UNIVERSITY OF GOTHENBURG
SCHOOL OF BUSINESS, ECONOMICS AND LAW

Master Degree Project in International Business and Trade

Identifying the Capability Gaps in a Multinational Corporation

A Comparative Case Study of the Global Purchasing Departments of Volvo Cars Corporation in Sweden and China

Liangchen Xu and Mihaela Ionescu

Supervisor: Claes-Göran Alvstam and Inge Ivarsson
Master Degree Project No. 2013:6
Graduate School

List of Abbreviations

BMS	Business Management System
BRIC	Brazil, Russia, India and China
CE	Cost Estimation Department
DM	Direct Material
FDI	Foreign Direct Investment
HR	Human Resources Department
HRM	Human Resources Management
HQ	Headquarters
IT	Information Technology
KM	Knowledge Management
MNC	Multinational Corporation
OEM	Original Equipment Manufacturer
RBV	Resource-Based View
R&D	Research and Development Department
SQM	Supplier Quality Management Department
VCC	Volvo Car Corporation

Abstract

In today's competitive global economy, one of the most encountered strategies in a multinational company is to take advantage of capabilities residing across different locations. It is widely recognized that a company's ability to successfully leverage such capabilities can be a significant source of long-standing competitive advantage. Former research has identified the dimensions and possible characteristics of core competences, but comparisons between employees in different organizations are still limited. This study is based on Volvo Cars Global Purchasing Department, which although split between Gothenburg, Sweden and Shanghai, China acts as one integrated purchasing organization. The study's main purpose is to identify and compare the competence gaps between the two offices and determine what is causing them. The study is exploratory and uses the research method of multi-source feedback. 52 interviews were taken in total. The empirical findings indicate that some capability needs are similar between the two offices; however, the differences are significant. The knowledge base and values cause the majority of differences in personal competence gaps. In addition, a further finding points to the significance of the business environment in which the employees are embedded. Suggestions concerning different competence development approaches in the two centers are provided.

Keywords: core capabilities, competences, gaps, knowledge, skills, purchasing, Volvo Cars

Acknowledgements

We express our sincerest gratitude to everyone who has helped our work during this project. Without your contribution, the thesis would not have been possible.

First, we would like to extend our appreciation to Professor Inge Ivarsson and Professor Claes-Göran Alvstam who guided us throughout the whole thesis from the first inspiration and provided invaluable opportunity to access to Volvo Cars Corporation. Their teachings and encouragement were the keys to our work. Additionally, we are thankful to the School of Business, Economics and Law for offering us support to access a large variety of research studies and to the Elof Hansson Fondation for the financial support which made the research in China possible.

Moreover, we would also like to highlight Susanne Phillips at Volvo Cars, who paid critical attention to our work and helped us with arrangements. We are grateful to all the Volvo Cars colleagues who took their time to participate at the interviews. Their contribution to this study is highly appreciated. Their experiences not only contributed to the outcomes of the thesis, but also enriched our knowledge for our future careers. We would like to give a special thank you to Perh, Rebecca and Daniel from the Volvo Shanghai office that helped us during our stay in Shanghai.

Furthermore, we take this opportunity to thank our families and friends for bearing with us during years of studies. Their love is always supporting us in our lives.

Last but not least, we would like to thank each other for the fruitful friendship during the entire project. We have learned a lot about cross-cultural collaboration and communication. Gathering, interpreting and analyzing cross-cultural empirical data would not have been the same without having each other to help out.

…… ……

Mihaela IONESCU **Liangchen XU**

Gothenburg, 22 May, 2013

Table of contents

Table of figures and tables

1. INTRODUCTION

This chapter contains a general description on the reasoning behind the research study. The section starts by describing the background information concerning the subject of the study and then continues with the problem formulation and why the subject is one of interest. The chapter then continues with a clarification regarding the limitations of the research. Last but not least a disposition of the thesis is provided for a deeper understanding on how the study has been structured.

1.1 Background

In today's highly volatile and competitive global economy, one of the most encountered strategies in a multinational corporation (MNC) is to effectively take advantage of capabilities residing across different subsidiaries. It is widely recognized that a MNC's ability to successfully leverage such capabilities can be a significant source of long-standing competitive advantage (e.g. Prahalad and Hamel, 1990). The Doz, Santos and Williamson's article (2001) has been one of the contributions in which it was argued that despite the unexpected places where companies might be based, MNCs have the power to unlock worldwide capabilities and build up what is called "*The Metanational Alternative"*.

Even from the beginning, when the capabilities started being more researched, they have been recognized to be the invisible and most powerful way of the companies to prevail over the global market (Prahalad and Hamel, 1990). An evidence of that time was that the Japanese companies presumably understood how to develop and exploit their core capabilities better than their U.S. counterparts (ibid).

Not all competences are considered relevant enough to support a competitive advantage. As such the concept of *core competences* has been promoted largely in the research literature to differentiate between the different types of competences. During time the concept has had different appellations from invisible assets (Itami and Roehl, 1987; Lank, 1997; Itami and Nishino, 2010), core or organizational competences (Prahalad and Hamel 1990; Bergenhenegouwen et al, 1997), resource deployments (Hofer and Schendel, 1978), to distinctive competences (Snow and Hrebiniak, 1980; Hitt and Ireland, 1985). The general accepted definition for a capability to be "*core*" involves three factors: (a) difficulty to replicate; (b) customer perceived added value; and (c) transferability to other markets (Prahalad and Hamel, 1990).

Despite the large research in the domain the dynamics of the core competencies are still not clear (Mascarenhas et al, 1998; Dobrev et al, 2004). Limited knowledge is available regarding how core competences arise or become valuable within a certain context (Mascarenhas et al, 1998) or how gaps in competences are managed across dispersed subsidiaries. Many times the organizational core competences of a company and the employees' competences are seen as being the same. Even if they are directly correlated and inter-dependable, it is important to differentiate the two so that the managers have a clearer perspective on where the capabilities actual reside within the organizations. Some researchers

argue that it is the companies that recognize the importance of high capabilities at the lower level of the organization that matters the most, because they believe that it is such capabilities developed starting with the lowest levels of the organization that support a series of small steps towards the company success on the market (Hayes, 1985). Since most of the research so far has been focused on the overall organizational competences, this paper will take the perspective of the employees and focus on their perspectives over their capability gaps.

In the context of globalization, more and more global-function teams have been formed to act internationally. It is apparent that different individuals have different needs for knowledge and skills, as well as different ways of learning and applying knowledge. How to recognize knowledge and how to train the individuals differently to achieve consistently high performance become increasingly important and urgent.

Having all these in mind, an interesting case to study is Volvo Cars' Global Purchasing Department. Since the beginning of the company, the department has been localized within the global headquarters from Gothenburg, Sweden and it dealt with all global purchasing activities. This was until recently, in 2010, when one of the largest private Chinese automotive companies, Zhejiang Geely Holding Group, finalized the acquisition of Volvo Cars, making China the second home market of the company. In the same year, a new global purchasing center was established in Shanghai, China as an extension of the Swedish one. To make the most out of both centers, the company, like many others, faces the challenge to develop similar core capabilities, while at the same time manage the competence strengths and gaps that reside in both locations in an effective way. The results show not only the increased attention that the company is paying to develop its purchasing capabilities, but also the crucial differences between the Swedish and Chinese organizations in terms of capability gaps due to several major factors that have been identified.

1.2 Problem formulation

During the last decade, and especially starting with 2009, when the first official BRIC meeting was organized, the BRIC countries (Brazil, Russia, India, and China) have been the focus of a large number of multinational companies. The countries, all developing or newly industrialized nations, are large, fast growing and worldwide influential actors on most of the markets. Among them, China has been the largest and the fastest growing economy so far, and the same time the biggest beneficiary of the global FDI in 2012 (OECD, 2013; China Daily, 2012).

As the huge Chinese export machine gets integrated in the world economy, a large number of multinational companies, especially Western, had set up local subsidiaries within the country. During the last years, the value-adding potentials of different components from the Chinese suppliers have significantly increased. One of the major consequences is that the demand for sourcing competences on the Chinese market has increased, posing challenges to the MNC's management teams and human resources departments (HR).

As the market is become increasingly competitive, the MNCs expect and need competences from their employees. The gap between expectations and the actual competences is even

more acute in China due to economic rapid changes and the cross-cultural work (Woodland, 2007).

Given the above facts and the limited research in the domain, we find it relevant to study how different actual capability gaps are in a Chinese organization compared to a Western one. In the case that significant differences are found, it is important to look over the generalities and try to dig within and see what influences such discrepancies.

1.3 Purpose and research questions

The purpose of this thesis is to investigate the differences in capability gaps between two locations of a MNC, one in Sweden and the other in China. The study has been narrowed down to focus only on those core functional capabilities of a buyer occupation within a Direct Material Purchasing Department of an automotive company. Through this study, we will attempt to get a deeper understanding of the capability needs between the two organizations and the factors influencing them.

The main research question the paper is intended to answer is:

How different are the capability gaps between a Swedish and a Chinese organization within a multinational corporation?

Sub-question:

If significant differences are found, what are the factors influencing them?

Within the context of this paper, an employee's capability gaps shall be understood as the difference between the expected capabilities to achieve the company's goals, and the actual capabilities of the employee at stake.

1.4 Delimitations

There are four main delimitations in the study:

a) The subject of capabilities and the analysis approach;
b) The limitations arising from choosing a certain company to study;
c) Resources and time constrains for the research;
d) Representativity and the transferability of the empirical findings.

Firstly, the subject of capabilities is a large one that stretches not only across several decades of research in the domain, but also throughout an entire organization regardless of country, functions or departments. Keeping this in mind, it is important to note that the study cannot address the whole domain of capabilities. For this reason, it focuses on a narrower subject referring to the capability gaps that can be identified today, within the function of direct material purchasing. The study takes the perspective of the employees as opposite to the market or the other competitors. The findings are analyzed using concepts and theories from different domains such as: the studies on (core) competences, knowledge management, human resources management (HRM) and organizational cultural differences. Even though

theories about the relationship between headquarters and subsidiary are not mentioned, we recognize that they might influence the case and do not overlook them.

Secondly, the company that has been chosen to be investigated is a large Chinese-Swedish original equipment manufacturer (OEM) within the luxury passenger car market. The MNC is a unique case in the car industry with two home markets and a divided global headquarters. The fact that VCC is a Western company owned by a Chinese MNC makes it an interesting case study for research. The purchasing department in focus is split between two locations one in Sweden and the other in China, both of them having the same global functional responsibilities. It is important to note that the choice of the company might act as a limitation to the paper's empirical findings.

Thirdly, the limitations of the research have also been influenced by the time constraints and the availability of data that could be retrieved within the given period of time. Although we have used all the available resources to gather enough relevant data as possible, it is reasonable to assume that the longer the period of the research, the more complex and complete data would be retrieved.

The fourth and last limitation lies in the generalization issue. Taking into consideration the qualitative research method (see Chapter 3: Methodology), the scope of the findings is not to be generalized to the entire population of employees or companies. Furthermore, when selecting the employees to be interviewed, several criteria of selection have been used. It is worth noting that in a perfect world, the population of employees throughout a company will be homogeneous, and the groups of employees interviewed for research will entirely represent the population. Because of the qualitative research approach and interviewees' selection, the findings cannot be generalized. This limitation is generally an issue to all research studies using qualitative methods. Even so, we have done our best to make the empirical findings as transferable as possible by using numerous methods.

1.5 Thesis disposition

Based on the above research question and the literature background information, the paper has been structured in the following way (see Figure 1):

Figure 1: Structure of the research paper

Source: Own visualization

Chapter 1: "Introduction" starts with general description on the reasoning behind the research study and then continues with the problem formulation and why the subject is one of interest. A clarification regarding the limitations of the research is provided at the end.

Chapter 2: "Theoretical framework" provides a theoretical background of the concept of capabilities within a firm. The chapter contains also relevant literature studies that help to understand the concept the core capabilities and investigate the factors that might influence the competence gaps.

Chapter 3: "Methodology" outlines the methods applied in the study and elaborates on the chosen research approaches. The chapter starts with the main research question the study intends to answer and steadily guides the reader through the process through which the research methods were chosen.

Chapter 4: "The empirical findings" describes the empirical findings from the chosen MNC. The chapter starts with the background information regarding the global automotive market, continues with a description on Volvo Cars and the professional role of a Volvo buyer. It ends with the competence gaps identified, based on the four dimensions.

Chapter 5: "Comparative analysis" interprets the empirical findings through the theoretical lenses described at the Chapter 2. An additional dimension is proposed to be added to the model.

Chapter 6: "Conclusion" summarizes the findings of the research study and emphasizes its contribution to the already existing literature on core capabilities. Possible opportunities of further research are presented at the end of the chapter.

2 THEORETICAL FRAMEWORK

This chapter provides a theoretical framework of the concept of capabilities within a firm. The chapter is split in three parts. The first part contains an overview on the resources of a company and the role of knowledge and capabilities within an organization. The second part presents a framework for core-capabilities that will act as a foundation for the theoretical model. The third and last part offers a deep understanding of the concept of core capabilities, their dimensions and their application within a multinational organization.

2.1 The resource-based view of the firm

For a better understanding of the concept of knowledge and capabilities, it is necessary to start with an overview of the resources of a firm. The resource-based view (RBV) advocates that firms consist of a unique bundle of resources and capabilities which are utilized to build firms' sustained competitive advantage. In order to reach this state of advantage, the firm must possess resources and capabilities which have the nature of being valuable rare and imperfectly imitable and not ease to substitute. The resource-based view emphasizes the strategic importance of firms' resources and capabilities to maintain competitiveness (Barney, 1991). The view is supported by several other large studies related, but not limited to: core competences (Hamel and Prahalad, 1994), the knowledge-based view (Grant, 1996) and the dynamic capabilities (Teece et al, 1997; Helfat and Peteraf, 2003).

Even though it is one of the most invoked views, especially in management and strategy research in all major management and related journals, the RBV has received several important critiques regarding its fundamentals. The biggest downside of the theory is the fact that it does not provide a clear framework to identify which resources are indeed strategically valuable and support a competitive advantage of the firm (Sanchez, 2008). A second problem identified is the fact that the theory builds on what type of resources the firm owns and neglects how they are actually used. The critics have been supported also by Macher and Mowery (2004) who further emphasize the lack of clear definitions to determine the locus and sustainability of "*core competences*" or "*capabilities*". We recognize the usefulness that such criticism offers in creating a constructive conversation around the theory. However, this paper chooses to take side with Barney (1991) and see the key resources and capabilities as a broader concept depending on what market it is applied on.

2.2 The concept of core capabilities

In order to make use of knowledge assets, the employees or the firm in general have to identify and recognize the potential of knowledge set. It is the knowledge has been defined that a company can manage it and also measure the capability associated with it (Freeze et al, 2008). Core capabilities start being analyzed in a large number of studies, most notably after Mitchell (1989), showing that industry specific capabilities increase the chances for a firm to take advantage of new technologies within its market.

The concept of "core capability" which is also known as "*core competence*" originates from the RBV applied to the company strategy. The concept of core competence was first introduced by Prahalad and Hamel (1990) as the strategic resource of an organization. The study argued that a firm's competitiveness is deeply rooted in its core competencies; here they refer to the organizational competence as a whole. For a company, the "*core competences*" were defined as something that the company does well and passes three tests: (a) it is difficult to imitate; (b) it contributes significantly to the customer experience; and (c) it provides access to multiple markets (Prahalad and Hamel, 1990).

From the organizational perspective, different sources have different definitions of competencies (Scarbrough, 1998). Kay (1993) defines distinctive capabilities to be related to architecture innovation and reputation. One year later, Winterscheid (1994: 226) claimed that a firm's competence is *"the specific tangible and intangible assets of the firm assembled in integrated clusters which span individuals and groups to allow distinctive activities to be performed*". Miyazaki (1994:19, 24) advocates that organizational competence is the firm's ability to activate its organization combining people of different skills to work together. Coyne (1997: 43) illustrates his opinion by proposing that "*a core competence is combination of complementary skills and knowledge-bases embedded in a group of people that result in the ability to execute critical processes to a world-class standard*".

From the individual perspective, Brache (2003) identified human capabilities as the unique sets of skills knowledge and personal values and beliefs. It is extremely important for an organization to identify what kind of human capabilities it possesses at present and find out what human capabilities they need to improve and also the steps it can take to close any gaps. Personal capabilities indicate the ways in which people perform their tasks, manage themselves, as well as interact with someone other in the workplace. They are also crucial for the employees to be able to put their knowledge skills and values into practice throughout their careers. In order to do that, continuously learning and training for improving performance are rather significant (ibid).

This study aims to identify the difference in capability gaps existent in two locations of a MNC. However, previous literature has predominantly discussed different capabilities, how the capabilities can be divided, what factors can influence them etcetera. The paper switches therefore the theoretical perspective from the focus on capabilities to the capability *gaps*. In other words, it intends to analyze which factors are failing to positively impact on capabilities. Such factors would lead to a lack of knowledge and competence.

2.2.1 Dimensions of core capabilities

In accordance with the knowledge-based view, core capabilities can be viewed as having four different dimensions that influence their development (see Figure 2 from the next page):

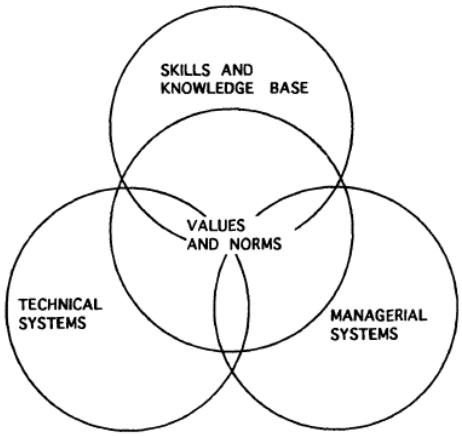
1) **Knowledge and skills** residing in the employees;

2) **Knowledge which is embodied in technical systems** that helps enhance the knowledge already residing within the employees;

3) **Managerial systems** which offer formal and informational ways of creating (e.g. mentorship, exchange programs between international offices, job rotation etc.) and controlling knowledge (e.g. incentives programs etc.);

4) **Values and norms** interrelated with the first three dimensions.

Figure 2. The four dimensions of a core capability



Source: Leonard-Barton (1992)

The first dimension refers to the knowledge and skills from both scientific and also developed by and in the firm. It is usually the most referred to when mentioning core capabilities and is probably also one of the most difficult to recognize and evaluate because of its intangible state (Leonard-Barton, 1992).

The second dimension indicates the stock of knowledge the company has accumulated during time within its systems and routines. Knowledge is a result of the firm's experience within its field of business and of the interaction of multiple stakeholders such as employees, shareholders, suppliers and buyers along the time. Consequently, the system can contain both data (e.g. blueprint product tests data bases with suppliers) and as well procedures and routines (e.g. licensing frameworks) (Leonard-Barton, 1992).

The third dimension connects the organizational architecture with the company's knowledge management system. The managerial systems can have two effects on the capabilities: they can either create knowledge through formal and informal activities (e.g. mentorship programs and team buildings) or help to control knowledge (e.g. incentive systems) (Leonard-Barton, 1992).

Last but not least, the fourth dimension encompasses the employees' and the company's values and norms. The values the organization associates with knowledge creation, sharing and control are correlated directly with the level and type of capabilities it will develop over time. These values can be reflected not only through culture but also through physical systems that embody values such as the type of hierarchy and organizational structure (Leonard-Barton, 1992). Another aspect of this dimension is the employees' own values and

to what extent do they fit within the organizational culture. As carriers of knowledge, the employees impact the development of organizational capabilities through their motivation. Values penetrate into the other dimensions of core capabilities.

2.3 Conceptual model

2.3.1 Knowledge and skills base

In accordance with the literature reviewed above, we utilize four dimensions of capabilities as a basis for our study and develop our own conceptualization to identify the capability gaps from those perspectives. Since knowledge begins to be considered as the most strategically important resource, RBV is extended by the knowledge-based theory of the firm. In this sense, knowledge possessed by the firms becomes crucial to help maintain their sustainable competitive advantage (Spender, 1989; Grant, 1996). Grant (1996: 110) defines knowledge as "*that which is known*". Such definition is broad and involves many types of knowledge. Sometimes knowledge is regarded as being the same as information and data. In order to avoid problems within the information system design, it is important to differentiate knowledge from both data and information. Data consists of simple facts of the reality that transform into information when put in a context. It is only when information is gained through learning that becomes knowledge (Cooper, 2010).

The knowledge can be divided in implicit and explicit knowledge. Implicit knowledge is defined as know-how whereas explicit is regarded as know-about facts (Grant, 1996). The critical distinction between the two is the way they are transmitted and revealed. The first one, the implicit knowledge is knowledge that resides within an individual and is a result of years of experience and expertise. As such, knowledge becomes difficult to codify and transfer and is only revealed only through the application of knowledge in action. On the other hand, the explicit knowledge is knowledge that can be easily codified and communicated (Kogut and Zander, 1992). Since knowledge is residing within the individual, the role of the individual becomes crucial within the overall firm context.

When transferring knowledge, it is important to keep in mind the concept of absorptive capacity. In the 1990s, Cohen and Levinthal (1990:128) firstly defined absorptive capacity as "*the ability of a firm to recognize the value of new, external information, assimilate it, and apply it to commercial ends*". The lack of absorptive capacity is a consequence of the pre-existing stock of knowledge of the employee and it has been proven to influence the capacity to exploit outside sources of knowledge (Szulanski, 1996). On the organizational level, it can be seen as a routine to achieve innovative output. The absorptive capacity can be split between knowledge acquisition, assimilation, transformation, and exploitation (Shaker and Gerard, 2002). The first two steps are classified into potential absorptive capacity, which is expected to have a high content of employees' ability; whereas the latter two steps are classified into realized absorptive capacity, which is expected to have a high content of employees' motivation (Minbaeva et al, 2003). Furthermore, considering the two roles in transforming, knowledge senders and receivers are supposed to have a fairly close

relationship (Minbaeva, 2007), the importance of interaction and communication play a crucial role in facilitating the speed of transferring knowledge (Chen and Lovvern, 2011).

Moreover, organizational learning can be achieved in only two ways: by learning from its employees or from new employees who have the knowledge that the organization did not have beforehand (Simon, 1991; Grant, 1996). It is worth noting that a number of scholars have added a third option, meaning the members can also absorb the traditionally collective knowledge based on the organization (Kogut and Zander, 1992; Nonaka, 1994; Szulanski, 1996; Chang 1995; Makino 1996) such as from another subsidiary or corporate headquarters.

Knowledge management (KM) has been discussed for a fairly long time. The main features of knowledge management concentrate on, firstly, the priority to make use of human potential and create opportunities to develop new knowledge; secondly, to support political and social development and to effectively use technology (Drew, 1999). Additionally, Kostova (1999) examines the knowledge transfer within different contextual embeddedness, namely social organizational and relational. Cross-nation differences can be found in a multitude of organizational practices such as leadership and distribution of power and authority in organizations (Hofstede, 1980), negotiations (Graham, 1985), and also HRM practices (Adler, 1995). A more recent study reveals that overconfidence and absorptive capacity are the two factors that influence the most the knowledge gaps in foreign markets (Petersen et al, 2008).

Drew (1999: 133) puts forward a matrix for building knowledge management into strategy as he suggests that "*firms could assess the balance of their competency portfolios as part of a resource-based approach to strategic planning*" in other words he classifies core competency by applying the Boston Box terms as follows. The portfolio model which is constructed by two dimensions of knowledge content and awareness identifies four types of knowledge (see Figure 3).

Figure 3. Knowledge portfolio model

Knowledge awareness	1. What we know we know	2. What we know we don't know
	3. What we don't know we know	4. What we don't know we don't know
	Knowledge content	

Source: Drew (1999)

The first quadrant shows the type of knowledge that is widely known and transferable in the firm. The characteristics of this quadrant are knowledge sharing access and inventory for this reason this part of knowledge can be aware of and managed by the technical systems such as intra-nets. Quadrant #2 refers to the existing knowledge that is available by information gathering mechanisms but it is seldom used or neglected in many cases. Quadrant #3 denotes a situation that some disregarded tacit knowledge could be re-utilized by reminding and training. Finally, quadrant #4 addresses the knowledge that enables firms to identify potential threats or opportunities. In addition, they also put emphasis on the importance of using

technology for knowledge management (Drew, 1999; Diaz and Bailey, 2011). This knowledge portfolio also can be viewed as a mechanism to build and transform knowledge from "*what we don't know we don't know*" to "*what we know we know*"; therefore the model could assist with distinguishing different knowledge needs from different perspectives in this study.

To be more precise, R&D-intensive firms particularly require inclusively specialized skills and knowledge often extend beyond the firm's own in-house capabilities and perhaps beyond that of the national R&D infrastructure (Tijssen, 2001). Furthermore, an excessive emphasis on purely internal activities through learning by doing will therefore reduce diversity instead firms should develop their knowledge base by combining various sources of both domestic and international external knowledge (Yamin, 2004).

2.3.2 Knowledge embedded in technical systems

Information technology as a tool of knowledge management plays a positive role on information application in organizations. For example, many companies use databases and intranets to enhance accessibility and retain certain directions such as standards and policies (Alavi and Leidner, 2001). Knowledge management systems can be an important support for employees in project teams and in sharing especially explicit knowledge between across locations. The technical knowledge, the personality and the social values of the employees are the biggest factors influencing the usage of technical systems to access knowledge and enhance organizational capabilities (Sullivan and Maureen, 2012).

However, limited capability of the technical infrastructure constituting a knowledge management system (KM) can be a barrier for the users, resulting in dissatisfaction and reluctance to use it (Chua and Lam, 2005). Generally, the researchers estimate that between 50 and 70% of the informational knowledge management initiatives are failing due to low usability of the systems (Sullivan, Maureen, 2012). Additionally, high technology maintenance costs can result in disinvesting the KM initiatives. If the IT system does not fit the users' needs or it is too complicated to use, it might bring in people's unwillingness of using tools (Chua and Lam, 2005; Sullivan, Maureen, 2012).

2.3.3 Managerial system

Second, during the 1990s, it became increasingly recognized that human resources can also be a source of competitive advantage for firms (Barney, 1991). How to manage human resources and individual capabilities are becoming more and more challenging. The key activities of human resource management usually start from finding people with appropriate skills, abilities, knowledge and experience to meet the job requirements in certain organizations. Besides that, an incentive system which consists of performance appraisal and benefits also need to be built up. Simultaneously, specific training has to be offered to ensure that employees maintain skills and acquire new knowledge to perform in their job or to make a progress in the company. In order to develop the human resources, performance appraisal can be one of the best ways to identify an employee's key skills and competencies.

Furthermore, some other HR practices such as compensation, job satisfaction and the sense of safety and belonging could help maintain capable employees (Bratton and Gold, 1999).

Additionally, Huselid (1995) found out the mutual influence between HRM and the employees' ability and motivation, through conducting a factor-based analysis for a number of HR practices. Similar results have been examined by different authors who have classified HRM practices in groups and examined the influence between HRM and personal ability with motivation (Arthur, 1994; Ichniowski et al, 1997; Delaney and Huselid, 1996). As Huselid (1995) stressed, HRM practices influence employees' skills and competencies through acquisition and development of the firm's human capital. The competitive advantage of a corporation is depending on the existing human resources with relevant competence profiles.

A study about competencies needed for different positions together with the firm's current pool of employees' competencies can assist the organization in recruiting people with desired skills and knowledge (Minbaeva et al, 2003). In addition, performance appraisal system provides employees with feedback on their performance and competencies; furthermore, it will also provide direction for enhancing competencies to meet the needs of the enterprise. Therefore performance appraisal and proper training are positively related to employees' abilities. A performance appraisal system builds the objectives for self-development and training of employees (Delaney and Huselid, 1996; Minbaeva et al, 2003). On the contrary, limited investments in training and development might result in a low level of employees' knowledge and skills, thus restraining learning (Minbaeva et al, 2003).

Considering the international business environment, an effective HRM relates to the success of companies' global operation (Kamoche, 1997; Schuler et al, 2002). Bjorkman and Fan (2002) in particular examined the positive relation between human resource management and organizational performance by investigating the Western firms that are located in China. It is common that companies could underestimate the difficulties and complexity for managing HR in the multinational operations (Braun and Warner, 2002). In order to succeed in a global organization, companies need to have an awareness of cultural differences. In this case, HRM practices are cultural sensitive. It is crucial for companies to take into account that what works at home might not necessarily be applicable in the host country, for example, whether they can use a common approach worldwide, or how to balance the global mindset with adaptation to local conditions (ibid).

Docherty (1997) suggests that MNCs have to use competence-based HR strategies to enhance the performance of employees, on one hand, by utilizing the existing knowledge assets, and on the other hand, by ensuring that employees are responsible for value added in core businesses (Boisot, 1998; Guile and Fonda, 1998). From this perspective, competence that is embedded in all systems and procedures can be improved through effective HR policies and practices (Ghererdi et al, 1997).

2.3.4 Values and norms

From the organizational perspective, culture is delegated to the shared values, beliefs and norms of employees within a multinational enterprise (Leidner et al., 2006; Hart and Warne, 2006). Although the subsidiary may share elements of a consistent organizational culture, there are still some differences; thus the subsidiary's culture can be seen as a sub-culture within one MNC (McDermott et al, 2001). The differences in this sub-culture are derived from different factors, including its core values, bargaining power within the MNC and the local national culture (McDermott et al, 2001; Forsgren et al., 2006; Royle, 1995). Therefore, it is extremely important to identify how employees in a subsidiary perceive their role and significance in the MNC as a whole, whether their attitude is collaborative or hostile would bring a big challenge to whether implementing centralized knowledge management or not (Edwards et al, 2005).

The most prestigious contributions about national culture are done by Geert Hofstede. "*Culture is the collective programming of the mind distinguishing the members of one group or category of people from others*". During the 1960s and 1970s, he conducted one of the most comprehensive studies of how values in the workplace are influenced by national culture (Hofstede, 1980). According to his research, the national culture has five dimensions: power distance, individualism and collectivism, masculinity and femininity, uncertainty avoidance, and long-term and short-term orientation (Hofstede, 2013).

Power distance is defined as '*the extent to which the less powerful members of institutions and organizations within the country expect and accept that power is distributed unequally*' (Hofstede, 2013). In the Chinese case, the subordinate-superior relationship tends to be polarized and there is no defense against power abuse by superiors. People should not have aspirations beyond their position. However, in Sweden power is decentralized and managers count on the experience of their team members. Communication is generally direct and participative and employees expect to be consulted.

In terms of individualism, China has a highly collective culture where people act in the interests of their group instead of themselves. Personal relationships usually prevail over tasks and company, and the relationships among colleagues are mutual cooperative in-groups. Compared to China, Sweden is an individualistic society where the employer-employee relationship is a contract based on mutual advantage; hiring and promotion decisions are generally based only on merit (Hofstede, 2013). Additionally, pursuit of personal goals is encouraged by the individualistic culture, whereas the cultures regarded as collectivistic prioritize organizational achievements. Since organizational culture is reflected by individuals, it is significant to notice that individuals' perception and attitudes within diverse social contexts will determine their knowledge management activities (Earley, 1994; Leidner et al, 2006).

Another big difference between China and Sweden lies in masculinity and femininity. China is a masculine society while Swedish culture is more feminine. Chinese society is driven by competition and success. Such value system starts from school and continues all the way

through organizational behavior. On the other hand, the dominant values in Sweden are caring for others and quality of life; therefore keeping the balance between life and work is rather important for Swedes. An effective manager is supposed to support his or her employees and conflicts are always resolved by compromise; moreover, Swedes are known for their long discussions until consensus has been reached (Hofstede, 2013).

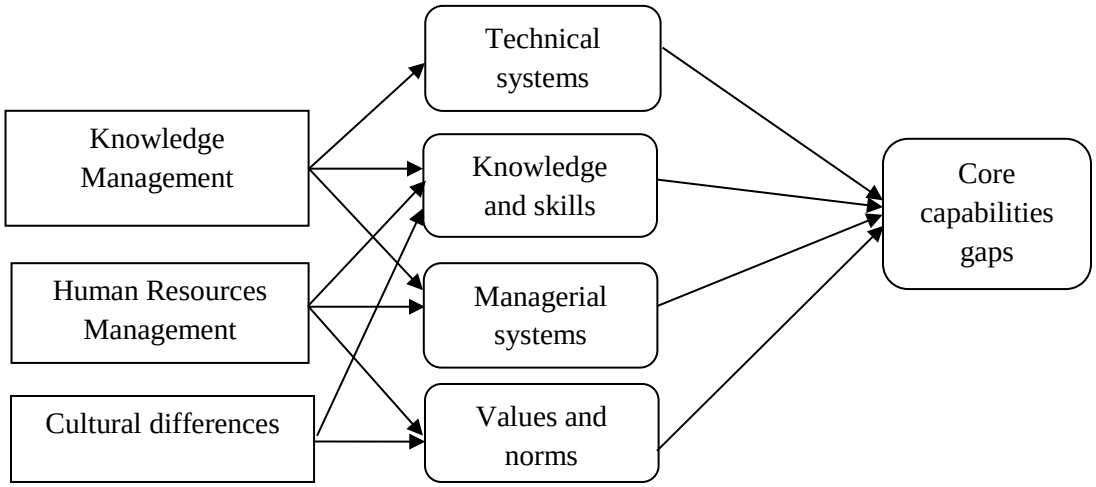
It is interesting that both China and Sweden have low preference of uncertainty avoidance, but the meanings are different. People in Sweden believe there should be no more rules than are necessary, and if any of them are ambiguous they should be reformed or discarded. The Chinese people, on the other hand, are comfortable with ambiguity; one example is that the Chinese language is full of ambiguous meanings that could be difficult for Western people to understand. Furthermore, Chinese persons are more flexible and entrepreneurial in comparison to the westerners. Concerning long-term orientation, China is influenced by Confucius' teachings; persistence and perseverance are normal virtue. Relationships are ordered by status and investment tends to be long-term projects. Conversely, Swedes have a relatively small propensity for saving preference for achieving quick results and a strong concern with establishing "normative" (Hofstede, 2013).

2.3.5 Conceptualization

This study is using the four-dimension structure which was put forward by Leonard-Barton (1992) as the basis for the theoretical framework. In order to identify the capability gaps, we start with the four dimensions of core capability, and develop important arguments from each dimension to see the relations between them and the capability gaps.

From the research studies reviewed above, the following factors are influencing the four dimensions of the capability gaps (see Figure 4 below).

Figure 4. Conceptualization of the factors affecting the core capabilities



Source: Own conceptualization based on Leonard-Barton (1992)

According to the literature, knowledge-based view is largely involved in the first three dimensions, which means that knowledge and skills, the knowledge embodied in technical

system and as well the managerial system are being influenced by knowledge management (Prahalad and Hamel, 1990; Leonard-Barton, 1992; Grand, 1996). Firstly, the abilities of learning and transferring are important determinants of the knowledge and skills base within the core capability model (Grand, 1996). Secondly, as technology becomes more developed, technical systems, one of the most advanced KM tools, play a vital role in building capabilities (Alavi and Leidner, 2001). Thirdly, in the managerial practice, knowledge management is taken into consideration when it comes to applying methods to create new knowledge or control pre-existing knowledge (Leonard-Barton, 1992). This suggests that the KM is influencing the first three dimensions (see Figure 4 from the previous page).

A similar argument could be made from the HRM perspective. HR policies form the constitution of the managerial systems by and direct the knowledge acquisition and control throughout trainings, rotation programs, etcetera (Huselid, 1995; Minbaeva, 2003). This is especially important in the global operations for MNCs (Braun and Warner, 2002). In such cases, HRM cannot only help build up the managerial practices, but also assist in knowledge and skills base that reside within the employees (Leonard-Barton, 1992). Moreover, it also plays a significant role to set up values and norms in the whole organizations. This suggests that HRM affects the last three dimensions (see Figure 4 from the previous page).

Additionally, cultural differences influence the dimension of values and norms, as well as the knowledge. It is obvious that the national culture impacts on the value of its employees. Moreover, different cultural backgrounds could also make different motivation, perceptions and attitudes for sharing knowledge and learning skills.

Based on the conceptualization of the factors affecting the core capabilities gaps, the corresponding theoretical literature has been used to analyze the empirical data.

3 METHODOLOGY

The purpose of this chapter is to outline the methods applied in the study and elaborate on the chosen research approaches. The chapter starts with the main research question the study wishes to answer and steadily guides the reader through the process through which the research methods were chosen. The chapter ends with arguments concerning the quality of the research study.

3.1 Research approach

Taking into consideration that the investigations regarding cross-border differences in capability gaps are limited, this study takes a more exploratory character. This means that without any prior expectations we tried to find out how different the capability needs are in two distinct locations of a multinational company. This approach opposes the descriptive research studies in which it is known exactly what has to be studied and where to look for the answers and the causal research studies where researchers investigate the relationship between two variables.

Keeping in mind the already existing literature on capabilities, knowledge and culture, the study is based on an abductive reasoning. This means that the empirical findings will be linked and interpreted through the theoretical lenses described in Chapter 2. The results of the analysis can either reject, fully or partially support the theoretical evidence from the already existing literature. New ideas can arise to complete the theoretical framework.

From the methods perspective, there are two major ways of approaching a research topic: a quantitative and a qualitative way. The quantitative method emphasizes the mathematical approach of gathering data; the method utilizes primarily statistical tools to measure data relevance and reliability of a certain group within a given population probability of certain type of data appearing or being influenced by other factors etcetera. On the other hand, the qualitative method focuses on the significance of the contextual understanding about social behavior (Bryman, 2011). As opposed to the quantitative method, it is mostly concerned with description and explanation of a social phenomenon and less with statistically measuring it. The aim of this study is to compare the gaps in capabilities between Chinese and Swedish employees and to furthermore investigate the underlying reasons of the possible differences. Since this research is derived from “how-questions”, a qualitative research is preferred instead of a quantitative one (Yin, 2009).

3.2 Research Design and Buyers Selection

3.2.1 Case study

There are several ways of research about a topic using qualitative methods. The most common ones are by collecting data through questionnaires, experiments, surveys or case studies. We have found the case study to be the most appropriate method in this study, because, as opposite to the others, it offers the opportunity to see the complexity of the group of people in focus, in this case, the buyers, and to analyze the data in its true depth (Yin, 2009). Case studies have been a common research method in international business studies

because of the data being needed to be collected cross-border and cross-cultural (Ghauri, 2004). It is mostly recommended when a "how" or "why" question is being asked about contemporary events but without required behavioral control. This helps us understand the holistic and in-depth characteristics of some complex social phenomenon, thus permitting the investigation of a phenomenon from a variety of viewpoints covering a period of time and crossing the boundaries between different factors (Yin, 2009; Ghauri, 2004). A case study also provides excellent opportunities for respondents and researchers to verify their understanding and carry on asking questions until they obtain sufficient answers and interpretations, as well as enables us not only to test the theory but also build theory (Ghauri, 2004).

When researching the capability gaps of a group of employees, there is no perfect way to gather data without potentially being subjective or too abstract. To target directly the relevant core capabilities and capability gaps and provide perceived causal inference and explanations, interviews have been selected as the most appropriate research method (Yin, 2009:102). It is worth noting that outcomes of interview could be biased because of the response bias, poor recall or the risk that the interviewee might give what the interviewer wants to hear (ibid).

Generally speaking, three types of interviews can be used in the qualitative interviewing: structured, unstructured and semi-structured. Semi-structured interviews typically apply to a situation where the interviewer has a series of questions on a general level and the sequence of those questions can also be varied. Unlike the structured interview, the semi-structured interviewer gives more freedom and flexibility to develop further questions in response to what is seen as important reactions (Bryman, 2011). To counterbalance the possible perceived subjectivity or abstractness of the findings, a 360-degree feedback on each selected employee was chosen as the best way to assess capabilities gaps.

3.2.2 360-degree feedback

One of the most common ways to assess the level of capability and performance of a person is to use the 360-degree feedback also known as multi-source feedback. The 360-degree feedback implies that the capabilities of a person are rated by the employee whose performances are evaluated and several outside raters, usually his (her) colleagues. It works in a similar way as the triangulation method for numeric data. When triangulating data, the researchers use several databases to compare the validity and accuracy of the quantitative data before the research. In the case of the 360-degree feedback, the researchers compare the qualitative data gathered from several interviewees regarding the performances of the same employee. If the data is supported by most interviewees (the employees being evaluated and the outside raters) then it is considered reliable and can be used for that particular employee's capability and performance appraisal.

The major advantage when using this method is that it offers a complex and more objective review of a person's capabilities and lack of capabilities in comparison with the other methods such as self-assessment or manager's assessment on one self. When it comes to self-

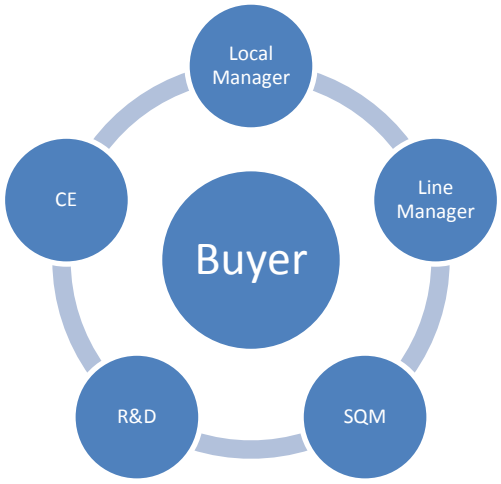
assessment, it has been proven to be problematic and inaccurate compared with more "objective outside raters" (Yammarino and Atwater, 1993; Nowack, 1992).

Regarding the accuracy level of the 360 degrees review, so far the research has shown that the accuracy is mostly influenced by the amount of time the interviewee has known the person being evaluated (Eichinger and Lombardo, 2004). The highest accuracy rate is reached when the persons know each other, and have been working together between one to three years. Moreover, if they have known each other for less than a year or if they have worked together for more than three years, in which case the interviewee will tend to positively generalize the feedback (ibid). In this study, most of the "outside raters" confirmed to know the specific buyer being profiled between six months to few years, increasing the accuracy of the data provided during interviews. Furthermore, as it will be seen later, the selection criteria for the buyers included an average of experience of just few years, to prevent the situation in which experienced employees would positively generalize their feedback on the person being evaluated.

It is worth noting that the method has two downsides. First, sometimes contradictory feedback can be received and there is no way to know who is telling the truth (Vinson, 1996). It is reasonable to assume that the bigger the number of feedback received from "outside raters", the smaller the possibility to receive an equal amount of contradictory feedback. To prevent this, a buyer was attributed a competence gap only if at least two assessments of him mentioned that particular competence gap (including the self-assessment). Any of the employee groups, either from Gothenburg or Shanghai, were attributed a possible competence gap pattern if at least three buyers from that particular location were attributed a certain competence gap. To increase transparency, each time a capability gap pattern is mentioned in the findings, there will be an estimation to show how many buyers have been identified as having that particular competence gap. The second drawback is that this method requires significantly more time and resources to gather data than a regular self-assessment; as such the population being evaluated is usually much smaller than in most researches based on interviews.Based on the work pattern of the buyers, the people with whom the buyers were working regularly and could assess their capabilities were: their managers and their colleagues from the Volvo Supplier Quality Management department (SQM), from the Cost Estimation department (CE) and from the Research and Development department (R&D). The Volvo suppliers were also considered however the buyers were not working that much with them and because of this were not seen as appropriate to ask feedback regarding the buyers' capabilities review. As such, **the external raters for each buyer evaluation were the buyer's direct manager(s) and two other persons with whom the buyer was working the most from the three departments mentioned above.** Some buyers had two managers: one local manager that was sitting in the same purchasing center and one line manager that was sitting in the other location. In such cases we interviewed both managers and got a cross-cultural managerial perspective on the same buyer one from the buyer's Swedish manager and the second from his Chinese manager. The other two "outside raters" have been named by the buyer himself based on with whom (s) he estimates **to work the most**. The other two

outside raters were colleagues from two of the three departments mentioned above: CE, SQM or R&D department (see Figure 5 below).

Figure 5. Data collection model



Source: Own visualization

After having used the 360-feedback in this research study and having analyzed the empirical findings, we recognize the importance of this research method. In addition to the increased reliability of the findings and the objective assessment of the buyers, it can be noticed that it also allowed us to discover more of the capability gaps of each buyer.

In total, we had 46 different interviews profiling 12 buyers using the 360-degrees method. If we would have had 46 self-assessments of buyers instead of 46 360-degree feedbacks on 12 buyers, we would not have got the depth of the answers we have received for this case. The outside raters' perspective on the buyers has played a crucial role in understanding the buyers' competence gaps and in allowing us to dig more into the complexity of the human interaction with the work colleagues and environment. Not once, the outside raters (including the managers) distinguished competence gaps that the buyers did not mention or chose not to put that much emphasis on them during interviews.

3.2.3 Units of analysis

Commonly it is preferred to have diverse units of analysis in order to explain a phenomenon and retain robustness and trustworthiness of the conclusion (Merriam, 1998). In this study, we suggest that the differences of purchasing capabilities could be found through comparing distinct capability gaps of two groups of employees. As such, the units of analysis will first and foremost be the employees and then the group of employees taken collectively from Gothenburg and Shanghai and compared against each other. From this point of view, Volvo Cars came out as a proper case for the study due to its global purchasing organization being split between its two home markets: Sweden and China.

The main reason why Volvo Car Purchasing is representative for this study is that VCC has expanded its global sourcing organization from Gothenburg to Shanghai. The two

organizations are seen to have the same functional role within Volvo Cars on global scale. Since they have the same function in purchasing activities, the Volvo Cars HR team has used similar criteria in recruiting the buyers; as a consequence it is suitable to compare the employees' capability gaps from two locations.

The case study concentrated on the direct material purchasing department, more precisely on the power train and electric and chassis sub-departments. The components that are sourced by the two sub-departments make up the core part of a car; correspondingly, their purchasing capabilities are one of the most significant parts in the direct material procurement and generally, in building the cars. Therefore the buyers' capabilities directly influence the core competency of the whole sourcing activity and thus influence the global competitive advantages of the firm as a whole. Additionally, these two sub-departments also have the highest degree of mixture in terms of different back ground buyers; such setting could also provide an apparent impression to discover the differences between buyers from Gothenburg and Shanghai when they are working together. All the reasons mentioned above confirm the appropriateness of the case.

3.3 Data Collection

There are several ways data can be collected for a case study analysis and these are via documentation, archive, interviews, observations and physical artifacts. All these sources are greatly complementary (Yin, 2009) and help us to see the same events from different perspectives. In order to maximize the reliability and validity of the study, a multi-method data collection has been used that comprises of a combination of techniques (Saunders et al, 2007) of the ones mentioned above.

3.3.1 Secondary data

Initially an overall perspective of the organization and the topic itself was built by analyzing the available secondary data on the case study. Secondary data has been defined as all data that is gathered with a different purpose than the one of the study (Saunders et al, 2007).

At this stage we used Annual Reports and Presentations about Volvo Cars and in particular, about its purchasing department, studies performed on the VCC purchasing and supply chain management done in the past, articles and newspapers regarding VCC and also different data and studies regarding the OEMs, purchasing and current challenges on the market. A basic perception about the occupation as a buyer in Volvo was formed at the beginning by reviewing internal presentations regarding the purchasing departments, the buyers' job requirements, activities and purchasing goals.

3.3.2 Primary data

Primary data is defined as all data that is gathered with the purpose to serve the actual study (Saunders et al, 2007). After gathering enough secondary data, meetings with key persons within the purchasing management team were set up to an overall understand over the purchasing organization. A short period of observation in the purchasing department was taken before the interviews so as to understand the interviewees and their working environment in advance. The main primary data on which the study is based upon are the

interviews within the purchasing organization since they encapsulate the knowledge and competences analyzed by us.

3.3.3 Interview and buyers' selection

The entire global direct material purchasing organization at VCC has approximately 178 employees out of which approx. 80% are buyers (see *Table 3* and 4 from p.38). This is the population from which the buyer-interviewees had been selected from. Based on the research question and the time constraints of the study, we established two groups of buyers, one from each location, to be profiled and interviewed each having 6 buyers. The buyers have all been selected from the Electrical & Chassis and Power train purchasing sub-departments within the direct material purchasing organization. Even if the products that are sourced are slightly different, the work of the chosen departments is based on the same principles following the same policies and pursuing same goals. The similarities identified between the buyers' work from the chosen departments overtake the differences. The selection of the targeted buyers that would be part of the study was based on four major criteria:

1) *Their location*. Since the research question is comparing the employees from two locations within a MNC, we split the pool of possible interviewees in two based on their location: they could be either from the Gothenburg office or from the Shanghai one. There were also few employees working from other Volvo offices around the world but they were not considered. It is worth noting that the large majority of the buyers working in the Gothenburg office were in fact Swedish. Therefore the pool of buyers from Gothenburg was actually more or less Swedish. Based on this practical fact, from now on in this study the buyers from Gothenburg will be referred to as the *group of Swedish buyers or the Swedish group*. The same thing applies to the Shanghai office; the large majority was Chinese. They will be referred to as the *group of Chinese buyers* or *the Chinese group*.

2) *The number of years of working experience within the purchasing department*. In order for the data from the two groups of buyers to be relevant and comparable with one another, we established two rules for a buyer to be chosen to be part of either of the groups:

a) *Minimum working experience*. In order for a buyer to be chosen to be interviewed it had to have at least 6 months of working experience within the VCC DM purchasing organization in either office Gothenburg or Shanghai. This would ensure that the two groups of buyers chosen had a minimum of understanding of their purchasing work, their role within the organization, as well as purchasing goals.

b) *Comparable average of the working experience between the two groups of buyers*. It is important to note that the global center in Shanghai started being built in 2010 as opposed to the Gothenburg office that has been in Gothenburg since Volvo was founded in 1927. In order to compare the two groups of buyers, it was important to keep the number of years of experience to just a few years for both groups of buyers. Due to the long tradition of Volvo Cars in Gothenburg, the Swedish purchasing organization had experienced persons that have been working for the company sometimes for more than 20 years. Because of this, we chose among the buyers that got employed in the last few years. On the other hand, in the

Chinese office, we chose the most experienced buyers within the department. Keeping in mind that the organization started being built in 2010, that meant that the maximum number of years of working experience the buyers in Shanghai had in VCC would be around 2. 5 - 3 years.

3) *Gender*. Both the Swedish and the Chinese groups of buyers had to have a balanced gender structure to eliminate the possible bias in responses due to gender specificities. As such, three male and three female buyers were chosen for each group.

4) *Purchasing responsibilities and leadership requirements.* As most purchasing organizations, the purchasing department within VCC has two types of buyer roles: a commodity buyer who is required to have more leadership skills and is mostly active within the global market of a certain set of products and a product buyer that has more or less a regional purchasing role either in Europe or China sometimes extending to global. The product buyers collaborate with a commodity buyer in setting up a global strategy for a set of products. The product buyer follows the strategic directions set up by the corresponding commodity buyer. To avoid bias in responses due to differences in responsibilities and therefore in the competence requirements the group of buyers chosen from each location had 3 commodity buyers and 3 product buyers.

We believe the restrictions above were required in order to make to the two groups of buyers as relevant as possible. Due to the complexity of the study pilot, interviews were conducted to test the quality of the questions and anticipate the type of information that would be collected prior to the actual interviews.

Apart from the 46 interviews that focused directly on the buyers' capability gaps, there were six more interviews added complementing the 360-degree feedback approach (see *Table 1* next page). **Two interviews** were performed with the top management from the departments' Power train and Electrical and Chassis. The two top executives were familiar with the company's global performance overall and the strategic role of the two centers within the organization and as well the industrial context of competences within the global car market. During the interviews they offered a strategic perspective over the buyers' role within the global purchasing organization and the competence challenges that OEMs face currently. **Three other interviews** were performed with the local Human Resources responsible for recruiting the buyers in each location. The interviews were highly valuable and offered a more local perspective on the capability gaps that exist on the market when it comes to the occupation as a buyer in a car company. **An extra interview** was performed with the person in charge of the information system within the whole purchasing department.

Table 1. Interviews headcount

No# of interviews	Total	No# of interviewees:	
		Swedish	Chinese
With buyers	12	6	6
With managers	14	10	4
With outside raters	20	9	11
Others	6	5	1
TOTAL	**52**	**30**	**22**
No# of hours	**Total**	**Out of which with:**	
		Swedish	**Chinese**
TOTAL	**49**	**28**	**21**

Source: Data based on interviews

As such the total interviews from which primary data was extracted were 52 summing up to approximately 49 hours of discussions (see above Table 1 and Appendix 8.4 Overview on interviews). The data gathered during all interviews was then double check with the secondary data from the company documentation and presentations, articles etcetera.

3.3.4 Interview questions and format

In order to set the atmosphere for both the interviewee and interviewer(s) the discussions started with open-end questions referring to background and career path of the interviewee until that moment. In the cases where managers or outside raters were interviewed the discussion started with general questions about their work together with the buyer in question. In the case of managers being interviewed the interviews started usually with questions regarding the goal of the team the capabilities that a buyer is required to have to reach the business goal and how frequent does the manager interact with the buyer in question.

After the introduction in the interview the interviews continued with questions targeting the four dimensions of a competence. In case of the knowledge dimension the first questions was meant as an open question regarding what type of knowledge the buyer could improve. This question had the role to indicate for us what the first thing the interviewee thinks when asked about knowledge gaps of the buyer. The open responses at this question are independent of the competence list identified by the Volvo and researchers and might have indicated to us knowledge gaps or competence areas that we have not thought about. After such open question the interviewee was asked to rank the competences of the buyer from a list given on a scale from 1 to 10, which 10 is the maximum score (see *Appendix 8.3: Interview guidelines*).

To have certain coherence between interviews and to be able to compare them somehow the competences within the buyer occupation have been split in four categories: generic leadership related functional and specific. In a usual work environment each of these four types of competences is used to assess the competences level of each buyer candidate and sense the potential of improvement and possible performance.

- **Generic competences** such as Customer Focus Communication Business Acumen etcetera. This type of competences are usually depending on the company's core values and brand proposition and are mostly general requirements for everyone within a specific organization. Since it is not targeted for the buyers' occupation this type of competences was not taken into consideration in this paper.
- **Leadership Competences** such as People Management and Business Management. In line with the generic competences the leadership competences are usually more particular generic requirements focused mostly towards management positions. Since this paper takes the employees' perspective this type of competences was not taken into consideration.
- **Functional competences** are the technical and operational competences that set apart the buyer occupation from others. These are the competences that drive the proven high results and performance within a certain occupation in this case the buyer one. There were 27 different functional competences that the corporate management and the HR department of Volvo suggested for the buyer occupation.
- **Specific Competences** include competences that are required at a certain point in time and are dependent on what the company's strategy is at that point. These competences are highly relevant for a buyer and can become core competences that support the company's competitive advantage on the market. Taking into consideration Volvo's strategy and objectives for 2020 the relevant specific competences that were identified by the corporate management and HR department are: "Car and car component knowledge" and "Knowledge about New and Emerging Markets".

Depending on the position (either commodity and/or product buyer) a buyer's functional and specific competencies levels have to match certain levels of requirements. As such both the functional and the specific competences have been weighted against the position itself and the associated responsibilities. The weights were given by us in accordance with the importance and the level of required competence given by the Volvo HR department to the corresponding buyer occupation (see *Appendix 8.2 The weights given to each competence*).

- **Weight 1:** "*good to have*" - a basic knowledge within the area is considered satisfactory.
- **Weight 2:** "*important to have*" – an independent contribution from the buyer's side is required. The buyer needs to be fully qualified within the area.
- **Weight 3:** "*very important to have*" – a very high competence within the area is considered a satisfactory level. The buyer needs to represent the competence area in strategic issues from an enterprise perspective.

When the interviewees were given the list of competences to evaluate themselves (if the interviewee was actually the buyer) or the buyer in question all the weights were hidden. After the interviewee has finished evaluating the competences interviewer turned the laptop with the score towards her and based on the type of buyer being evaluated showed either the commodity buyers' weights or the product buyer's. Based on the weights the interviewer took away all the competences weighted with "1"and focused only on the ones with "2" or

"3". When the interviewee entered his evaluation perception on the list he did not know that a large part of the competences will not considered important enough to discuss them during the interview. This further increased the reliability of the scores he entered. The second step for the interviewer was to determine which competences weighted as very important ("3") were evaluated generally less than the important ones ("2"). These competences would then be brought up in the discussion and the interviewee would be politely asked to comment on why he gave those particular scores. If no competences weighted with "3" would be generally ranked lower than the ones with "2" than the interviewer would bring up the lowest scores from competences weighed with "2". In general due to the limited amount of time the interviewer could ask the interviewee to discuss the lowest three to six scores marked either with "2"or "3".

The scores that each interviewee entered have not been used to compare to any other buyer. The goal with having interviewees rank the competences of the buyer using a list was from the very beginning to easily identify the categories of competences that would need most improvement in the eye of the interviewee. This helped us significantly in increasing the efficiency of the interviews while focusing only on the core competences that matter the most.

After the discussions concerning the ranking and the list of capabilities the interview continued with the rest of the questions within the knowledge dimension set the technical the managerial and last but not least the values dimensions.

To keep the results from all interviews comparable we have used the same interview guidelines for all buyers managers and the outside raters with just minor changes adapted to the interviewees position (for further details see*: Appendix 8.3. Interview guidelines*)

3.3.5 Interview guidelines

All interviews took place face-to-face in either the Gothenburg or the Shanghai offices of the company. Interviews as one of the most important sources of case study is guided conversations instead of structured enquiry (Yin, 2009). In this study semi-structured approach has been used in the interviews based on some general guideline (see *Appendix 8.3 Interview Guidelines*). This allowed us to capture the depth of the necessary data required for the study while building up a conversation.

Collecting data about one's capability and lack of capability might become challenging if it is not done in an appropriate way. For this study, we had Volvo Cars Academy (department within VCC that has the mission to help improve the purchasing capabilities) support to conduct the research. While setting up the interviews there was a clear communication of the study purpose and the Volvo Academy's support to do this. In many cases Volvo Academy was the one that contacted and set up the interviews for the study. This together with the confidentiality guarantees for each interviewee ensured that the study has legitimacy within the purchasing organization and is taken into serious consideration by the interviewees. During all the time, we tried to inspire trust and create a relaxed atmosphere where each interviewee would feel comfortable in discussing competence related topics.

In advance to each interview, we spent approximately 5 minutes mentioning why we are there the topic of the study the criteria of choosing the buyers the way the data will be used and the confidentiality guarantee from our side.

Before data from interviews was collected, a decision was made by us to use the tape recorder for all interviews. In general, the opinion of the researchers worldwide is split on, whether or not the recorder should be used as it might seem intrusive and affect the type of data collected. However, we believe that is it important to have an accurate recording of the discussions. The use of a recorder turned out to be a great advantage as we could go through each interview two - three times without missing any information that was provided by the interviewee. Before each interview we always asked the interviewee the permission to record. Only after the interviewee agreed the interview started. There were three interviewees who asked not to be recorded in which case we took notes during the whole interview. The initial idea of the interviews was for them all to be carried out in English. However, a significant number of interviews with Chinese employees were done in Mandarin to make it more comfortable to discuss and take away the language barriers.

In general, the interviews started with an introduction of career background and working description in Volvo for each buyer. Following that, we operated the main part of interviews on two levels simultaneously: guarantee the application of the question list while put forward more essential questions in the open-ended discussion. This approach was seen as the best way to gather in-depth understanding and primary data to recognize certain competence context.

For the buyers as the main body of the interview process questions were asked by four categories as the dimensions of the framework. For the external raters' interviews questions were targeted to assess specific buyers. It is worth mentioning that Mandarin was also used to interview the Chinese employees to acquire a better understanding through a smooth communication.

During the interview we tried to keep an open and flexible approach on the questions while at the same time focus on the most relevant topics of the research study. We knew beforehand the capability gaps that were mentioned by the interviewees before regarding a specific buyer. Keeping this in mind we tried to look for clues that would confirm or decline the capabilities gaps mentioned before and at the same time to be open to hear new ones.

All interviews were designed to last approximately 60 minutes. In practice the majority of the interviews lasted according to the expectations. There have been few occasions where due to the amount of additional questions needed to reach relevant data the interviews lasted more or less 60 minutes. It is worth noting that in several occasions the managers did not have the necessary amount of time needed for the interview in which case we shortened it by half and captured only the most important questions regarding the capability gaps of the buyer.

3.4 Qualitative data analysis

Interpreting and analyzing data is the most difficult task while doing case study research. The authenticity of a qualitative research is the main issue rather than reliability (Ghauri, 2004). In this phase data has been interpreted against the background of the context in which they were emerged not just present the viewpoints of individuals being studied. Theory could be developed along with the increasing amount of data at the same time the research question could also be formulated in this process. Theoretical proposition structured the layout of empirical data collection; as a result the analytical procedures could be conducted systematically. After the interviews we had data from both the Gothenburg and Shanghai offices. First we took each buyer at a time and established (her) his individual profile by triangulating the answers from the different raters including one self. This method helped improve the internal validity and reliability of the case study. After each individual profile had been established the profiles were split into two groups: one Swedish group and one Chinese and the most common similarities and difference in gaps were identified as common pattern for each group. For the next step the common characteristics between Swedish and Chinese were compared and then the main findings would stand out to reveal the differences in capability gaps.

We collaborated closely during this phase in order to best gather and interpret the data. The fact that one researcher has a Chinese background while the other a European one helped to better understand the discussions and eliminate the cultural bias that would have been given if we were only from Europe or China.

3.5 Quality of the study

When judging a case study research the most common concern is the fact that biased evidence is affecting the results and interpretation of the study (Yin, 2009). In this sense we have taken several measures to ensure that the case and evidence taken into consideration are relevant necessary and enough to support a research on the chosen topic. To start with, we have two separate backgrounds one of us is of Chinese origin and education and the other one European. This has helped to interpret the empirical results in a cross-cultural way avoiding as much as possible cultural bias. Both of us have a few years of international experience and 2 years of studying International Business and Trade. This has helped us become familiar with the international environment and to interpret the case in a scientific way. Secondly during the Methodology Chapter we have described in a detailed way each step of the research from how the research methods were chosen why they are relevant for the research question how the data is correlated with the initial research question how the data has been analyzed and interpreted. During the study we tried to reduce to the minimum the amount of biased data that could have influenced the study's results. We gave our best to conduct the research in a professional manner and hope that the rigor and transparency showed during the whole research project are proof of that.

In order for a study to be considered relevant and contributing to the academia it has to have certain quality. There are generally three major recognized criteria to measure the rigor of a case study: reliability, validity, and sensitivity.

High reliability of a qualitative study ensures that, in case other researchers perform the same type of research, they would reach the same results (Yin, 2009; Zigmund, 2000). This is mostly based on the assumption that there is only one reality that is being researched over and over again. It is worth noting that in qualitative studies, the findings depend to a large extent on the researchers' perspective, the research methods that have been used and the point in time in which the empirical data has been gathered. Consequently it is harder to achieve high degrees of reliability. One of the ways to reach a higher level of reliability is to document all steps of the research, including the interview protocol, the criteria that has been used to select the interviewees (if any), the interpretation of the results, etcetera (Christie et al, 2000). As such, in this third chapter containing the methodology behind the research study, we have been describing and arguing about each step we have taken in gathering and interpreting the empirical data. Conclusively, the transparency shown during the whole research ensures a relatively high level of reliability of this case study.

High validity of a research study ensures that the study is measuring what is actually saying it is measuring through the chosen methodology (Yin, 2009; Zigmund, 2000). To reach a high level of validity, we made sure to take few minutes before each interview started and explain the purpose of the study and what is meant to be measured. Moreover, several other actions were taken to increase the validity such as: to notify each interviewee that the interview is not correlated in any way with his (hers) performance appraisal or salary, full confidentiality is guaranteed during the whole interview, etc. Furthermore, the methodology employed during the whole study was one that characterizes the most accurate measurements of the employees' core capabilities: 360 degree feedback. Conclusively, it is reasonable to evaluate the study as having a relatively high level of validity.

Last but not least, the concept of **sensitivity** refers to how accurate the variability of responses was measured (Zigmund, 2000). As an example: if the interview questions had limited answers such as: "Yes" or "No", "Agree" or "Disagree" then the results could not have captured the variability of the answers. For this study, we have tried to combine the open-end questions with the closed-ended ones (rank questions) while putting more emphasis on the first type of answers. All the closed-ended questions were followed by a politely request for the interviewee from our side to briefly comment the answer. This helped explained the answers and ensured that all the data captured had a high degree of sensitivity. Furthermore, during the whole interview process, additional questions were asked to test the depth of the answers.

4 EMPIRICAL FINDINGS - THE CASE OF VCC PURCHASING DEPARTMENT

The purpose of this chapter is to describe the empirical findings based on the theoretical framework described in Chapter 2. The chapter starts with the background information regarding the global automotive market, continues with a description on Volvo Cars and the occupation of a Volvo buyer. The chapter ends with the competence gaps identified in the department based on the four dimensions.

4.1 The market background information

The car industry is one of the largest and most complex industries nowadays strongly embedded not only in the global trends but also in the local business environments which makes it an interesting case study industry in international business and trade.

During the last years, the dynamics of the production and sales of passenger cars has changed significantly showing a growing pattern of the car industry moving away from North America and Western Europe towards Asia but also to Eastern Europe. Since 2005, the sales in EU27 and NAFTA have significantly decreased in relative terms while the non-EU Eastern European countries, Central and South America and also Asian markets have registered a tremendous growth of 55%, 93% and 108% respectively in passenger car sales (OICA, 2013). As a response, the passenger car industry has steadily moved its sourcing and production towards the Eastern world. The market has proven to be highly competitive putting further pressure on the prices and in particular on the sourcing process (Volvo Presentation, 2013). The biggest winner on the market seems to be the China which increased its passenger car production with more than 400% from approx. 3 in 2005 to 15.5 million vehicles in 2012 (OICA, 2013).

Such market development emphasizes the need to further improve the purchasing capabilities of the car companies from suppliers located in the Eastern emerging markets and especially from China. China has steadily become the powertrain for automobile companies and the next big challenge within the overall global car industry especially in component sourcing. In order to better perform on the global market, the car companies have to reorganize their supplier base and somehow move it more towards the emerging countries to further adapt to the increased price pressures.

4.2 Volvo Car Corporation

Volvo Cars Corporation (hereby referred to as “Volvo” or “VCC”) is a Swedish automobile company founded in 1927 in Gothenburg which manufactures and markets a range of premium passenger cars. The company was initially an integral part of the Swedish ball bearing multinational SKF up until 1935 when Volvo AB got listed on the Swedish stock market. In 1999, Volvo AB sold its passenger car division, Volvo Cars, to the American Ford Motor Company and kept

Source: www.volvocars.com

only the commercial vehicles such as the Volvo trucks and busses. Volvo Cars was then incorporated in Ford's Premier Automobile Group and until 2010 operated from Gothenburg, despite the American ownership. In 2010, after 10 years from the Ford acquisition, the company got sold once again, this time to the Chinese Zhejiang Geely Holding Group ("Geely"). Geely is one of the largest Chinese car manufacturers headquartered in Hangzhou, China. The company was founded in 1986 grew exponentially since then to reach 17,695 employees (Geely Interim Report, 2012) and 2.61 billion EUR in 2011 (Geely Annual Report, 2011; exchange rate used: 1RMB = 0.124 EUR).

The acquisition automatically made China Volvo Cars' second home market and so a memorandum of understanding was agreed upon to transfer technology and to further collaborate on strategic projects to strengthen Volvo's and as well Geely's competitiveness on the market (Geely Interim Report, 2012). In the same year, Volvo created a second global center in Shanghai to complement the one in Gothenburg.

The current goals of the company have been grouped under the name "Shape 2020" and are quite challenging (Volvo presentation, 2012a). By 2020, the entire Volvo group aims to:

- Provide cars people want
- Sell over 800,000 vehicles globally
- Have a top tier luxury auto brand perception
- Deliver a top car industry return on invested capital
- Be the employer of choice

Despite the fact that the three largest sales markets of Volvo have so far been, in order, the United States of America, Sweden and China (Volvo Financial Report, 2012), its supplier base is predominantly located within the European continent (see below *Table 2*).

In order to reach its corporate objectives, Volvo is adapting its sourcing strategy by supplying more and more from the emerging markets, especially from China. Overall, from the sourcing perspective, Volvo aims at increasing the share of total sourcing from China from 3% in 2012 to 25%and localize up to 85-90% of the content by 2020 (Volvo Presentation, 2012a). In order to accomplish such goals, the Volvo Purchasing Organization has several smaller goals for the years to come:

Table 2. Main supplier countries in 2011

Ranking	%	Country
1	27.72	Belgium
2	22.68	Germany
3	18.39	Sweden
4	7.60	United Kingdom
5	3.57	France
6	3.29	Poland
7	3.18	Spain
8	2.70	Czech Republic
9	1.97	Turkey
10	1.73	Slovak Republic
-	7.17	Others

Source: Volvo Presentation (2012a)

- To always purchase materials and services on time, with the correct quantity, according to the quality specifications and corporate terms and conditions towards the suppliers;

- To decrease the overall costs with purchasing with a certain percentage each year (cost savings);
- To decrease the overall costs within purchasing which are not directly linked to the materials e.g. cost avoidance, decrease the amount of costs paid as claims to suppliers etc.(other cost savings);
- To reorganize the supplier base towards emerging markets (only for those components for which this is possible to attain) while keeping a strategic focus on the overall supplier base;
- To further improve the sourcing capabilities within the department (VCC Interviews, 2013).

4.2.1 Direct Material Purchasing Department

Volvo Cars' organizational structure is rather flat compared to other transnational companies. The company follows the general Swedish structures of decentralization. Overall, there are approximately 7 hierarchical levels between the employees and the top management.

The number of Volvo employees globally is approximately 21,000 out of which around 70% are located in Sweden (Volvo Financial Report, 2012). The Global Purchasing Organization has approx. 650 employees out of which approx. 400 are located in the Gothenburg office, 200 in Shanghai, the rest being distributed among Prague and Malaysia offices (VCC Interviews, 2013). Despite the fact that it is split between locations, the whole department is following the one single Global Sourcing Strategy to combine volume and reduce investments. The department's day to day work consists in further developing and optimizing the global supply base for all Volvo's plants and for all global operations that are somehow connected with component supply (Volvo Presentation, 2012b).

The Global Purchasing Department in Gothenburg is as old as the company itself and has always been based in the headquarters in Sweden. The Global Purchasing Department in Shanghai is about 3 years old; it is a young organization on a rapidly growing car market. The sourcing capabilities of VCC China play a crucial role complementary to the center in Gothenburg in supporting the company's global strategic purchasing and distribution. In order to further grow globally, VCC has to find efficient ways to leverage the capabilities residing in both locations to support the company's global development and strategy.

The Global Purchase Organization is split in two, depending on the extent the products and services which are supplied contribute to the car production: the Indirect and the Direct Material organization. The Indirect Material organization is purchasing machineries, tools, test equipment and different types of services (e.g. logistics packaging warehousing marketing and advertising services information technology and communication etcetera) that help indirectly the production of cars and support the commercialization of them. On the other hand, the Direct Material organization is focused on supplying materials and services that go directly in the production of cars such as: upholstery, brakes, wheels, electrical systems, engine and transmissions systems, cooling and fuel systems, aluminum casting, pistons systems etcetera.

The Direct Material Organization consists of three sub-departments: The Powertrain Department, the Electrical and Chassis Department and the Interior & Exterior Department. Overall, the organization has approx. 178 employees which are divided between the Gothenburg and the Shanghai offices (see below *Table 3* and *4* from below). As mentioned before, this paper will focus only on the first two sub-departments which follow the global geographical division between the two locations.

Table 3. Volvo employees distribution in Volvo

Total Employees	21 000 employees				
	Out of which:				
	Purchasing Organization	650 employees			
		Out of which:			
		Direct Material Organization	178 employees		
			Interior and Exterior Dept.	24 employees	
			Power Train Dept.	**69 employees**	Interviewees have been selected from here
			Electrical and Chassis Dept.	**85 employees**	

Source: Data based on different Volvo Internal Materials (2013)

Table 4. Volvo employees distribution in Power train and Electrical & Chassis Departments

Department	**Total**	**Out of which:**		
		Managers	**Analysts and assistants**	**Buyers**
Power Train Dept.	69	11	3	55 = 42 in Gothenburg and 13 in Shanghai
Electrical and Chassis Dept.	85	14	3	68 = 49 in Gothenburg and 19 in Shanghai

Source: Data based on different Volvo Internal Materials (2013)

Both centers act as one single organization despite the geographical distance. Generally speaking, each team is split between the two centers and has two managers, one located in Gothenburg and the other one in Shanghai, both working tightly together and pursuing the same team goals. That means that an employee usually has two managers, a local one and one situated in the other location. The manager located in the same center is usually the one that connects the most with the employees located in the same center. All teams have global responsibility in supplying different car components, depending on their department. Following the organizational structure, there sometimes might be that just one or two employees are located in the *other* organization in which case it is considered that a management role in the *other* location it might not be necessary. As such, we saw two examples of teams having just one employee in Gothenburg and the rest of the team in Shanghai (including the only manager) and the other way around, one employee in Shanghai and the rest of the team (including the only manager) in Gothenburg.

4.2.2 Volvo Cars Purchasing Academy

The Purchasing Academy is a sub-department within the Global Purchasing Organization whose main goal is to improve the purchasing capabilities level in the entire Volvo Global

Purchasing Organization. The means through which it achieves its goals is through planning and organizing activities to support professional development such as different trainings and courses.

The concept of the Volvo Purchasing Academy is rather new. The department has been created in 2012 as a response to a growing need to help improve and better synchronize the capabilities between the two purchasing centers in Gothenburg and Shanghai.

4.2.3 The HR recruiting process for buyers

When assessing capabilities and capability gaps, it is important to know how the DM buyers from each organization got recruited. Since the job descriptions for buyers are similar in the two locations the recruitment process might indicate a reason why possible capability gaps might appear in any group of buyers.

Each organization has a Human Resources team (HR) handling all activities associated with the recruitment human resources development and pensions and additional benefits. Both HR teams are part of the Volvo global HR department and follow same corporate HR policy.

The HR Recruiting Process in the organization from Shanghai

The Human Resources Department within Volvo Cars China is the one that is managing all the recruiting process for the open positions within the Volvo Purchasing Department. There are generally four channels through which new buyers are recruited:

- the VCC Careers website in China;
- the VCC internal website advertising open positions to all the employees;
- two local recruiting websites;
- headhunters.

In general there are approximately 110 applicants for a direct material buyer position out of which around 10 might originate from internal applications. It is important to keep in mind that these numbers fluctuate depending on, among others, the period of the year when the recruitment is done.

In order to be a buyer in the Shanghai office, the applicants have to first demonstrate that they speak fluent English. The recruitment officers test the candidates' English skills by calling them and speaking in English, asking to whom they reported before and what language they usually used in their previous job. The future manager will have also the opportunity to do the same on-the-phone English test. Secondly the applicants have to have at least 5 years of experience from within the auto industry (VCC Interviews, 2013). Priority is given to applicants to have worked before in other OEMs (due to the Chinese market characteristics these are usually joint ventures between Chinese and Western companies) then to the ones who have experience in tier one suppliers to car OEMs and lastly to others with another type of experience also within the auto market. The third criterion is motivation including the 5 year career plans and salary expectations. A bachelor degree is also required, but there is no preference on the major. International experience outside China might be a

plus but it is not a must. It is worth noting that the office in Shanghai does not recruit recent graduates (ibid).

The group of buyers from Shanghai taken for this research study confirms Volvo's human resources policy in China. The buyers have a diverse education background, two of them having technical education and the other four business social sciences. From the experience point of view, all the buyers interviewed had between 7 and 11 years of experience in the auto industry before joining Volvo, well above the 5 years minimum experience required to apply for a buyer position in the company. Half of the chosen buyers have worked as buyers for other OEMs before joining Volvo and other half within sales for tier one auto suppliers.

The HR Recruiting Process in the organization from Gothenburg

The Volvo organization from Gothenburg has its own HR department, but unlike the one in Shanghai, it does not perform any recruiting activities for the buyer positions. The HR team in Gothenburg has outsourced the entire recruitment to an external company. Keeping this in mind, the main channels for recruiting DM buyers in Gothenburg are:

- the VCC Careers website in Sweden;
- the VCC internal website advertising open positions to all the employees;
- Through an external recruitment agency that is advertising the open positions on two global websites and nine local ones.

The large majority of the applications came from the external agency. In general there can be between 20 and 100 applicants for a buyer position, with the majority of job announces getting around 60 applicants (VCC Interviews, 2013).

The profile of the buyer is set up by the HR Department together with the Purchasing team manager. The agency is then receiving the profile and starts the recruitment process. As opposite to the recruitment process in Shanghai, the recruiting profile of the buyers varies. Looking at a number of old job announces it can be seen that the requirements for a DM buyer have been:

- required to have 1 to 3 years of experience of work, preferably in purchasing, sales or financial but not necessarily;
- required to have a university degree, preferably in commerce, business or technical but not necessarily;
- required to be fluent in English;
- required, sometimes preferred, to be fluent in Swedish;

The motivation letter does play an important role in the recruiting process.

During the interview process, besides the regular interview questions, the candidates' English capabilities are tested. There are also two other tests: a personality one and a logical test that the candidates have to take to prove themselves fit for the job.

In general it has not been difficult to find candidates fulfilling the requirements. During time, two of the above requirements proved to be more challenging than the others: experience in the automobile industry and the capability to speak Swedish fluently. In some cases, the products that are sourced within the Volvo Direct Material department are automobile specific, such as powertrain. If the buyer profile requires candidates to have experience in a related domain connected with power train as an example, it can be difficult to find a good candidate to match the above requirements. This contrasts the situation where the buyer has to have experience related to upholstery, which even if it is auto related, it is also textile related which makes it easier to find good candidates. In regards to the Swedish language requirement, even if the recruitment is done globally, the candidates that are passing to the next stage in the recruiting process have to have, in the large majority of cases, the ability to speak Swedish. This suggests that the recruitment process is done, more or less, from within national borders.

After reviewing HR recruiting processes in both organizations, it can be noticed that in both locations the same recruiting criteria are applied even if the recruiting is done independent from one another. The pool of professionals from where potential buyers are recruited is Sweden for the Gothenburg office and China for the Shanghai office. All buyers have to have a high level competence in speaking English at a business level. The education background of the buyers is more or less technical or commercial for both centers. There are three major differences in their recruiting process that come not from Volvo itself but from the business environment surrounding the two organizations:

1. The recruited buyers in China are mostly coming from outside the company. This is due mainly to the fact that the Shanghai center is relatively new in comparison with the Gothenburg one.
2. As opposite to the Shanghai center, the Gothenburg organization established partnerships with the local universities from Sweden (Chalmers and Gothenburg University). The center uses its embeddedness in the local university environment to recruit fresh graduates.
3. As opposite to the Gothenburg office, which is located on a national market where only three other automotive companies are present (Volvo AB, Scania AB both specialized in heavy trucks and buses and Saab Car corporation which went bankrupt in 2011), the Shanghai office is located in a highly competitive market with plenty other car makers. It is worth noting that overall in China there are over 100 car makers (Forbes, 2013) and even more car component suppliers which provides the Shanghai office with buyers having potentially different capabilities and professional experiences.

It is reasonable to expect that, despite the similar recruiting criteria, the recruited buyers from the two organizations might have different type of gaps in their buying capabilities.

Once recruited, all buyers are usually signed up for an initial training module. Since in Shanghai there are more new employees, the HR office in Shanghai is organizing initial

trainings modules regularly once in two or three months so all employees have the chance to participate. On the other hand, the number of new employees in the Gothenburg office is much lower and buyers are usually recruited from inside the organization. This affects the initial trainings in a manner that sometimes is seen as not needed and organized less often. This has a negative impact on the new employees coming from outside the company with no OEM work experience.

4.2.4 The occupation of a Volvo Direct Material buyer

All Volvo buyers work within the VCC Purchasing organization and have as the main goal to purchase goods and services for the company based on the internal needs and following the global targets set by the corporate management. While doing this, the buyers have to set up maintain and develop a competitive supplier base that is reflecting the company's long term goal and vision (VCC, 2013a).

The overall car industry characteristics are strongly influencing the buyers' day to day work. As such depending on the car production cycles, the buyers can perform several tasks more or less regularly:

- Search for potential suppliers; perform supplier evaluation and selection;
- Conduct negotiations and insure that the optimal cost level is reached according to the overall corporate strategy;
- Sign legal agreements to implement purchasing strategies;
- Seek constant improvements to increase the sourcing efficiency;
- Work cross-functionally to maximize synergies;
- Act as the primary point of contact of the company in relation with its supplier base;
- Perform the required administrative work associated with the sourcing activities;

Depending on the extent of the level of responsibilities there are two main types of DM buyers: the **commodity buyers** and the **product buyers**.

The **commodity buyers'** main role and function is to develop and maintain a competitive supplier base from a global view perspective. Each commodity buyer is responsible for one or several commodities for which the buyer has to create an (multi) annual business plan and strategy. In order to do that, the buyer has to carry out a market analysis and benchmarking studies together with a market analysis team and to further establish a strategic action plan. The commodity buyer usually has a leadership role within his purchasing team and is the main person responsible for supplier base development and the corresponding negotiations. Sometimes a commodity buyer works together with few product buyers to help deliver the company's global strategy for a given set of commodities (VCC, 2013a).

The **product buyers'** role can be a support role for the commodity buyers but most of the times are a complementary one. The product buyers are more responsible for the sourcing activities than for the actual planning. The day to day work includes: requesting for quotations from potential suppliers, negotiating sourcing agreements, issuing purchase orders, taking the necessary action for any changes that might occur to the requested product

design, establishing action plans and contributing on pre-requisites for development of future suppliers. Depending on the product that is sourced its global context and supplier base the product buyer can have either more or less regional or global responsibilities. Sometimes it can much resemble a commodity buyer's responsibilities (VCC, 2013a). As a rule, a buyer's job name or corporate description of his job is not truly reflecting the actual job responsibilities. More often than not buyers have responsibilities that are a mixed version of the two descriptions above.

Regardless of which position the buyers have, either product or commodity, in order to perform they have to act as a bridge between several departments: the Supplier Quality Management Department (SQM), the Research and Development department (R&D), the Cost Estimation Department (CE), the Logistics Department, the Financial Department etcetera.

4.3 The knowledge and skills dimension

First of all, based on our findings, it is apparently to see that the purchasers who have a commerce education background, regardless if they are from Gothenburg or Shanghai, reflect a knowledge gap regarding technical understanding about car and car components in comparison to those that have a technical education. Five buyers from the Shanghai office and three from Gothenburg have been characterized as needing improvement in the car and car component competence. This has sometimes been declared by the buyers themselves, but it was most frequently emphasized by their managers and outside raters. As purchasers, they concentrate more on the commercial activities rather than technical knowledge. As buyer "I" from Shanghai mentioned "*If there are two companies that can both provide us with the same product but actually their material and technology are a little bit different, then their price will be different. So if I can discover these differences in detail (…) it would be better. (…) you have to know the differences between the suppliers, right? What's the reason behind the different prices? (…) Everything is relying on the product, if you have more knowledge about the component (…), it will help you a lot*". For example, they need to know more about the function and structure of the products, technology of the parts, what the products use for, what kind of technology are using in the production, etc.. In addition, a colleague from Gothenburg mentioned that the buyers in Shanghai usually focus more on the engine itself instead of the knowledge about the assembly of the whole vehicle.

VCC, as a technology-intensive enterprise, empowers R&D sector more than the other parts. Because of this, the buyers usually rely on engineers to learn about the high-tech knowledge behind the components. However, from the observations during the study, this depends to a large extent on the motivation of the buyers personally. Besides the components, knowledge about manufacturing technology and processes is another area that has been recognized as needing improvement. "*If you have the technical background or manufacturing knowledge, it would be easier when you talk about the commercial issues (...) If you understand the commodity very well, you know the technical requirements and manufacturing processes, the effect of your negotiation with supplier will turn out to be better. Otherwise, the supplier could tell you something that you don't know, then you would not be able to judge, to what*

extent this thing could influence the quality, processing technology, or usage of your commodity" (SQM outside rater "I").

Secondly, knowledge about the industry and their own commodity also needs to be strengthened for buyers from both locations. All buyers mentioned the importance of having a deep knowledge about each of their component markets. The outside raters mentioned in all the buyers' cases at least one aspect that could be improved within their industry and commodity overall knowledge. The feedback usually mentioned the market situation related to the commodity and industry and the understanding of the connection to VCC commodities. Besides that, detailed knowledge regarding suppliers and general industry is required, not only for the current but also potential suppliers, their strengths and weaknesses as well their competitive positions within their overall markets. From the managers' perspective, knowledge about suppliers is particularly significant for the buyers in Shanghai because they expect the buyers in Shanghai to have more responsibility for the supplier base in China than the buyers in Gothenburg. This implies a deeper knowledge about both the current suppliers and potential suppliers, for instance, what are the characteristics of different suppliers in China, including joint ventures and local companies, R&D capacity, production facilities etcetera.

In order to obtain the knowledge mentioned above, according to our interviewees, one of the best ways is to visit the suppliers. However, VCC, as all automotive companies, has certain financial limitations for visiting the suppliers, especially for those suppliers who are located far away. Even if the same financial restrictions apply to both centers, the buyers in Shanghai seem to be able to travel more within China due to the lower travel expenses. All buyers from both locations admitted that the financial restrictions impede them to travel to suppliers as often as they would like to. Such restrictions impact on the business traveling from Gothenburg to the Asian supplier plants and from Shanghai to the European supplier plants. Besides the financial issues, the buyer E highlighted that *"you must have a very good business case to make sure that you can achieve positive results for the company like reducing cost from visiting them. Then you can apply to your mangers, otherwise, you can't just go there for learning*."

Additionally, environmental knowledge is the third common gap for both locations mentioned in the profiles of 4 buyers from Gothenburg and 5 from Shanghai. The majority of the buyers said that they do not really know about Volvo's environmental policy, even though the Environment is one of the core values for the company. In addition, the majority of the managers confessed that the environment is not a topic in purchasing in general. It is not a key element for selecting suppliers as price, quality and productivity are. For the buyers, environmental awareness is related to just ticking the term ISO 14001 in the box for the suppliers, nothing more. "*Never heard about it, I don't know what is ISO 14001, I never discuss it with the suppliers. I guess it has to be somewhere this type of information (…) It might be a work for SQM, not for me*" (buyer "F" from Gothenburg). Even if the environmental competence of the buyers is "important to have" in accordance to the Volvo buyer competence profile, the buyers do not have knowledge about it. "*Environment is very*

important to focus on Volvo. But then when we source, this is not a key performance indicator in purchasing. It is required but this is not the key to be honest, we are not evaluating our performance on how good we reach an environmental level. We are more evaluated on how much cost saving we have. So on that side I mean, of course, people will follow the company policy" (manager "H").

To be more specifically, from the Chinese employees' pool, Volvo's strategy is not that clear for them, in this case, we are referring this as relevant to the business plan and strategies. This was pointed out by four out of six buyers in Shanghai. After mentioning that corporate strategy and asked what exactly is not that well known, buyer "H" mentioned: "*When we are trying to develop or design a car, what is the major strategy that we are going to maintain and try to introduce to our end-customers? The company has been in Gothenburg for 86 years, and then we came to the Chinese market. We have not been so successful so far, frankly speaking. Especially compared to some of our competitors (...) So it's very important for us, and for most of the Chinese employees to understand what's the major spirit or the strategy for Volvo Cars.*" In addition to a general targets that apply for everyone such as Shape 2020, all three buyers mentioned that they would prefer to know more strategic details on what the buyers can do to accomplish those general goals.

Regarding the sources of knowledge and skills, all buyers in Shanghai mentioned to count more on the external environment, which means their personal contacts, friends, suppliers and also on their previous experience in other OEMs and car-component-suppliers. On the other hand, 5 out of 6 buyers from Gothenburg stated to rely more on knowledge from inside the company, which consists of their managers, senior colleagues and on the IT systems. This is one of the biggest differences from the two organizations.

Another difference of capability gaps lies in the understanding about multi markets. In Shanghai, the majorities of the employees were usually more concerned about the local market and only dealt with the local businesses. Yet, when their role turned out to be a global responsibility, they liked to know more about how to do business with Europeans. Three of the buyers in Shanghai were characterized as needing more knowledge about how to handle suppliers from different cultures outside China. In two cases, the buyers themselves stated that they would need additional knowledge about European, especially German culture, and their way of doing business. This was also confirmed by two of the local managers. In the third case, the buyer did not mention it; however two of his colleagues have characterized him as lacking multimarket cultural knowledge and competence. German culture has been seen as being, in many ways, different from the Chinese culture. "*I would like to know more about the German culture. Because their way of doing business is very different and I cannot understand it fully*" (buyer "K"). The multicultural competence was brought up in the discussion by the interviewees because a large majority of the car-component suppliers have German origins even if located in China. This has sometimes created challenges in the international negotiations. On the contrary, the buyers from Gothenburg were more interested in the knowledge about the Chinese market, involving both automotive and supplier industry. With the increasingly tense of competition in international business, they needed to enhance

their knowledge base from traditional European market to the new and emerging markets such as China. The new goal of Volvo of emphasizing the low cost countries in the last 3 years has changed the focus of the buyers from West to East and put more competence requirements on them. The lack of experience in sourcing from China and the knowledge gap about the Chinese supplier market has been noted by all but one buyer in Gothenburg. "*I would like to know more about how to do business in China and also in the other Asian countries around China, like South East Asia. We do not have knowledge about them because we used to focus on the European supplier market. So far, I talked with my Chinese colleagues but we need to find a way to know more about the new emerging markets.*" (buyer "B").

Furthermore, most of the buyers in Shanghai showed to have a strong awareness of the differences in negotiations with European suppliers. Reviewing the list of trainings VCC is offering to buyers, it can be seen that all buyers from both locations are trained in fact-based negotiations. All the buyers in Shanghai, who have global responsibilities, were eager to know more about negotiations with European suppliers, to understand their custom and taking actions correspondingly. Yet, two buyers that have been part of the negotiations trainings had another opinion: "*We are trained by the fact based negotiation, which is good, but it is not useful on the Chinese market. I can see such big differences between Swedish and Chinese when it comes to the negotiation with suppliers. I prefer to have some Chinese communicating skills, the Chinese way, no matter where are the suppliers coming from, local companies or foreign companies, as long as it's located in China, it must be influenced by the Chinese culture"(buyer "J").* Two of the managers also mentioned the necessity to offer trainings on negotiations that are less fact-based and can be used when negotiating with Chinese suppliers.

The next capability need for the employees in Shanghai is reflected in the competence of applying lean deployment for purchasing. The Lean concept was generally viewed as a relatively new concept. Two of the managers stated that this is mostly because the concept arrived in China later than it did in Europe. Besides this, Volvo currently does not have a lean team supporting the Shanghai organization. All Volvo's lean experts are located at the main production plant which is situated in Gothenburg, close to the purchasing organization. Generally speaking, employees in Gothenburg mentioned to be more aware of the lean concept and process than their colleagues in Shanghai. Two of them said they had training on lean deployment with their colleagues from the factory.

One of the competences that was mentioned it could be improved by the employees in Gothenburg was the legal one. Three out of six buyers mentioned their legal competences as needing improvement. All of them mentioned going to the legal department for support. However, one of them underlined the importance of having legal competence as a buyer: "*it would be good to know more law. The emails that I am sending can be seen as commitments to what Volvo will write in the (future) supplier contract. If something goes wrong, they could use my emails against us*" (buyer "F"). In regards to the origins of such a competence gap, none of the buyers in Gothenburg had either formal legal education or experience. Their legal

knowledge was coming only from working experience and internal trainings provided by Volvo.

4.4 The technical systems dimension

It is well recognized that a MNC stores its accumulated knowledge in its technical (applications, databases, technical drawings etcetera) and managerial systems (best practices, routines, management structures, different informal corporate habits on how to do things etcetera).

The entire Global Purchasing Department is supported by a highly complex IT system that stores the company's knowledge acquired during time across all of its worldwide operations. The information system is made up by thirteen applications and databases that can be accessed and updated worldwide from any of the companies' locations.

The databases contain historical information regarding the company's global supplier base (requests for quotations, contracts, purchasing orders, delivery times, etcetera), information regarding Volvo's own production sites and its component needs during time, changes in production lines, development sketches regarding high technologic components that go into production, component test results, car breakdowns data etcetera.

The most important applications that are used by the buyers are:

- BMS (Business Management System): main application describing all the processes and overall operations within the company. In case buyers lack knowledge regarding how a certain process or issue should be handled, they access this system and check for more information.
- SI+ (System Inköp Plus): main system that the buyers use to order components from the supplier base. The ordering system was build more than 20 years ago and it had one major upgrade since, this is where the "+" is coming from.
- CBP (Commodity Business Plan): a tool used by the buyer in collaboration with the CE, TVM and R&D departments. It is the CE department's main tool for cost savings. This system first gets the input from the R&D department, after that it goes to the CE, TVM and the buyers for further analysis, processing and component purchasing.
- PURS (Register Purchasing System): the buyers use this database to access all the document archives;
- VSIM (Volvo Supplier Improvement Management): the main application that is accessed by the suppliers, the SQM team and also by the buyers. This application contains valuable knowledge regarding the suppliers' plants, quality certificates, and all documents regarding the produced quality at the suppliers site;
- PARMA: this database is accessed by the buyers to find out more details regarding the supplier base such as names, contact details, and plants;
- NPNL (part of the logistics system): an application that is connected directly to the Volvo production plants. This is the first system when quality issues appear at the delivery of components from the suppliers' side. This system is also connected to the supplier database and is informing the supplier immediately about the quality issues.

The buyers use this application to check the possible quality issues interfering in the supply chain to the Volvo production plants.

Besides these, there are six more applications, however, we have presented only the seven most used ones.

The company's suppliers and Volvo employees within the entire global purchasing department have different levels of access to them depending on their role in the purchasing chain. The buyer, in particular, is the main person coordinating the buying activities and strategy; as such he has access to most of them. Most of the employees mentioned during the interviews: "*the buyer is the spider in the web*" at Volvo. Considering the day to day activities and requirements from a buyer, the buyer is required to know the system very good, well above the basic level so that he can take advantage of all knowledge and enhance his competences when sourcing globally. It is worth noting that both centers use the same system in the same way, and the buyers have the same type of access to the same data.

The large majority of the interviewees in both centers, regardless if they were buyers or outside raters, agreed that the technical systems mostly act as a barrier and fail to enhance the buyers' competences. The main problem seems to be not the quality of the data provided by the systems but the fact that the purchasing information is dispersed across many applications and databases, and the time that is necessary to access and compile the data in a form that it can then be used, is usually longer than the employees expect.

The buyer "F" in Gothenburg commented on the technical systems he is using every day: "(the information system) *is very bad, BMS is worthless, I would like to see the person who is using it.* The buyer "C" in Gothenburg commented: "*You don't even want to know about our systems, they are so … no, I am not using anything else than the software from Volvo during my day to day work*", after being asked if information is missing, the buyer continues and clarifies "*is not the type of information, I guess you can find most of the information you need. The problem is that you need to have everything in one place. They try to collect data so that different departments can then analyze. We are working with so many different systems so people from so many different departments come to you; they want the same data so you need to do the same work over and over again. It should be enough to have one system that everybody shares and you get access to the parts that you need to you know is able to handle your work. There is probably a lot of data that maybe is sensitive and maybe they do not want everybody at Volvo to have access to it. But it should be one and the same system!* ". Asked to rank the information system based on its performance and support in his day to day job from 1 = "*Useless*" to 10 = "*Excellent help*", a third Swedish buyer replies: "*2, 3 it is very basic. You just put in the price and that's it. Pretty much.*" (Suggesting that it is just an administrative tool, it is not compiling or analyzing different data). The CE outside rater "F" confesses how difficult it is to use it "*it's a system that you are not able to use without looking at the instructions first; it looks like in the 1980s*". The buyer "I" in Shanghai further

confirms "*It is DOS software*[1]*. It's hard to use, you have to write commands, it is very very hard to operate, this* (competence) *has to be trained for sure*" and "*I think generally our tools and our systems are not good enough, we have very limited tools to use as buyers, I don't have a very good benchmarking system*".

The process of finding relevant data in the systems seemed cumbersome for both groups of buyers. Taking into consideration the evaluation of the IT systems dependency from the interviews, it seems that it creates slightly more competence gaps for the buyers in Gothenburg since most Swedish employees admitted to rely more on the systems than the Chinese admitted to do.

It was interesting to notice that both groups of buyers found different ways to somehow circumvent the competence gaps created by the usage of technical systems. Half of the buyers in Gothenburg said that they turn more for support and knowledge towards their more experienced colleagues and seem to have developed more symbiotic relationships between them and their cross functional colleagues. The buyer "A" in Gothenburg commented on the knowledge that he could access through the technical systems: "*Volvo's knowledge is a lot from education, 95% of the knowledge resides in the people not BMS*".

All the buyers in Shanghai, on the other hand, mentioned that they have turned more towards the sources of knowledge residing outside the company such as the suppliers: "*I pay more attention to interpersonal communication; it's useless to depend on such tools or system. I am now more dependent on my mobile phone. For example, if I have a very good relation with the sales* (representatives) *from suppliers and we have a mutual trust in each other, they will tell me a lot*" (buyer "J"). Buyer "I" from Shanghai suggested hiring a person just to access the data that they need in the corporate systems: "*We need two key users here, they don't need to responsible for any other work, just focus on the system and to operate on it proficiently or even help the buyers with orders. This would improve our working efficiency very much; we being 300 persons just need one key user. We don't have this kind of person now. Every time when we work with this DOS system, I feel depressed, too many functions, tooling, PPAP*[2]*, and others, very complex...*"

4.5 The managerial systems dimension

From the HRM perspective, both centers have the same policies that support the knowledge exchange between different employees and among the two centers. The largest HR programs supporting have been:

- Between 2011 and 2012, a Matched Pair System has been used globally to facilitate knowledge exchange between the Gothenburg and the Shanghai centers, with the emphasis from Gothenburg to Shanghai. The system has been proven to be a success,

[1] DOS comes from Disk Operating System, a system that has been popular between 1980 and 1995.
[2] PPAP means Production Part Approval Process, a term used mostly in the automotive supply chain to create confidence between the car component suppliers and the OEMs. Following the PPAP, the supplier proves that the components that are supplied are corresponding with the requirements of the OEM as their customer.

however, as it required substantial resources from the corporate side, the program ended in 2012 (Larsson and Yu, 2012).

- In 2012, the Matched Pair System continued with an exchange program between the employees of the two centers. As such, few buyers, each type other buyers, are exchanged regularly for a period of three months between the centers. The buyers are changing only their working location for three consecutive months. During that time, they have the same job responsibilities and projects to work on. This facilitates knowledge exchange between the centers by encouraging networking and at the same time educating informally the employees about the social and cultural differences between the two global centers.
- Each buyer has a one-on-one meeting with his manager each week where different issues or challenges can be discussed, regardless if they exist or not. This ensures that the buyer has a way to communicate with the management regularly and also to socialize one-to-one. It also precludes the situation in which one of them is too busy to be able to take time to discuss the purchasing activities with the other.

In both centers, Gothenburg and Shanghai, all buyers are located at the same floor in the same building with their SQM and CE colleagues to encourage socialization and minimize the time needed to travel to and from their offices. Since Volvo is a technology driven company, the R&D department is one of the largest and it needs its own large building, still it is always in the vicinity of the purchasing department.

Looking at the corporate working habits, it can be noticed that the buyer is required to have regular meetings with its colleagues from R&D, CE and also SQM to agree on each step of the sourcing process. The four are required to negotiate and agree on what is the most favorable way to supply components and chose the suppliers that fit the most. This best practice is rather unique among the OEMs and can sometimes be misleading for the buyers and not understood correctly. More specifically, in the Swedish organization, this shared responsibility on the sourcing process creates misunderstanding regarding in whose competence is to do a particular action that then reflected negatively on the buyers' competences. Sometimes the buyers took more responsibility on themselves: *"Sometimes, if a problem shows up you don't know it is my responsibility to solve this or maybe is one of the people in the cross function team. Maybe is their job. Sometimes just to make sure you do a good job, you take on too much. Many things maybe you should not be the person who handles them. (...) I think I have more responsibility than I should. It is hard to say (...) I enjoy it but I don't have time for everything else that I need to get better"* (buyer "C"). Some other times they took less. "*They* (the buyers) *need an understanding of the R&D department, how we work … it is a lack of understanding I think and 'over the wall' work like I do my job and then throw it over the wall to my neighbor"*(R&D outside rater "A")**.**

On the other hand, things seem to be different in the Shanghai organization. Keeping in mind that the buyers from Shanghai came from other OEMs or car-component-suppliers, they are using their experience in working within Volvo. They are working the same as they used to do in their former companies before Volvo. However, every organization has its own way to

conduct projects and collaborations. Three out of the six buyers felt that they do not really know how to manage a project in Volvo, in which step they should do what. From the outside raters' point of view, each buyer has his or her own way of working, which is different from person to person. Some of them do not really know how to organize and lead the related activities, Volvo's purchasing process and what kind of tools they can use in the purchasing procedure are not clear for the buyers in Shanghai.

For example, Volvo has the position of cost estimator (CE). Yet in most of the other OEMs, cost estimating is one of the main responsibilities of the buyers. None of the three buyers mentioned anything about the CE difference in roles. However for each of them, there was at least one outside rater that saw this difference between OEMs and mentioned it affecting the buyers' work within Volvo China. The outside rater "H" reflects on the buyer role in Volvo and comments: "*It is interesting because in Volvo you have separate departments*[3]*. In other OEMs the cost estimator and the buyer are the same, one person with two responsibilities. This is a unique feature in the purchasing organization, this is carried on from Ford, I am talking about the big purchasing organization*". Manager "I2" further explains "*If you compare a buyer role within Volvo to other Chinese companies, you can see that in the Chinese companies the buyer has more power. So the buyers in Shanghai were very confused, buyer "I" was one of them as well. <Why does the engineering care about what we are doing?> they saw that there is a wall between, if you compare with other Chinese companies it is a wall between them*". This made the buyers not take as much advantage of Volvo's organizational knowledge when it comes to cost estimating.

On this topic, more than half of the buyers in Shanghai mentioned that Volvo cannot make available the true production costs from the suppliers' sites and that the suppliers will always try to hide the true costs. Because of this, the general opinion in the Shanghai office was that the supplier negotiations should not over emphasize the cost estimations.

Regarding the Gothenburg office, a source affecting the buyers' competences was traced back to the initial trainings. Three out of the six buyers interviewed came from outside Volvo: one from another automotive company and two from outside the automotive industry. All three of them mentioned receiving basic initial training at the start of their careers in Volvo as buyers. The initial trainings consisted of an overall presentation of the company, SI+ system training and few hours meetings with the higher management. The two Swedish buyers who have been recruited from outside the automotive industry confessed feeling that they are lacking understanding about their position and limitations, as well as the overview about the company. This is because in their opinion they were not given a proper training regarding what they should do in their role when they first joined Volvo. *"No one came to me and said 'This is what we do, this is for sourcing process, this is the sub issues you should go through, this is like legal things which you should think of, this is what you should think of, this is something you need to know', I would say I'm kind of missing basic package about what does purchasing mean at Volvo."*(buyer "C"). In addition to these two buyers that

[3] Separate department means the CE department and various Direct Material Purchasing Departments.

confessed missing a good initial training, the large majority of the outside raters in Gothenburg mentioned that the initial trainings in their location should be improved. The situation is different in Shanghai, where most of the buyers were satisfied with the initial training they have received when they joined Volvo.

4.6 The values and norms dimension

One of the largest differences in values between the two offices is related to the organizational hierarchy and overall perspective on the purchasing function and the buyer occupation. Depending on their location, the influence of the same rather flat Volvo organization over the buyers was different.

All of the buyers from both locations mentioned that the buyer position is a good one to have; however the large majority mentioned it is more demanding than others because of the challenging cost targets and cross-functional collaborations.

In general, Volvo, through the HR and management teams is encouraging employees to suggest improvements for the overall process of purchasing. Half of the buyers' group in Shanghai mentioned to have the freedom to do such suggestions for improvements. The other half, however, mentioned to have limited or generally lower leverage when it comes to process improvement. *"I do not do that, I will not mention when I see something needs improvement. I don't have right to suggest it, I'm just a buyer" (buyer "J"). "We just follow the rules, we follow the BMS, we are working under the structure, under the policy of the company." (buyer "G").* Yet, regarding this last half of the group, most of their outside raters stated that they do have freedom to suggest improvements but the buyers themselves do not believe this to be within their responsibility. On the other hand, in the Gothenburg office, all of the buyers mentioned to have the opportunity to do such suggestions. However the majority of them emphasized that they need to have solid arguments supporting their proposals.

From the value perspective, four out of six buyers in Shanghai mentioned to value their personal connections the most, as opposite to get the same information from within Volvo from different databases. Asked where the buyer is getting most of his (her) knowledge from, the buyers in Shanghai answered: "(only) *friends*" (buyer "K"), "*the practice from my previous companies, my personal knowledge stock, and also through communication with my friends*" (buyer "J"), "*most of the knowledge about components is coming from suppliers*" (buyer "I"). It is worth mentioning that the buyers' behavior in the organization from Shanghai showed more interaction with their supplier base in comparison to the buyers from Gothenburg. Most of knowledge coming from the suppliers' side was based on with whom the buyers had a more personal relationship.

On the other hand, the buyers in Gothenburg took more advantage of the opportunities that the workplace proximity could offer them. More often than not, it was mentioned the tight collaboration with cross-functional employees for work purposes. The collaborations seemed so beneficial that sometimes buyers' competence gaps were covered up by their more-

experienced colleagues stepping in and helping out with the necessary. Furthermore, it helped transmit tacit knowledge residing in cross-functional teams that otherwise would be harder to reach. It is reasonable to believe that this might be a consequence of working in an organization with long standing history in the region. The buyers in Gothenburg mentioned seldom this, yet most of the outside raters from Gothenburg had a clearer perspective over this fact. "*They* (the buyers) *are asking the suppliers to come to Volvo because we normally want to negotiate with the supplier at a home base. You would always have the right people, maybe not in the meeting, but you can call them and they will be there in 2 to 5 minutes. So when you are negotiating with the supplier it is always good to do it in the home base, not out to the supplier because then you are out, you don't have the experts with you because maybe they were here. From that point of view, X* (a more experienced buyer colleague) *and buyer "A" have been a good team together. Maybe X has been like a mentor or something like that for buyer "A". I think the absolute best thing is what we call it knowledge transfer. When I am out travelling to my suppliers, I have brought them with me and also other Swedish colleagues. Next week I was supposed to go with a Chinese colleague but unfortunately we were not able to get approval for it so it is very good that we share our experience with buyers. My base knowledge is experience, you have to learn the job and to learn it by yourself is very very difficult* "(SQM outside rater "A").

It is worth noting that throughout the interviews, the general perspective of the buyers over their purchasing work was homogeneous within the Gothenburg office and the same in the Shanghai office. Yet, there have been several cases where the personality and individual values of the buyers significantly affected the outcome of their work. As an example, buyer "A" from the Gothenburg office was characterized by all three outside raters as "curious" which has helped the buyer acquire more knowledge throughout the buyer career in Volvo than other buyers would have in the same amount of time. In Shanghai, the buyer "G" has visited approx. 20 suppliers in the last year due to his determination and initiative which was also confirmed by his manager. Personality traits can not only encourage knowledge acquisition but also can create competence gaps as well. If a buyer does not have enough motivation to take initiative, then it can cause knowledge gaps and, consequently, affect the purchasing competences negatively. This is independent from the general national shared values or corporate (sub) culture.

5 COMPARATIVE ANALYSIS

The purpose of this chapter is to interpret the empirical findings through the theoretical lenses described in Chapter 2. The chapter starts with an overview of the competence gaps identified in the two locations and continues by explaining them with the help of the available research literature. The chapter ends by proposing one additional dimension that has proven to influence the personal competences of the employees.

Following Miles and Huberman (1994), when qualitative analysis is performed, the data analysis needs to be clarified by using data reduction, data display and conclusions drawing. The empirical data gathered during the research, has been sifted in accordance with the goal of the study, taking into consideration the theoretical framework displayed in Chapter 2. There were 12 significant competence gaps that were identified in both groups of employees. The data is further displayed in *Table 5 below*. Leonard-Barton's (1992) conceptualization of the competences' dimensions is used as an orientation to determine and analyze the competence needs in each location. The possible conclusions are drawn at the end of this chapter.

Table 5. Competence gaps identified in the two organizations

Common competence gaps for both locations		
Competence gaps	**Factors influencing the gaps**	**Dimension***
Related to a lack of knowledge in Industry and commodity knowledge	-lack of knowledge and skills	I
Related to a lack of car and car component knowledge	-lack of a deeper technical understanding -lack of technical education	I
Related to a lack of environmental knowledge within purchasing	-lack of knowledge and skills -partially induced by the MNC's practices	I
Related to a lack of system competence	-difficulty in accessing the knowledge stored in the IT systems -IT systems were not user friendly	I, II
Employees from the Shanghai office		
Competence gaps	**Factors influencing the gaps**	**Dimension***
Related to a lack of understanding of Lean deployment in purchasing	-lack of knowledge and skills -partially induced by the local business environment	I, V
Related to multi market knowledge and experience	-lack of knowledge and skills -lack of working experience -different values -partially induced by the Chinese business environment	I, III, IV, V
Related to a lack of understanding about Volvo business plan and strategies	-lack of knowledge -difference in values	I, IV
Related to disregarding facts and numbers in purchasing and negotiations and emphasizing more social relations	-lack of knowledge -difference in values	I, IV
Employees from the Gothenburg office		
Competence gaps	**Factors influencing the gaps**	**Dimension***
Related to a lack of knowledge in legal agreements connected with Legal Agreements	-lack of knowledge and skills -difference in values	I, IV
Related to a lack of knowledge in new and emerging markets	-lack of knowledge and skills	I
Related to a lack of ability to capture knowledge from outside the company	-lack of knowledge and skills -partially affected by corporate financial	I, IV, V

	restrictions -local business environment	
Related to disregarding social relations in purchasing and emphasizing more facts and numbers	-difference in values	IV

*I - Knowledge and skills dimension, II – Technical dimension, III – Managerial dimension, IV –Values and norms dimension, V – Business environment.

Source: Data compilation based on the interviews

Several competence gaps that were identified could not be framed totally in the dimensions of the model used because the interviewees pointed the reason of the gap to another dimension, a fifth one. This extra dimension is affecting the speed of the knowledge and skills transferred between employees and also the values and norms. The fifth dimension will be called the "*business environment"* and will be further described below.

5.1 The knowledge and skills dimension

The empirical findings show that knowledge assets play a crucial role in all activities, including purchasing in a high-tech driven organization as Volvo cars. The study confirms that an employee's knowledge stocks accumulated over times as well as its capability to recognize and absorb new knowledge and share it, is deeply influencing the purchasing competences. This is in line with former theoretical findings concerning knowledge management (Grant, 1996) that see the employees as key knowledge carriers within an organization. When one of these factors is failing, knowledge needs are created and competence gaps appear.

The core competences for an employee in purchasing are more about knowing the industry and commodity. These are also the general capability gaps for both organizations according to the empirical data. Generally speaking, this is related to the proximity of the knowledge origins, as Minbaeva (2007) argues that a close relationship between knowledge senders and receivers can benefit knowledge transfer. The industry knowledge of suppliers is lacking from the Swedish side, this is partly because that they cannot easily visit suppliers and the way they are working is more relying on technical systems rather than face-to-face or personal communication with partners. Furthermore, as stated by Chen and Lovvorn (2011), a lack of interaction negatively affects the company's performance and competence. On the other hand, a newly founded organization which is located far from the sources could be more problematic, for example, regarding understanding the company's strategy and plans, like the case in Shanghai, because the business plans and strategies are primarily originated from the HQ perspective (heritage?), such situation is in line with Makino (1996) viewpoint. In the literature, he added a third way of acquiring company knowledge: from the corporate headquarters, besides the two mentioned by Chang (1985). This is fully confirmed by observing that the Gothenburg organization which has the advantages of proximity to the HQ and production sites relies more on the inside company as a source to acquire knowledge and skills. Therefore, there is a limited supporting unit in the Chinese organization, which would to help those employees transfer knowledge through internal ways. For the case of the Gothenburg office, some of the capability gaps are covered by such proximity. In response to

this, the young organization acquires more knowledge from own experiences and other firms like suppliers or OEMs. Besides that, the proximity and frequent interaction with more experienced colleagues is also facilitating knowledge transfer, especially for tacit knowledge comparing to explicit knowledge (Chen and Lovvern, 2011). Another example stated that the Gothenburg office that is located near to the production has a lean team, and the members can help the buyers solve the lean problem. This gives the buyers from Sweden a much better understanding of lean deployment than the Shanghai office has. For the Chinese employees however, the lean knowledge is only available through the Swedish organization. The interaction is limited due to the long distance, thus, the only way of acquiring knowledge largely used in the Shanghai office is through external firms. Nonetheless, the Chinese business environment does not emphasize the Lean deployment as in Sweden. Therefore, all of the above explain how the knowledge management could generate the capability gaps.

In terms of the lack of multi-market knowledge, since an organization is becoming global, employees from both sides cannot only stay behind their original situation, but need to have a better understanding of each other's markets as well. In fact, both of organizations demonstrated an improvement needed for the knowledge about new markets. Lane (1998) confirms that organizational structure positively affect the absorptive capacity and organizational learning, while Minbaeva et al. (2003) conceptualize that employees' ability and motivation comprise of their absorptive capacity, and accordingly influence the inter-organizational knowledge transfer. According to the empirical findings, the buyers from both sides do have ability of knowing their adjacent markets; but their motivation for absorbing new market knowledge is low, this is partially because of the perceived inefficient structure and heavy workload. A similar situation regards the competence gap within legal domain within the Gothenburg office. In general, all of the buyers in Gothenburg said they receive a lot of support from their colleagues from the legal department. Even if the importance of legal competence above basic knowledge was widely acknowledged, the buyers were not that motivated to learn more. The same factors influenced them as the ones mentioned above: the perceived heavy workload and the comfort of having a team of colleagues lawyers always available to help out had decreased the motivation to absorb more knowledge, even if the buyer occupation would require more legal competence. The reason is in line with the statement of absorptive capacity (ibid).

Therefore, this directly results in a lower absorptive capacity and creates gaps of knowledge and capability in practice.

Within the global luxury car market, the knowledge associated with the recognition of high-technology advantages, is crucial. The technical knowledge within the car and car component competence increases the chance that the buyers recognize and take advantage of the new technologies on the market (Mitchell, 1989). The buyers having a commercial background in both locations showed less knowledge regarding the technical part of their components. This lack of a deeper technical competence has only been identified by the outside raters. Neither the buyers nor their managers showed to regard technical knowledge as important as the outside raters. Taking into consideration Drew's research (1999), it can be stated that the

buyers' knowledge gaps related to technology are connected to lower levels of awareness and knowledge from the buyers' side. Due to the 360-degrees feedback method, we could identify these competence gaps which would not have shown if only self-assessments would have been used. Consequently, the buyers with less technical knowledge have been recognized to need improvement when working with some cross-functional departments. Since the lack of technical knowledge is mostly due to the employees' commercial education, it can be stated that the source of this gap lies in the recruiting process.

Competence should be aligned with the strategy of the company in order to achieve competitive advantages (Leonard-Barton, 1992; Prahalad, 1994). In regard to the environmental competence, it relates to the strategy set out by the high level of management. Once the managers' considerations are not on the same level as the employees', the company as such creates the competence gaps through not being able to channel its own strategy down the organization. Thus, misunderstandings or insufficient communication between high level managers and employees could also bring some capability gaps, just as the purchaser and group managers do not pay attention to the environmental competence at all whereas the higher managers do.

5.2 The technical systems dimension

From the technical systems dimension perspective, both groups of employees confessed a lack in understanding the IT systems ("System Competence") which affected their productivity and competences. Impractical or inefficient technical systems can act as barriers for knowledge management across the MNC (Chua and Lam, 2005). In this case, sometimes, the buyers confessed to use less the system in the day to day purchasing due to the perceived difficulty in using it. In line with Hofstede's research findings (2013), the employees in Gothenburg proved to have a higher dependency on the IT systems then the employees in Shanghai. More often than not, the employees in Gothenburg emphasized how difficult purchasing would be if the systems would crash. The importance of the past investments within a MNC has been earlier emphasized by Teece et al (1997). Previous investments made by the MNC such as the ones in the IT systems are significantly influencing the future development of a company in terms of competences**.** The fact that the usage and reliability on the systems is bigger in Sweden suggests that the System Competence gaps created were bigger in the Gothenburg office than in the Shanghai office.

5.3 The managerial systems dimension

From the managerial perspective, the findings show that the two groups of employees are subject to the same HRM policies, trainings, incentives and performance appraisals. Interestingly enough, the two groups of employees proved to understand the same managerial structure differently which had furthermore an effect on their purchasing competences. This is in line with Braun and Warner's research (2002) which states that the MNC should consider balancing the global mindset of their HRM practices with the local one. The findings point out that it is more than cultural differences, it relates also to the overall local business conditions and environment.

One competence gap that was created by the difference in understanding organizational structure is in the job description. Because of the multitude of car makers on the Chinese market, the buyers in Shanghai tended to misunderstand the CE role and misuse the cost estimation knowledge residing in Volvo.

Companies usually have numerous trainings available to the employees that have proved to help the learning curve and improve the performance. Some of the employees have recognized that these trainings helped and have been crucial for their sourcing work (Brache, 2003). Even so, the employees from two organizations could have different opinions for the same training. For instance, while the fact based negotiations trainings offered by Volvo generally helped the buyers in the Gothenburg office, the employees in Shanghai saw it in a more mixed way. The difference in values and culture between the two centers, made the employees in Shanghai see the trainings as more impractical and not matching their sourcing work in China. Such a situation is in line with the literature stresses that company need to aware the values and cultural differences before applying variable international HRM in two organizations (Braun and Warner, 2002).

5.4 The values and norms dimension

From the values perspective, the empirical findings show that the perceived power distance of the employees affect their purchasing competences. In line with Hofstede's research (2013), the employees in Shanghai proved to have a higher perceived power distance than the employees in the Gothenburg office. The buyers in Shanghai confessed to be influenced by the formal authority in the sense that they will follow the company's practices as a rule of law and restrain themselves to make any improvements in the processes since it is not the purpose of their buyer occupation. However, in contrast with Hofstede's study (ibid), the findings show that the employees in the Shanghai office are having a more short-term orientation in when purchasing being driven more by price than long-term benefits. Not once, it was reported that the buyers in Shanghai sometimes minimized the importance of sustained quality of components and strategic perspective over the global supply base. Being a MNC within the car industry, Volvo is involved only in long term projects going from 15 to over 20 years. As such, the values related to the power distance and short-term orientation had a partially negative influence on the buying competences.

Keeping in mind that the Gothenburg location has most of Volvo's knowledge stock accumulated over time, the Shanghai organization has to work closely with it to transfer valuable knowledge. The empirical findings revealed that the organization in Sweden is more feminine in line with Hofstede's study, and this has proven to negatively affecting the knowledge transfer from Sweden to the Chinese organization. In other words, because the Chinese organization is more masculine, it takes shorter time to take decisions than in the Swedish organization. When it comes to transfer of knowledge, the buyers in Shanghai perceived the other center as "very slow", "inefficient" and concerned with having a general consensus before taking any actions. In line with Grant's work (1996), the lack of a common language and a shared meaning is decreased the Chinese buyers' ability to access valuable

knowledge from the more experienced headquarters in Sweden and thus partially creating competence gaps.

Another finding is pointing to the fact that both groups would need further improvement in their skills in negotiating internationally to match the buyer occupation performance goals. In line with Hofstede's study, the empirical findings showed that the employees from Gothenburg have a purchasing behavior that focused more on contracts, while the employees in Shanghai focused more on the personal relations. This difference in values, made each group of buyers having difficulties in negotiating with suppliers from other regions. As an example: most of the buyers in Shanghai confessed that they would like to improve their understanding of the European way of negotiating, especially German. Since most of the car component suppliers have German origins and since most the buyers in Shanghai are responsible for sourcing globally not just from China, their competences need to have a broader span. In addition, more often than not the employees in the Gothenburg office mentioned that they would like to improve their understanding of the Chinese way of negotiating and doing business.

The studies regarding the social cultural differences, especially Hofstede's, have been generally confirmed with few exceptions. The empirical findings from Volvo show that not only the cultural environment can support the creation of the competence gaps but also the individual's personality. In other words, an employee's personal values and norms can delete, minimize or emphasize a competence gap created by cultural programming of the respective employee.

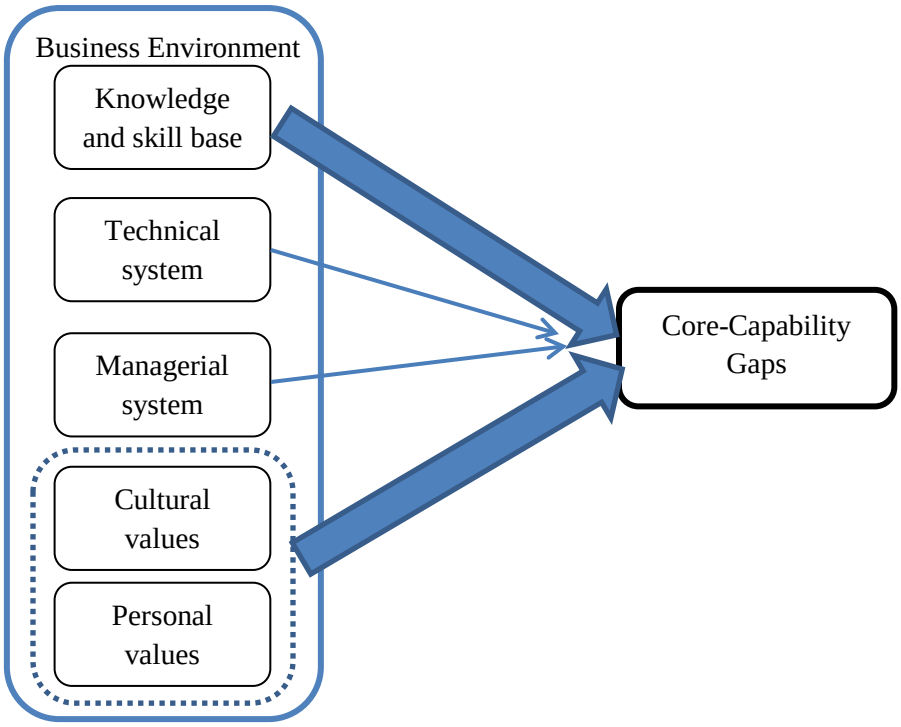
5.5 The conceptual framework reviewed

In accordance with the theoretical framework presented in Chapter 2, we have divided the interview questions depending on each dimension that could influence the core capability gaps of the employees. Once the factors that supported the creation of gaps in core capability started emerging, they have been assigned to each dimension the interviewees pointed to. As an example: the majority of the buyers have identified the IT systems as barriers to access knowledge within the Volvo systems and consequently creating gaps in their sourcing capabilities. This factor was then assigned to the technical systems dimension.

In the comparison analysis, we applied the framework to our empirical findings and confirmed the effects of all dimensions on the capability gaps. A notable finding in our empirical data was the high importance of the source of knowledge and social behavior. On one hand, the employees from one organization recognized to acquire more knowledge from outside the company, such as suppliers, external contacts and their previous work experiences; while on the other hand, the employees from the other location were more reliant on the internal sources, such as IT system, senior colleagues and managers. This finding indicates that the business environment and network mold the employees' competence gaps to a large extent; different business environments affect capabilities gaps from different perspectives, thus we consider this is a further dimension of significance for the MNCs.

Therefore, as the comparative analysis shows, the business environment is involved into all dimensions discussed above (see Figure 6). The figure emphasizes the empirical findings that the knowledge and social values are having a greater influence on the competence gaps than the other two dimensions.

Figure 6. Factors influencing the core-capability gaps



Source: Own conceptualization

Data shows that China surpassed USA and became the first FDI destination in 2012 (OECD, 2013; China daily, 2012). There is no doubt that a flourishing and diverse business situation exists in China nowadays. In terms of automotive industry, the updated figures demonstrate that there are over a hundred automotive manufacturers across China (Forbes, 2013). Such a business environment inevitably creates a huge knowledge base and influences the capability of Chinese employees. A relatively competitive business environment makes them think about the competitors, suppliers and the way to acquire more data for benchmarking. Yet, from another perspective, our findings suggest that such a booming market naturally makes people focus more on the local business environment, instead of looking for market opportunities abroad. In comparison to the Chinese market, the Swedish market has a much smaller automotive industry from all perspectives, resulting in a lack of capturing knowledge from outside the company through, among others, knowledge spillovers. However, it is apparent that the advantage of Sweden is in the high level of industry and market maturity, while China is continually upgrading its industry. For instance, the fairly high value-added activities such as lean deployment are still not widely applied in the Chinese automotive market, which leads to certain gaps in purchasing capabilities.

Furthermore, the relational embeddedness of the buyers in Shanghai in their external networks reflects different values from the ones residing in the buyers in Gothenburg. This has proved to affect their capability gaps within purchasing. Andersson et al (2002) elaborates that relational embeddedness can be a strategic resource influencing the company's performance and competence development. In a MNC context, relational embeddedness refers to the extent to which a subsidiary's individual, direct relationships with customers, suppliers, competitors etc. can play a role as source of learning (ibid), which is corresponding to our empirical data from the Shanghai location. However, this was not as pronounced in the interviews from Gothenburg.

Conclusively, we confirm the four dimension model influences the capability gaps; yet, according to our findings, such influences are depending to a large extent on the different business contexts where the employees or organizations are located in. The knowledge and skills base as well values play the dominant role in the model. The technical and managerial system are only slightly affecting the capability gaps. Regarding the values, due to our observation in the case, we saw that this dimension could be divided by two different aspects, namely cultural values and personal values. The reason is that it is unnecessarily to say that the national culture fully influences the values, because diverse personalities proved to diminish or help create capability gaps independently of the cultural values. Our contribution here is that we put another consideration related to business environment, which also acts as a factor resulting in capability gaps.

6 CONCLUSIONS

This chapter summarizes the findings of this research study and emphasizes its contribution to the already existing literature on core capabilities. The chapter then continues with an overview on the possible managerial implications and how can the results be used in practice by the today's MNCs. The section ends by proposing additional subjects that might be interesting to research further.

6.1 Theoretical implications

The study started from our curiosity to have a deeper understanding on how different the capability gaps between a Western and a Chinese organization truly are. Following a broad literature review, it was discovered that the topic of international capabilities (gaps) was covered by just a limited number of studies. The main research question that the paper focused to answer is:

How different are the capability gaps between a Swedish and a Chinese organization within a multinational corporation?

Sub-question:

If any, what are the factors influencing these differences?

When answering this question, we used the 360-degrees feedback research method applied on two groups of employees, one in Gothenburg, Sweden and the other one in Shanghai, China. Taking into consideration that the focus is on the employees' core capabilities, one of the most common used and accurate methods to assess the work performance is through a 360-degrees feedback overview. This is the main reason why this research method was chosen as the most appropriate one. The method used proved to be successful since several of the identified capability gaps couldn't have been observed through individual self-assessments. The automotive market is well recognized for its complexity, especially in the components purchasing where there are still many challenges to overcome. Volvo Cars was chosen as it is a highly interesting automotive MNC that is sharing its global purchasing department between two locations. This has made the company a highly proper case study when it comes to analyzing the difference in capabilities gaps across locations. When digging deeper into the gaps in core competences, we used Leonard-Barton's findings (1992) mentioning that the core competences are having four dimensions that influence them: knowledge and skills, technical systems, managerial systems and values and norms.

The empirical findings show that some of the capability gaps between the two organizations are similar, such as the environment competence gap; however, the differences are significant. This is mostly because of the different knowledge base and values that reside in the buyers from the two locations. The major factor contributing to the differences has proven to be the local business context. The technical and the managerial dimensions are shown to have a limited influence over the capability gaps. Moreover, the findings suggest that the shared values have two parts: one belonging to the cultural values and the other one to the

personal values. While the first one is influenced by the national culture, the second relies more on the personality traits of each employee.

Furthermore, according to the empirical findings, a fifth dimension is influencing the competences gaps that the employees might have: the business environment in which the employees are embedded in. The novelty in this last dimension is that it connects the employees' competence gaps with the business environment (number of competitors, number of suppliers, level of competitiveness of the market, maturity of the market, size of the market etcetera). As an example: the more competitors or suppliers exist on the local market, the broader the knowledge of the employees, the fewer opportunities for the employees to develop a knowledge gap. The business environment speeds up the knowledge transfer and absorption rate of new knowledge of the employees. In addition, the more competitive the local market is, the bigger the turnover of the employees, the more their values are changing towards a more flexible career in multiple MNCs instead of in just a few. The business environment does not act as a separate dimension but significantly influences all the other dimensions.

6.2 Managerial implications

Regarding managerial implications, our findings suggest that MNCs need to be aware that capability gaps vary from different organizations, and also companies have to make effects to adopt the good points as well to avoid the negative factors. In the case of VCC Global Purchasing, diverse trainings for each side are needed to some degree, for instance, the Swedish center needs to acquire more competence in the area of market and supply base, while the Chinese center prefers to have more information to understand the company's strategy and processes. Meanwhile, some types of universal training approach could also be applied to buyers from both locations, such as technical education. Besides the IT and management system, the knowledge base as well as different views of values could significantly affect the individuals' core capability, and thereby cause some parts that need to be improved. However, in the HRM practices, MNCs must not only think of the internal factors mentioned above, but also need to take the different backgrounds such as local business environment and personal values into consideration. It is crucial for MNCs to identify such variation among organizations and optimize training programs in order to perform better.

6.3 Further research

Having done this study, we see several obvious and interesting opportunities for further research. Firstly, there is an opportunity to further research what the differences in capability gaps are among several MNCs as opposed to within one, as it was studied in this paper.

Secondly, based on our conclusion, regulation and rules are valued slightly more in the Gothenburg location than in Shanghai, while social network and individual embeddedness are more emphasized in Shanghai than in Gothenburg. In this regard, relevant theories could also be employed to analyze such differences, such as institutional context theory or business network related concepts.

Another possible continuation of the study would be to focus on just one dimension: technical systems, knowledge and skills, managerial systems, cultural or personal values, to see how they are influencing the employees' core competences and further the MNC's competitive advantage.

Furthermore, with the increased globalization and internationalization of the MNCs, it is important to get a deeper understanding of how a MNC can take advantage of capabilities residing in multiple locations. In this sense, a possible research topic would be: how can a MNC leverage and exchange the capabilities from different locations in an efficient way?

7 REFERENCES

Adler N. (1995). *International dimensions of organizational behavior (2nd Ed.).* Boston: PWS-Kent.

Alavi M., Leidner D. E. (2001). Knowledge management and knowledge management systems: conceptual foundations and research issue. *Management Information Systems Research.* Center University of Minnesota 25(1): 107-136.

Andersson U, Forsgren M, Holm U (2002). The strategic impact of external networks: subsidiary performance and competence development in the multinational corporation. *Strategic Management Journal*, 23: 979-996

Arthur J.B. (1994). Effects of human resource systems on manufacturing performance and turnover. *Academy of Management Journal* 37(3): 670-687.

Barney J. (1991). Firm resources and sustained competitive advantage. *Journal of Management* Vol. 17 No. 1 pp. 99-120.

Bergenhenegouwen G.J., Horn H.F.K., Mooijman E.A.M. (1997). Competence development - a challenge for human resource professionals: core competences of organizations as guidelines for the development of employees. *Industrial and Commercial Training* Volume: 29 Issue: 2

Bjorkman I., Fan X. (2002). Human resource management and the performance of Western firms in China. *Int. J. of Human Resource Management* 13: 6 September. 853-864

Boisot M. (1998). *Knowledge Assets OUP*. Oxford: Oxford University Press, 1998.

Brache A.P. (2003). Managing human capabilities. *Journal of Organizational Excellence*. Autumn 2003

Bratton J. and Gold J. (1999). *Human resource management theory and practice.* 2nd Ed. Mcmillan Press Ltd Houndsmill.

Braun, W. H., M. Warner (2002). Strategic human resource management in western multinationals in China: The differentiation of practices across different ownership forms. *Personnel Review*. Vol. 31 No, 5, pp. 553-579.

Bryman A. and Bell E. (2011). *Business research method 3rd edition*.Oxford: Oxford University Press

Chang, S.J. (1985), International expansion strategy of Japanese firms: capability building through sequential entry, *Academy of Management Journal*, Vol. 38 No. 2, pp. 383-407.

Chen, J-S., Lovvorn, A.S. (2011). The speed of knowledge transfer within multinational enterprises: the role of social capital. *International Journal of commerce and management*, 21 (1): 46-62

China Daily (2012). China passes US as top FDI destination**.** Updated: 2012-10-26. http://usa.chinadaily.com.cn/epaper/2012-10/26/content_15849754.htm [accessed 2013-05-17]

Christie et al (2000). Implementation of Realism in Case Study Research Methodology, *International Council for Small Business*, Annual Conference, Brisbane, 2000

Chua A., Lam W. (2005). Why KM projects fail: A Multi-case analysis. *Journal of Knowledge Management* 9(3): 6-17.

Cohen W M., Levinthal D. A. (1990). Absorptive capacity: A new perspective on learning and innovation. *Administrative Science Quarterly*, Vol. 35, No. 1, Special Issue: Technology, Organizations, and Innovation. March. pp. 128-152.

Cooper P. (2010). Data information and knowledge. *Anesthesia& Intensive Care Medicine*. Vol. 11 Issue 12 December. pp. 505–506.

Coyne, K., Hall S., Clifford P (1997). 'Is your core competence a mirage?', *McKinsey Quarterly.* 1, pp. 40-54.

Delaney J.T., Huselid M. (1996). The impact of human resource management practices on perceptions of organizational performance. *Academy of Management Journal* 39(4): 949-969.

Diaz R., Bailey M. (2011). Building knowledge to improve enterprise performance from inventory simulation models. *International* Vol. 134 Issue 1 November. pp. 108–113.

Drew S. (1999). Building knowledge management into strategy: making sense of a new perspective. *Long Range Planning* 32 (1) pp.130–136.

Dobrev S., Kim Tai-Young, Solari Luca (2004). The two sides of the coin: core competence as capability and obsolescence. *Advances in Strategic Management.* Volume: 21.

Docherty P., Nyhan B. (1997). *Human competence and business development, Emerging patterns in European Companies*. London: Springer Verlag, 1997.

Doz Y., Santos J., Williamson P. (2001). From global to metanational: How companies win in the knowledge economy. *Harvard School Press: Boston MA.*

Earley (1994). Self or group? Cultural effects of training on self-efficacy and performance. *Administrative Science Quarterly* 39(1) 89-117.

Edwards J. S., Shaw D. Collier P. M. (2005). Knowledge management systems: Finding a way with technology. *Journal of Knowledge Management* 9(1): 113-125.

Eichinger R.W., Lombardo M.M. (2004). Patterns of rater accuracy in 360-degree feedback. *Human Resource Planning* ISSN 0199-8986 06/2004 Volume 27 Number 4 p. 23

Forbes (2013). "The Future of China's Luxury Auto Market", Kenneth Rapoza, published on 1st of April,http://www.forbes.com/sites/kenrapoza/2013/04/01/the-future-of-chinas-luxury-auto-market/ [accessed 2013-05-05]

Forsgren M., Holm U., Johanson J. (2006). *Managing the Embedded Multinational: A Business Network View*. Edward Elgar.

Freeze R., Kulkarni U. (2008). Validating Distinct Knowledge Assets: A Capability Perspective. *International Journal of Knowledge Management.* Volume 4 Issue 4 IGI Global 2008.

Geely Annual Report (2011). 2011 Annual Report, Geely Automobile Holdings Limited

Geely Interim Report (2012). Interim Report for Jan-Jun 2012, Geely Automobile Holdings Limited, Released August 2012

Ghauri P. (2004). Designing and Conducting Case Studies in International Business Research in Marschan-Piekkari R. and C. Welch (eds.). *Handbook of Qualitative Research Methods for International Business* pp. 109-124

Ghererdi S.,Nicolini D. and Odella F. (1997). Towards a social understanding of how people learn in organizations: the notion of a situated curriculum. *Management learning*. Vol.10, No.3.London: Sage Publications.

Graham J. (1985). The influence of culture on business negotiations. *Journal of International Business Studies*. 16: 81-96.

Grant R.M. (1996). Toward a knowledge-based theory of the firm. *Strategic Management Journal.* 17: pp.109-122.

Guile D., Fonda N. (1998). *Performance Management through Capability.* London: I.P.D.,1998.

Hamel G., Prahalad G. K. (1994). *Competing for the future*. Boston: Harvard Business School Press.

Hart D., Warne L. (2006). Comparing Cultural and Political Perspectives of Data Information and Knowledge Sharing in Organizations. *International Journal of Knowledge Management* 2(2): 1-15.

Hayes, R.H. (1985). Strategic planning---forward in reverse? *Harvard Business Review*, November-December 1985, pp.111-119

Helfat C. E., Peteraf M. A. (2003). The dynamic resource-based view: Capability lifecycles. *Strategic Management Journal* 24: 997-1010.

Hitt M., Ireland R.D. (1985). Corporate distinctive competences strategy industry and performance. *Strategic Management Journal*. 6: 273-293

Hofer C.W., Schndel D. (1978). *Strategy Formulation: Analytical Concepts*. West Publishing St. Paul MN

Hofstede G. (1980). *Culture's consequences: International differences in work-related values*. Beverly Hills CA: Sage.

Hofstede G. (2013). National culture dimensions. http://geert-hofstede.com/national-culture.html [accessed 2013-05-01]

Huselid M. (1995). The impact of human resource management practices on turnover productivity and corporate financial performance. *Academy of Management journal* 38: 635-672.

Ichniowski C., Shaw K., Prennushi G. (1997). The effects of human resource management practices on productivity: a study of steel finishing lines. *The American Economic Review* 87(3): 291-31 3.

Itami H., Nishino K. (2010). Killing Two Birds with One Stone: Profit for Now and Learning for the Future. *Long Range Planning* 43: 364-369

Itami H., Roehl T. (1987). *Mobilizing Invisible Assets*. Harvard University Press Cambridge MA 1987

Kamoche, K. (1997). Knowledge creation and learning in international HRM. *International Journal of Human Resource Management*. Vol. 8, Issue 2, pp. 213-226.

Kay J. (1993). *Foundations of Corporate Success: How Business Strategies Add Value*. Oxford University Press. Oxford.

Kogut B., Zander U. (1992). Knowledge of the firm combinative capabilities and the replication of technology. *Organization Studies* 3 pp. 383-397.

Kostova T. (1999). Transnational Transfer of Strategic Organizational Practices: A Contextual Perspective. *The Academy of Management Review* Vol. 24 No. 2. April. pp. 308-324.

Lane, P., Lubatkin, M. (1998). Relative absorptive capacity and interorganizational learning. *Strategic Management Journal*. 19(5): 461-477.

Lank E. (1997). Leveraging Invisible Assets: the Human Factor. *Long Range Planning.* Vol. 30 June 1997:406

Larsson A. and Yu Z. (2012). Facilitating faster knowledge transfer in the MNC: A case of Volvo Car Corporation's matched pair system in Shanghai, *Master Degree Project* No. 2012:14, Graduate School, University of Gothenburg

Leidner D., Alavi (M), Kayworth T. (2006). The Role of Culture in Knowledge Management: A Case Study of Two Global Firms. *International Journal of e- Collaboration* 2(1): 17-40 USA.

Leonard-Barton D. (1992). Core Capabilities and Core Rigidities: A Paradox in Managing New Product Development. *Strategic Management Journal.* Vol.13 Special Issue: Strategy Process: Managing Corporate Self-Renewal. pp. 111-125.

Macher J. T., Mowery D. C. (2004). Vertical specialization and industry structure in high technology industries. *Advances in Strategic Management*. Vol. 21 pp. 317-355.

Makino, S., Delios, A. (1996). Local knowledge transfer and performance implications for alliance formation in Asia, *Journal of International Business Studies*, Vol. 27 No. 5, pp. 905-27.

Mascarenhas B., Baveja A., Jamil M. (1998). Dynamics of Core Competencies in Leading Multinational Companies. *California Management Review*. Vol. 40 No.4 Summer:117-132

McDermott R., O'Dell C. (2001). Overcoming cultural barriers to sharing knowledge. *Journal of Knowledge Management* 5(1): 76-85.

Merriam S.B. (1998). *Qualitative Research and Case Study Applications in Education.* Jossey-Bass Publishers San Francisco

Miles M. B., Huberman A.M. (1994). *Qualitative data analysis: an expanded sourcebook*, Thousand Oaks, CA: Sage, cop.

Minbaeva, D.B. 2007. Knowledge transfer in multinational corporations. *Management International Review*, 47 (4): 567-593

Minbaeva. D, Pedersen. T Bjorkman I Carl F. Fey Park HJ (2003). MNC Knowledge Transfer Subsidiary Absorptive Capacity and HRM. *Journal of International Business Studies* Vol. 34 No. 6 Decade Award Issue: Foreword from the Editor-in-Chief November. pp. 586-599

Mitchell, W (1989). Whether and when? Probability and timing of incumbents' entry into emerging industria subfields. *Administrative Science Quarterly*, 34, pp. 208-230.

Miyazaki K. (1994). *Building Competences in the Firm: Lessons from Japanese and European Optoelectronics.* Macmillan. London.

Nonaka I. (1994). A dynamic of organizational knowledge creation. *Organization Science* Vol. 5(1): pp.14-37.

Nowack K. (1992). Self-Assessment and Rater-Assessment as a Dimension of Management Development. *Human Resource Development Quarterly* ISSN 1044-8004 Volume 3 Number 2 pp. 141 – 55

OECD (2013). FDI in figure, April 2013.http://www.oecd.org/daf/inv/FDI%20in%20figures.pdf [accessed 2013-05-17]

OICA (2013). Organisation Internationale des Constructeurs d'Automobiles. Statistics on the Production and Sales of New Passenger Car Vehicles http://oica.net [accessed 2013-03-07]

Petersen B, Pedersen T., Lyles M.A. (2008). Closing knowledge gaps in foreign markets. *Journal of International Business Studies* 39, 1097–1113

Prahalad C.K., Hamel G. (1990). The core competence of the corporation. *Harvard Business Review* Vol. 68 No. 3 pp. 79-91.

Royle T. (1995). Corporate versus societal culture: a comparative study of McDonald's in Europe. Are societies and organizations becoming increasingly similar across the world? *International Journal of Contemporary Hospitality Management* MCB University Press.

Sanchez R. (2008). A scientific critique of the resource-based view (RBV) in strategy theory with competence-based remedies for the RBV's conceptual deficiencies and logic problems. *Research in Competence-Based Management* Vol. 4 pp. 3-78.

Saunders M., Lewis P., Thornhill A. (2007). Research methods for business students. *Harlow: Financial Times. Prentice Hall*.

Scarbrough H. (1998). Core competencies from organizational perspective. *British Journal of Management.* Vol.9 219-232

Schuler, R.S. et al. (2002). International human resource management: Review and Critique. *International Journal of Management Reviews*. Volume 4, Issue 1.

Shaker A.Z., Gerard G. (2002). Absorptive capacity: a review, reconceptualization, and extension. *Academy of management review*, Vol 27, No, 2, 185-203

Simon, H. A. (1991). Bounded rationality and organizational learning. *Organization Science.* 2 pp.125-134.

Spender J.C. (1989). *Industry Recipes: The Nature and Sources of Managerial Judgment.* Blackwell Oxford.

Snow C.C., Hrebiniak L.G. (1980). Strategy distinctive competences and organizational performance. *Administrative Science Quarterly.* 25 1980:317-335

Sullivan, Maureen S. (2012). A study of the relationship between personality types and the acceptance of technical knowledge management systems (TKMS). Capella University, ProQuest, *UMI Disseratations Publishing*.

Szulanski G. (1996). Exploring internal stickiness: Impediments to the transfer of best practice within the firm. *Strategic Management Journal.* 17: pp.27-43.

Teece D. J., Pisano G. P., Shuen A. (1997). Dynamic capabilities and strategic management. *Strategic Management Journal.* 18: pp.509-533.

Tijssen R. (2001). Global and domestic utilization of industrial relevant science: patent citation analysis of science–technology interactions and knowledge flows. *Res. Policy* 30 35–54.

VCC (2013a). VCC Internal Documentation Business Management System Role descriptions

VCC Interviews (2013). Interviews which have been performed for the research study

Volvo Financial Report (2012). 2012 Financial Report, Volvo Cars Group

Volvo Internal Materials (2013). Volvo internal documents made available during the study

Volvo Presentation (2013). 2012 Financial Report, Volvo Cars, 3rd of May 2013

Volvo Presentation (2012a). China - The future of Volvo Cars sourcing 2012, Volvo Cars China

Volvo Presentation (2012b). China – how is Volvo's future build in China? Volvo Cars China, 25th April 2012

Volvo Cars Corporation website (2013). www.volvocars.com. [accessed 2013-05-22]

Vinson M. N. (**1996).** The pros and cons of 360-degree feedback: Making it work. *Training & Development* 50 11-12.

Winterscheid B.C., McNabb S. (1994). Technology development and transfer across national and organizational borders: The case of AT&T network systems Europe. *lnternational Business Review*. Vol. 3 NO. 4 pp. 425- 442.

Woodland T. (2007). Accelerating leadership and talent development in China. WuDeLan Partners Beijing February.

Yamin M., Otto J. (2004). Patterns of knowledge flows and MNE innovative performance, *Journal of International Management* 10: 239– 258

Yammarino F.J., Atwater L.E. (1993). Self-perception accuracy: implications for human resources management. *Human Resources Management* 32:2&3 Summer: 231-245

Yin Robert. K. (2009). *Case study research: design and methods fourth edition.* London: SAGE Publications

Zigmund W. G. (2000). Business research methods, 6th Edition, The Dryden press series in management

8 APPENDIX

8.1 Competences definitions

Ability to influence and negotiate Has ability to lead, teach and inspire as well as motivate individuals and other functional teams through different stages of team dynamics. Works creative and target oriented. Is capable of handling conflicts within the teams and secure a holistic view.
Ability to influence and negotiate Has ability to lead, teach and inspire as well as motivate individuals and other functional teams through different stages of team dynamics. Works creative and target oriented. Is capable of handling conflicts within the teams and secure a holistic view.
Benchmark Understands benchmark principles and applies the knowledge for the commodity to achieve best in class cost, pricing and quality. Knows available tools and actively applies them in activities such as market tests, etc. in both commodity strategy development and running production. Understands the benchmark results and can analyze and use the knowledge in discussions with internal stakeholders and suppliers.
Car and car component knowledge Demonstrates general knowledge about vehicle assembly and technical knowledge about car components.
Car Program management Project Management (planning and objective setting/scope): Has knowledge of VCC global product development systems. Performs objective & scope setting based on GPDS requirements. Ability to lead and drive projects and make gate recommendations. Understands and uses resources as well as methods to secure project plans and flawless launch.
Commodity Business Plan and Commodity strategies Use strategic tools such as Commodity Business Plan & Commodity Strategies to deliver business objectives. Understand the need for a Commercial Strategy and Commodity Business Plan and how they are linked. Understand the working and governance principles for the Commodity Business Plan and actively apply them on the 5 years targets and annual process. Understand the financial reporting principles and methods. Understand how to follow up decided actions. Understand how to report and explain deviations. Understand and apply: - Market analysis data - Cost analysis/Cost Models and other supplier data - Industry market trends including Emerging Markets Sourcing - Supply base process and technology development - Purchasing Strategy improvements/VCC's Commodity strategies.

Commodity skills

Demonstrates Manufacturing Process skills and branch knowledge in the applicable commodity. Understands Design Record requirements and is able to judge design concepts and recommend alternative solutions based upon proposed or selected manufacturing method.

Cost Estimating for Buyers

Well proficient in Activity Based Costing principles and knowledgeable in how to understand and translate cost estimates into useful negotiation parameter to be applied in commercial negotiations.

English Language Competence

Demonstrates business English proficiency.

Environmental competence

ISO 14001 application on purchasing & suppliers (BMS)

Examples:

- VCC´s Environmental Policy
- Supplier Environmental Requirements
- Supplier Evaluation Model (SEM) Environmental Self-Assessment
- Handling of waste within Purchasing
- Purchasing´s significant environmental aspects
- Purchasing´s Environmental Targets

General Environmental knowledge, the problems, sustainable development, good environmental choices etc.

Industry and commodity knowledge

Demonstrates knowledge of own commodity and the industry.

General knowledge of current and future product development and technologies, different manufacturing technologies and how marketing is done within the commodity and industry. Understands the linkage to VCC products.

Detailed knowledge of supplier industry; knows both current and potential suppliers, their weaknesses and strengths and competitive positions.

Knows how to make prognosis and analyze the market situation.

Understands the commodity's cost elements (drivers).

Knowledge of Corporate Social Responsibility and what requirements VCC puts on its supplier base.

Lean Deployment for Purchasing

Basic understanding about the commercial implications of Lean related cost reduction opportunities identified at our suppliers sites and/or in our suppliers value chains. Understands the logic of high level lean measurable from lean assessment reports and how to use the lean findings as negotiation leverage parameters. Understands the impact of Lean tools and processes on quality, capacity constraints and delivery precision.

Legal agreements

Has understanding of commercial law and VCC' agreement structure in order to establish robust agreements with the suppliers.

Understands general principles and regulations regarding settlements of commercial agreements.

Knows content and structure of VCC agreements to be able to choose agreements applicable for the

business event. Understands why agreements are structured in this way and what the critical components are to be able to judge and discuss questions and deviation requests coming from suppliers. Knows content of applicable terms & conditions.
Multi market knowledge & experience Multi market experience and knowledge for concerned markets. (Business experience, business relations, history, other everyday knowledge about the markets) Cultural knowledge, (behavior, attitudes, values, communication etc.) for concerned markets. Cultural knowledge includes ability and experience of realizing, understanding and reading / interpreting human behavior which has its origin in common cultural values and attitudes in a country / region. It also includes ability to make oneself understood from the view of "the other person/party" and in daily business ensure / secure that "the other person/party" has correctly understood a message/communication.
Knowledge about new and emerging markets Demonstrates market knowledge about new and emerging countries, especially China.
Problem Solving Thorough understanding of problem-solving and quality improvement tools and techniques. This includes knowledge of management and planning tools, quality tools, preventive and corrective actions, and how to overcome barriers to quality improvements.
Process Management • Knowledge of VCC mega processes, sub processes and how they interact. • Knowledge of Business Process & Operation Engineering. • Ability to drive process orientation and process changes in accordance with the business processes and VCC 5 year plan. • Ability to develop, optimize & maintain VCC processes. • Knowledge of process tools – Business Process Assessment – and how to make use of it for process efficiency. • Knowledge of Audit processes and Audit requirements. • Ability to develop and communicate BMS processes. • Ability to drive, apply and communicate Purchasing process development process.
Product Quality Assurance Can analyze, interpret and apply APQP (Advanced Product Quality Planning) procedure. Has knowledge in the application of APQP within the company. Understands the PPAP procedure including the elements, submission requirements and is able to judge the PSW fulfillment.
Product/Process quality Able to plan, control, and assure product and process quality in accordance with quality principles, which include planning processes, resource identification, process control, measurement systems, and error proofing.
Quality Assessments (Audit) Understands and applies the process, planning, preparation, execution, reporting results, and follow-

up for various types of audits in driving continuous improvement.
Quality Operating System (Business Management System) Fundamental understanding of Volvo Cars' Business Management System and the systematic, disciplined use of standardized tools and practices to manage the business and achieve increasing levels of customer satisfaction and success for Volvo Cars.
Reliability (robustness and mistake prevention) Apply reliability, robustness, and risk management tools and methodologies, including key terms and definitions, modeling, systems design, assessment tools, and reporting to support product/processes that are mistake-free and robust to the 5 sources of noise for the useful life of the product.
Risk and Issue management Uses and understands SWOT (**S**trengths, **W**eaknesses, **O**pportunities, **T**hreats) analysis and DMAIC (**D**efine, **M**easure, **A**nalyze, **I**mprove, **C**ontrol) process. Creates conformance plans/ back-up plans and follow-up plans, to create actions plans to handle and secure the issue. Makes use of and understands scorecards/diagrams (the 7 management tools). Secures action plans to solve urgent launch issues.
Strategic work Knowledge of and Ability to drive and lead Purchasing Strategic work : - Purchasing Vision & Mission - Purchasing Business plan - Purchasing liaison in VCC Corporate Business plan - Objective setting process - Creating Purchasing Scorecard
Supplier Cost Tools Use basic cost tools such as Price / Volume Curves, Value Chain Analysis, Cost Estimates, Benchmark, Gap Analysis, Total Cost Validation etc. to deliver business objectives. Understand the most common cost tools, to be able to discuss facts with internal specialists and suppliers. Have good understanding of common calculation methods, such as NPV (Net Present Value) and ABC (Activity Based Costing). Able to interpret various forms of cost estimates. Have comprehensive understanding of cost driving factors along the complete value chain, and continuously search for possibilities to improve VCC's result. Continuously search for improvement of Purchasing efficiency, and encourage colleagues to learn about what drives total cost.
Supplier Key Ratios Understand and effectively use supplier key ratios to be able to evaluate supplier's long term ability to deliver on time and with premium quality. Knowledge of: - the most common key ratios to be used for sourcing - tools such as SEM (Supplier Evaluation Model), Sourcing for Quality etc. - data sources, e.g. Annual Reports etc. Ability to evaluate and analyze data regarding financial metrics, quality metrics, environmental

sustainability and historical performance. Have good understanding of the supplier's products and processes. Furthermore, understand the competitive supplier's processes and have ability to lead constructive discussions with suppliers regarding product and process improvements.
Supplier Manufacturing Management Able to lead suppliers to an approved manufacturing site assessment and VQE status. Manages supplier driven changes in running production utilizing agreed process.
Supplier Negotiations For own commodity develop and execute a robust negotiation tactic based on negotiation strategy in Commodity Strategy and Commodity Business Plan. Understand how to prepare for a negotiation based on: - Cost elements/Gap analysis/cost models - Negotiation target based on broken down commodity/group target - Supplier financial status/Key Performance Indicators - Supplier competition and overall market situation - Leverage points New Sourcing for VCC global manufacturing footprint Understand how to merge above to negotiation tactics Understand how to execute a negotiation: - Apply changes in negotiation tactics when required based on situation and supplier tactics - Identify win-win situations and apply when appropriate - Utilize specialist in a constructive and efficient way like cost estimating, lean engineering, engineering (as well in preparation) - Understand when to leverage to next management level Understand how to evaluate the negotiation result and apply lessons learned on next negotiation.
Supply Base Management Utilizes SQM part of Sourcing process and safeguard the Volvo’s standard of the supply base.
System Knowledge Operates the office software tools normally used at Volvo such as: MS Word, MS Excel, MS PowerPoint, MS Outlook, MS Project, SI+ etcetera and also the operation of various web based applications. Key user knowledge with ability to support and educate.

8.2 The weights given to each competence

Buyer Capabilities*	Type	Weights for Commodity buyers	Weights for Product buyers
Ability to influence and negotiate	F	2	2
Benchmark	F	2	2
Car and car component knowledge	S	2	2
Car Program management	F	2	2
Commodity Business Plan and Commodity strategies	F	3	3
Commodity skills	F	3	2
Cost Estimating for Buyers	F	2	2
English Language Competence	F	2	2
Environmental competence	F	2	2
Industry and commodity knowledge	F	3	3
Lean Deployment for Purchasing	F	2	2
Legal agreements	F	2	2
Multi market knowledge & experience	F	2	1
Knowledge about new and emerging markets	S	2	2
Problem Solving	F	1	1
Process Management	F	1	1
Product Quality Assurance	F	1	1
Product/Process quality	F	1	1
Quality Assessments (Audit)	F	1	1
Quality Operating System	F	1	1
Reliability	F	1	1
Risk and Issue management	F	2	2
Strategic work	F	1	1
Supplier Cost Tools	F	2	2
Supplier Key Ratios	F	2	2
Supplier Manufacturing Management	F	1	1
Supplier Negotiations	F	2	2
Supply Base Management	F	1	1
System Knowledge	F	2	2

Notes:
F=Functional Competence
S=Specific Competence

Source: Data based on Volvo Internal Materials (2013)

*see definition of each competence on *Appendix 8.1 Competences definitions*

8.3 Interview guidelines

A. Interview guidelines for buyers

Introduction

- Please briefly describe your career path so far previous and in Volvo.
- Please briefly describe your current role as a buyer.

Knowledge Dimension

- Is there a part of your job you feel you don't know as well as you would like to?
- What type of knowledge would you like to improve to perform better in your job?
- Please grade the capabilities the following list based on your self-evaluation.
  Take the least developed capabilities and then politely ask:
  - What are the reasons you believe you would need improvement in this area? Why do you think it is like this? Can you give an example?
- Do you think something is missing from this capability list?

Technical System Dimension

- Are you using any extra sources of data to the side of what Volvo provides?
  - YES: What type of data? How is it helping you in your job?
- How does your informational system perform on a scale from 1 to 10 (1=”Not good at all” 10=”Excellent”)?
- How dependent are you on the system on a scale from 1 to 10 (1=”Not dependent at all” 10=”Very dependent.”)? Why?
- What type of information you are missing from the system and you believe it is important to have?

Managerial Systems Dimension

- From where/whom do you feel you learn the most of what you need for your job (inside and outside Volvo)? How? What other ways are you acquiring knowledge?
  - Is your current team structure allowing you to perform at your best?
  - How would you change it?
- What type of training were you given in the first six months after you have started working as a buyer?
- How useful are they in your daily work on a scale from 1 to 10 (1=”Not useful at all” 10=”Very useful”)?
- Would you change anything in the way the initial training is provided?

Values & Norms Dimension

- What do you think about Volvo’s way of doing things?
- How would you say is the buyer position seen in Volvo?
- How much freedom of initiative would you say you have in your current role?
- Do you feel that you know what is expected of you and you are fulfilling these expectations?

Ending part

Is there anything we missed in this interview and you would like to add?

B: Interview guidelines for managers

Introduction

- Please briefly describe your role in the (insert purchasing team name).
- What are the general goals for your team for the next years?
- How often would you say you are interacting with (insert buyer's name)?

Knowledge Dimension

- What type of knowledge are you looking for when recruiting new buyer?
- Would you say that this knowledge resides in the (insert buyer's name)?
- Please grade the purchasing capabilities in the following list for (insert buyer's name)?
  Take the least developed capabilities and then politely ask:
  - What are the reasons you believe he would need improvement in this area? Why do you think it is like this? Can you give an example?
- Do you think there is something missing from this purchasing capability list?

Technical System Dimension

- As far as you know is every buyer having the access to the same software?
- Do the buyers need to use additional sources of data from outside Volvo to better perform on the job? Is a buyer allowed or encouraged to do that?
- How does your information system perform on a scale from 1 to 10 (1="Not good at all" 10="Excellent")?
- How dependent would you say (insert buyer's name) is on the system on a scale from 1 to 10 (1="Not dependent at all" 10="Very dependent")? Why is (s) he dependent on it?
- What type of data would you say (insert buyer's name) feels is missing from the system?

Managerial Systems Dimension

- How would you say (insert buyer's name) is acquiring knowledge regarding how to best purchase?
- From where/whom would you say (insert buyer's name) learns the most of what is needed for the job (from inside and outside Volvo)? How?
- What other ways can (insert buyer's name) acquire knowledge about how to best perform on everyday tasks?
- Is the current team structure allowing (insert buyer's name) to perform at his best? Why?
- What type of training was (insert buyer's name) given when he first started working as a DM buyer? (first 6 months)
- On a scale from 1 to 10 how useful are they in his day to day work? Why it is so?
- Would you change anything in the way the initial training is provided?

Values & Norms Dimension

- How much freedom of initiative would you say he has in his role as a buyer?
- Do you feel that he knows what is expecting of him and is fulfilling these expectations?
- How would you say is the buyer position seen in Volvo?

Ending part

- Is there anything we missed in this interview and you would like to add?

C: Interview guidelines for outside raters

Introduction

- Please briefly describe your current role in Volvo.
- Please briefly describe your daily work that you are performing with (insert buyer's name).

Knowledge Dimension

- What type of knowledge would you say a DM buyer needs to have to best perform?
- Would you say that this knowledge resides in (insert buyer's name)?
- Please grade the purchasing capabilities in the following list for (insert buyer's name)?
  Take the least developed capabilities and politely ask:
  - What are the reasons you believe he needs improvement in that area? Why do you think it is like this? Can you give an ex.?
- Do you think there is something missing from this purchasing capability list which is also important for a buyer?

Technical System Dimension

- Are you using any software when you are working with (insert buyer's name)? How it performs on a scale from 1 to 10 (1="Not good at all" 10="Excellent")?
- How dependent is (insert buyer's name) on the system on a scale from 1 to 10 (1="Not dependent at all" 10="Very dependent")? Why is (insert buyer's name) dependent on it?
- Does (insert buyer's name) use additional sources of data from outside Volvo to better perform on the job in connection with you?

Managerial Systems Dimension

- How would you say (insert buyer's name) acquire knowledge regarding how to best purchase?
- In your opinion from where/who would you say (insert buyer's name) learns the most of what is needed for the job (from inside and outside Volvo)? How?
- In your opinion what other ways is the (insert buyer's name) acquiring knowledge about how to best perform on everyday tasks?
- Would you change anything in the way the initial training is provided?

Values & Norms Dimension

- How much freedom or initiative would you say (insert buyer's name) has in his role to improve his buying process?
- Do you feel that he knows what is expecting of him and is fulfilling these expectations?
- How would you say is the buyer position seen in Volvo?

Ending part

- Is there anything we missed in this interview and you would like to add?

D: Interview guidelines for the higher management level

- Which competences and characteristics are needed in order to complete a buyer's work? From what you know, are they different from what other OEMs need?
- Is there any standardized list or does it varies between the different DM departments?
- How different would you say are the competences residing in the Chinese and the Swedish buyers? Why?
- Are you using different practices to develop the competencies in the two centers?
- Are there any competences that are more important or more difficult to develop within the Swedish buyers? What about the Chinese buyers?

Initial training module

- How important would you say the initial training program for new employee is in the development of the competences?
- What type of training are the buyers receiving in the first 6 months after they have started working? Are they different in the two locations? Why?
- Would you change anything in the way the initial training is provided? How would you change it?

- How much freedom of initiative would you say a buyer has in his role to develop and improve the buying process for Volvo?
- How would you say is the buyer position generally seen in Volvo?

8.4 Overview on interviews

Nationality	Respondents	Duration (min)	Interview Method
Swedish	Product Buyer A	60	Face-to-face, in English, with a recorder
Swedish	SQM Outside Rater A	50	Face-to-face, in English, with a recorder
Swedish	R&D Outside Rater A	60	Face-to-face, in English, with a recorder
Chinese	Manager A	80	Face-to-face, in English, with a recorder
Swedish	Commodity Buyer B	60	Face-to-face, in English, with a recorder
Swedish	Manager B	60	Face-to-face, in English, with a recorder
Swedish	R&D Outside Rater B	60	Face-to-face, in English, with a recorder
Swedish	CE Outside Rater B	60	Face-to-face, in English, with a recorder
Swedish	Product Buyer C	70	Face-to-face, in English, with a recorder
Swedish	CE Outside Rater C	60	Face-to-face, in English, with a recorder
Swedish	Manager C	60	Face-to-face, in English, with a recorder
Swedish	Commodity Buyer D	60	Face-to-face, in English, with a recorder
Chinese	Manager D	80	Face-to-face, in English, no recorder
Swedish	R&D Outside Rater D	60	Face-to-face, in English, with a recorder
Swedish	CE Outside Rater D	60	Face-to-face, in English, with a recorder
Swedish	Commodity Buyer E	60	Face-to-face, in English, with a recorder
Swedish	Manager E	60	Face-to-face, in English, with a recorder
Swedish	P Buyer F	60	Face-to-face, in English, with a recorder
Swedish	Manager F	60	Face-to-face, in English, with a recorder
Swedish	CE Outside Rater F	60	Face-to-face, in English, with a recorder
Chinese	Product Buyer G	60	Face-to-face, in English, no recorder
Swedish	Manager G	60	Face-to-face, in English, with a recorder
Chinese	CE Outside Rater G	60	Face-to-face, in Mandarin, with a recorder
Chinese	SQM Outside Rater G	50	Face-to-face, in Mandarin, with a recorder
Chinese	Commodity Buyer H	60	Face-to-face, in English, with a recorder
Chinese	Manager H	30	Face-to-face, in English, with a recorder
Chinese	SQM Outside Rater H	50	Face-to-face, in Mandarin, no recorder
Chinese	R&D Outside Rater H	55	Face-to-face, in Mandarin, with a recorder
Chinese	Product Buyer I	75	Face-to-face, in Mandarin, with a recorder
Swedish	Manager I1	50	Face-to-face, in English, with a recorder
Swedish	Manager I2	45	Face-to-face, in English, with a recorder
Chinese	CE Outside Rater I	60	Face-to-face, in Mandarin, with a recorder
Chinese	SQM Outside Rater I	80	Face-to-face, in Mandarin, with a recorder
Chinese	Product Buyer J	50	Face-to-face, in Mandarin, with a recorder
Swedish	Manager J	30	Face-to-face, in English, with a recorder
Chinese	R&D Outside Rater J	60	Face-to-face, in Mandarin, with a recorder
Chinese	SQM Outside Rater J	60	Face-to-face, in Mandarin, with a recorder
Chinese	Commodity Buyer K	60	Face-to-face, in English, with a recorder
Swedish	Manager K1	60	Face-to-face, in English, with a recorder
Chinese	Manager K2	40	Face-to-face, in English, with a recorder
Swedish	R&D Outside Rater K	60	Face-to-face, in English, no recorder
Chinese	CE Outside Rater K	60	Face-to-face, in Mandarin, with a recorder
Chinese	Commodity Buyer L	60	Face-to-face, in Mandarin, with a recorder
Swedish	Manager L	40	Face-to-face, in English, with a recorder
Chinese	SQM Outside Rater L	45	Face-to-face, in Mandarin, with a recorder
Chinese	R&D Outside Rater L	60	Face-to-face, in Mandarin, with a recorder
46	Total	2 660	
	Other interviews		
Swedish	Purchasing Vice-President	45	Face-to-face, in English, with a recorder
Swedish	Purchasing Vice-President	45	Face-to-face, in English, with a recorder
Swedish	Business Office - Systems specialist	90	Face-to-face, in English, no recorder
Chinese	Shanghai local HR	30	Face-to-face, in English, no recorder
Swedish	Gothenburg local HR	30	Face-to-face, in English, no recorder
Swedish	External HR Recruting Agency	50	Face-to-face, in English, no recorder
6	Total	290	
	TOTAL	**50 min (49,2 hours)**	

Source: Data based on the interviews