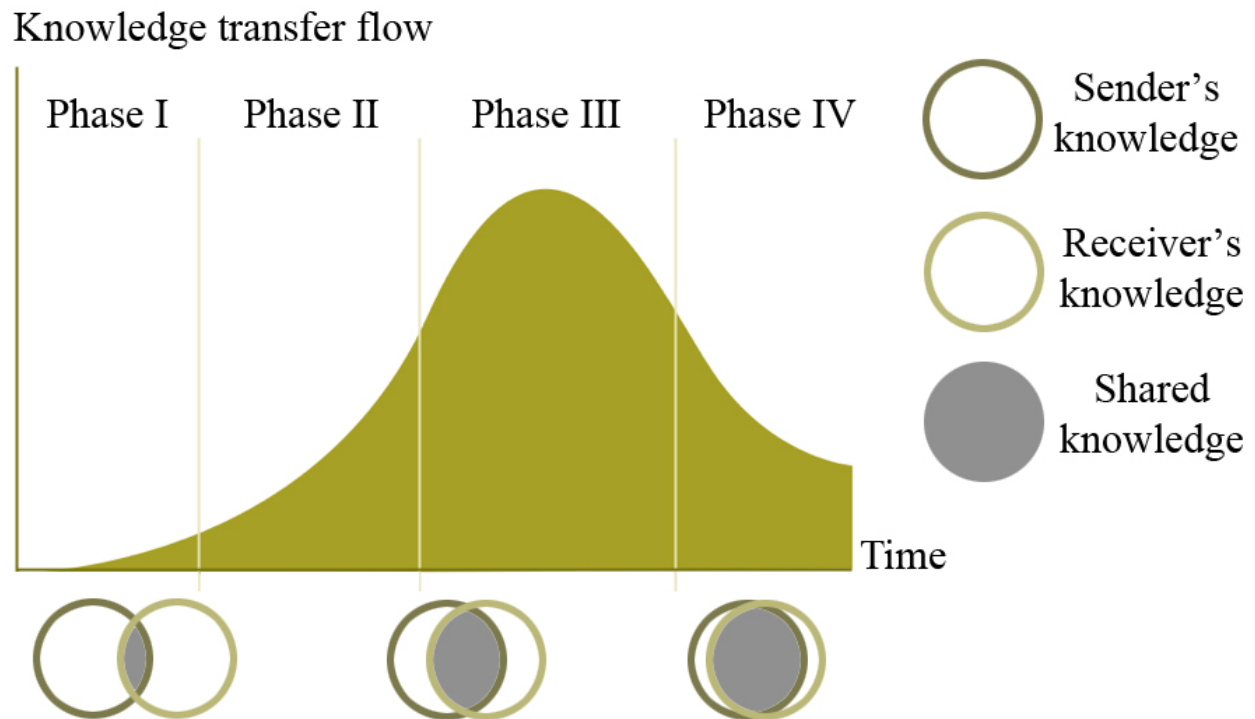
Source: Own conceptualization

In previous research on social capital and knowledge transfer, the dynamics over time is often left out. No discussion has yet been made if the effects of organizational mechanisms, or the *"learning landscape"* (Prencipe & Tell, 2001), could vary over time. The theory on social capital in relation to knowledge transfer suggests that more social capital leads to faster knowledge transfer. In this study, however, it is expected that the effects of increasing social capital will diminish after a certain level has been reached. In addition to social capital, this study applies shared knowledge as a concept to analyze the changes in the speed of knowledge transfer over time, as earlier research has shown that an appropriate knowledge distance is important for efficient knowledge transfer. On the one hand, Hamel (1991: 97) claims that *"if the skill gap between partners is too great, learning becomes almost impossible."* On the other hand, Cummings & Teng (2003: 47) argue that *"parties may become less satisfied with their transfer activities if there is not much knowledge to be transferred due to too small a knowledge gap."* These arguments support the logic of figure 4, showing that as the knowledge gap between the

sender and receiver decreases, the will to work closely together to transfer knowledge will decrease as well.

As seen in figure 4, the speed of knowledge transfer will accelerate initially (phase I in figure 4) as the shared knowledge between the sender and receiver is still limited and as they have a lot to learn from each other. Ideally, the two actors need to have some shared knowledge as a common ground already from the start in order to enable communication between them. As time passes, the shared knowledge will grow and thus increase the speed of knowledge transfer (phase II in figure 4). At a certain point in time (phase III in figure 4), the platform of shared knowledge will reach a stage where optimal flow of knowledge transfer occurs. At this point, the sender and receiver will share common codes, values, and understandings and therefore facilitates efficient communication between them, although still having room for exchanging knowledge. Past this point, the shared knowledge would become too extensive and little could be gained from further exchange of knowledge (phase IV in figure 4). When the sender and receiver fully share the same knowledge, the flow of knowledge will stop and the knowledge transfer stock will reach its peak.

This argumentation is in line with our empirical findings showing that the MPS facilitates faster knowledge transfer in departments where the differences between the two units (VCC Gothenburg and VCC Shanghai) are more extensive (as in phase I and II in figure 4). By contrast, managers in departments with more universal or standardized working routines seem to have too little to gain from each other (as in phase IV in figure 4) already in the initial phase (phase I in figure 4) and therefore consider it more efficient to work individually. This indicates that firms need to take into consideration different departmental characteristics and adapt the structures accordingly.

6 CONCLUSIONS

This study focuses on how the MPS can facilitate faster knowledge transfer in the MNC and what the important factors to consider in the implementation and utilization of the MPS are. By using firm-level data from VCC Shanghai, we conclude that the MPS can indeed be successfully used by MNCs in order to facilitate faster knowledge transfer in the initial phase of newly established and fast-growing organizations, but that there are important factors to consider in the implementation and utilization of this organizational mechanism. To facilitate faster knowledge transfer through the MPS, we have shown that firms need to:

- set up structures that facilitate frequent interaction between the managers;
- maximize the use of the personal informal networks that the managers bring with them;
- provide extensive information on the decision-making process in order to avoid confusion;
- implement the MPS only in the departments without universal and standardized routines;
- match the right people in terms of personalities, knowledge gap and shared values;
- pay attention to the long term stability of the human resources to retain transferred knowledge;
- develop a shared understanding for common goals and vision;
- create an organizational culture that is energetic and motivated to learn;
- adapt to changes by adopting new organizational mechanisms over time.

6.1 Theoretical and managerial implications

In our theoretical review, the MPS has not been found in the previous literatures. In this regard, this study has contributed to the literature by a focus study on this specific organizational mechanism. Earlier research suggests the notion of social capital can be helpful to explain the phenomenon of faster knowledge transfer. Our study partly confirms the import role of social capital for faster knowledge transfer. In contrary to this previous theory, however, we have found that more social capital is not necessarily positive for faster knowledge transfer. In this regards, our study has contributed with new insights to this field of research. Furthermore, through the

identification of the time dimension and by highlighting the important role it seems to have for the application of organizational mechanisms over time, we have also contributed to the understanding of how firms can facilitate faster knowledge transfer in a long term perspective.

In terms of managerial implications, our findings have shown that firms need to be aware that certain circumstances might constrain the optimal choice of organizational mechanisms for faster knowledge transfer. In the case of VCC Shanghai, for instance, the MPS was more of a precondition forced upon the organization rather than the optimal organizational mechanism for faster knowledge transfer. In this kind of situation, however, it is important for firms to identify the optimal solution under the given circumstances in order to achieve the best possible outcome. We have also shown that an organizational mechanism cannot achieve its full potential unless considerable attention is given to the communication of the purpose of its implementation and of the expectations during the utilization of the mechanism. This should also be connected to continuous evaluation of the mechanism and extensive training.

6.2   Future research

As mentioned under the delimitations and limitations section, this study suffers from several limitations. This provides avenues for further research, which can add more knowledge and understanding to this largely unexplored field of research. The main suggestions for further studies are outlined below.

First, while our study has provided new insights into the use of an organizational mechanism for faster knowledge transfer, further studies could build on our findings by extending the scope of participants, firms, or industries, and by conducting longitudinal studies on the same case (VCC Shanghai). These kinds of studies could add reliability and validity to our findings.

Second, future studies can also include further theoretical concepts when investigating similar cases in order to broaden the understanding of the underlying factors for faster knowledge transfer, including the concept of knowledge creation that is closely related to knowledge transfer. These studies could also identify other organizational mechanisms used specifically for the purpose of facilitating faster knowledge transfer.

Third, further investigations may focus on developing reliable measurements that can evaluate the actual increase in speed of knowledge transfer. In this case a quantitative approach could be added as a complement in order to measure developments in the speed of knowledge transfer over time or to compare the suitability of different organizational mechanisms for the purpose of facilitating faster knowledge transfer.

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APPENDIX

1. Overview of respondents and interviews

Respondent (13)	Working in the MPS	Nationality *	Interview method	Date	Duration (approx. 700 min in total)
Manager A	No	ISE	Face-to-face English Recorder used	Mar 20, 2012	80 min
Manager B	Yes	Chinese	Face-to-face English Recorder used	Mar 21, 2012	20 min
Manager C	Yes	ISE	Face-to-face English Recorder used	Mar 21, 2012	70 min
Manager D	Yes	Chinese	Face-to-face English Recorder used	Mar 21, 2012	60 min
Manager E	Yes	ISE	Face-to-face English Recorder used	Mar 22, 2012	70 min
Manager F	Yes	Chinese	Face-to-face English Recorder used	Mar 22, 2012	70 min
Manager G	No	ISE	Face-to-face English Recorder used	Mar 23, 2012	40 min
Manager H	Yes	Chinese	Face-to-face English Recorder used	Mar 26, 2012	40 min
Manager I	Yes	ISE	Face-to-face English Recorder used	Mar 26, 2012	40 min
Manager J	Yes	ISE	Face-to-face English Recorder used	Mar 27, 2012	90 min
Manager K	Yes	Chinese	Face-to-face English Recorder used	Mar 27, 2012	70 min
Manager L	Yes	Chinese	Face-to-face English Recorder used	Mar 28, 2012	20 min
Manager M	Yes	ISE	Face-to-face English Recorder used	Mar 28, 2012	30 min

* ISE refers to "International Service Employees". Their respective nationalities are left confidential to respect the anonymity of individual managers.

2. Interview protocol

Introduction

- Please provide a brief background on your career - previous and at VCC.
- What is your current role and responsibility within the organization?
- Please provide brief information about your experiences since joining VCC China and the developments since that time.

Structural

- What is the matched pairs system to you?
- What is your opinion of the matched pairs system?
- What alternative methods are or could be applied?
- How do you contact each other, interact, and take decisions?
- How often do you contact each other?
- What is your experience of the contacts?

Relational dimension

- How is it to work with your matched pair colleague?
- How do you complement each other? What are your colleagues' strengths?
- How do you cooperate and coordinate the work?
- What is your experience of the cooperation?
- What efforts are undertaken to overcome challenges and come to an agreement?
- Do you both share knowledge?
- What type of knowledge?
- How useful is the knowledge to you?
- What are the individual and joint efforts to develop your cooperation?

Cognitive dimension

- How would you describe your organizational culture and work environment?
- What is your opinion on the motivation among the colleagues?
- What is your experience in terms of cultural differences?
- How would you describe your MPS relationship in terms of shared goals and values?