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**SCHOOL OF BUSINESS, ECONOMICS AND LAW**

# KNOWLEDGE TRANSFER IN THE CHINESE AUTOMOTIVE INDUSTRY

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## **Abstract**

The automotive industry has been subject to a turbulent shift in the last decades as its markets, production and focus has shifted its center of gravity towards the East, specifically to China. When Western automotive companies seek to establish themselves on the Chinese automotive market they have been forced to engage in joint ventures with Chinese counterparts. As the motivation for the Chinese partners is to accumulate knowledge, experience and competencies from their mature and sophisticated Western partners, the Western partners are faced with the difficult process of transferring competencies and knowledge that have been accumulated over long periods of time and which can be tacit or hard to codify. The question of how to transfer knowledge and competencies successfully to their Chinese joint venture subsidiaries therefore becomes evident.

Our aim with this thesis was to identify how Western multinational corporations can upgrade the competencies of their joint venture subsidiaries in China through the transfer of knowledge. We engaged in research of empirical data concerning both the problems faced by the Chinese automotive industry as well as the study of how Western parent firms successfully can transfer knowledge and competencies to their Chinese joint venture subsidiaries. The empirical data consisted of both secondary data as well as primary data collected through interviews. We formulated our hypothesis on the analysis of our empirical data and a theoretical framework on knowledge transfer.

Our study shows that the Western automotive parent firms should focus on knowledge transfer associated to the establishment of new organizational structures and managerial principles. Most of the problems faced by the Chinese automotive industry derives from difficulties of retaining skilled personnel, which makes competence building hard, and that the Chinese organizations are not knowledge sharing, accumulating and creating organizations, which deprives them of innovativeness and development. By creating knowledge orientated organizations, not only will the Chinese subsidiaries be able to absorb competencies associated directly to the faced issues but it will also facilitate any future knowledge transfer between the organizations.

**Keywords:** Knowledge transfer, Competences, Automotive industry, MNC's, China, Joint Venture

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## **Definitions**

### **Competence**

“The capacity of an individual (or a collective) to successfully (according to certain formal or informal criteria, set by oneself or by somebody else) handle certain situations or complete a certain task or job. This capacity may be defined in terms of: perceptual motor skills (e.g. dexterity); cognitive factors (different types of knowledge and intellectual skills); affective factors (e.g. attitudes, values, motivations); personality traits (e.g. self-confidence); and social skills (e.g. communicative and cooperative skills)” (Ellström, Henrik, 2008).

### **Knowledge**

“Facts, information, and skills acquired through experience or education; the theoretical or practical understanding of a subject” (Oxford Dictionary, 2014).

### **Joint Venture (Subsidiary)**

“An entity comprising of two or more firms which have brought together their resources in a single common legal organization” (Kogut, 1988). In this thesis the term subsidiary or joint venture subsidiary is also used to describe the joint venture organization.

### **Parent firm**

“Firm that owns or controls other firms (called subsidiaries) which are legal entities in their own right” (Business Dictionary, 2014).

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# 1. Introduction

## 1.1 Background

The global economy's ever shifting center of gravity from the West towards the East in recent decades has had tremendous impact on the strategies of companies. This new center of gravity is highly evident for the automotive sector, as Asia and more specifically China has become the world's largest automotive market, overtaking the American and European markets (Tita, 2013), (Ying, 2010). In the report "The Eight Overarching China Automotive Trends That Are Revolutionizing the Auto Industry", the authors stated:

"We believe that recent events signal the early stages of an economic revolution: a shift of the global center of gravity of economic strength towards the east, which will result in profound changes in numerous industries. As an economic bellwether, the automotive industry captures a great deal of interest" (Russo, et al. 2009).

Any automotive company not incorporating China as a top priority in their market strategy will miss out on immense opportunities for growth and profit. With over 1.3 billion inhabitants (The World Bank, 2014), strong economic growth and high consumer demand (Shen, Shirouzu, 2014), the Chinese automotive industry is most likely to take over the position as the main focus market for all global automotive companies, a change that most probably already have taken place.

Automotive multinational corporations (MNC's) who have been seeking to establish themselves on the Chinese market have been restricted to engage in joint ventures with Chinese counterparts, as the Chinese government have expected this occurrence to lead to a transfer of knowledge and competences from the Western firms to the Chinese subsidiaries (Lin, Zhiyong, 2014). However, due to the mentioned promise of the market, the Western automotive firms have accepted this responsibility in order to gain access to the market (Balcet, 2014). Consequently the strategies of both the partner firms are to reach growth and profit.

Learning, knowledge acquisition and adaptation to changing market environments are therefore important rationales for the creating of international joint ventures (Lyles, Salk, 1996).

## 1.2 Problem Discussion

The Chinese automotive companies are, compared to their Western and Japanese counterparts, still immature in terms of competitive competences and it is expected that time will be needed before they are able to catch up. In an effort to upgrade their competences the Chinese automotive companies are seeking collaboration with Western MNC's (Ban, et al. 2005), (Yan, 2011).

Earlier studies have shown that Chinese companies seeking joint ventures with Western firms have been motivated by the desire to acquire management expertise and technology (Yan, 2000). Western firms on the other hand seek these joint ventures to gain access to the fast growing and emerging market of China, where the local knowledge and skill of the local manufacturers facilitate in the process of capturing market shares (Balcet, 2014).

While discussions of policy changes are taking place, Western automotive manufacturers seeking to establish themselves on the Chinese automotive market are still obligated to engage in joint ventures, due to rigid legislations on a tightly regulated market and extensive bureaucracy (Lin, Zhiyong, 2014).

As mentioned in the beginning statement, the Chinese automotive companies are still lagging behind their Western counterparts in numerous areas and these issues need to be responded to, in order to be competitive in the 21th century. Examples are, the necessity to decrease the fuel and electricity consumption in the production processes (China.cn, 2011), to reduce the exhaust emission of the vehicles they produce (Kalmbach, Landmann, 2011), (Ban, et al. 2005), to upgrade quality (Wang, Liao, Hein, 2012), and to decrease staff turnover (Eloot, Strube, Wang, n.d), (Yangpeng, 2013).

These issues need to be responded to since the earlier competitive advantages of cheap production (China.cn, 2011) and modest demands put on safety, quality and emissions are beginning to change and will continue to do so in the years to come (Wang, Liao, Hein, 2012), (Kalmbach, Landmann, 2011). Also, competences associated to solving these problems need to be acquired due to stricter legislation on the domestic market and also in order to capture growing markets worldwide and to gain entrance to the more mature and demanding markets of the US, Europe and Japan (Wang, Liao, Hein, 2012), (Kalmbach, Landmann, 2011).



Legislations, restrictions or characteristics of a market, such as the ones concerning environmental standards also need to be taken into account as they affect the profit and growth strategies of the joint venture.

Highlighted by this discussion, it is important that automotive manufacturers redefine their business models for the realities of the 21st century competition and acknowledge that going global is not a simple transplant of the current business model to a foreign location (Russo, et al 2009).

Consequently, associated to the problems faced by the manufacturers in the Chinese automotive industry, multiple questions arise about how to best manage the cooperation between the involved partners in a joint venture, in order to reach desired outcomes and mutual prosperity. More specifically questions arise concerning organizational structures and practices. When two partners form new joint ventures, questions concerning which managerial and operational practices that should be replicated onto the new entity for most successful effect will be evident. This can serve as stumbling-block for the cooperation as each partner usually perceives their operation method as the superior one (Buckley, Clegg, Tan, 2004).

Knowledge that is transferred from parent firms to the joint venture can be used to create and increase the competitive competences of the recipient. Therefore, making use of the knowledge, competences and skills of the foreign parent organization, which usually is situated in sophisticated and competitive markets, can greatly enhance the competitive advantages and performance of a joint venture subsidiary (Lyles, Salk, 1996).

In previous studies on knowledge transfer, most researchers have focused on the process of knowledge transfer, sometimes limiting themselves to one aspect of knowledge transfer (Cohen, Levinthal, 1990), (Inkpen, 1998). Others have attempted to make more comprehensive investigations, involving several aspects of knowledge transfer (Minbaeva, 2007), (Buckley, Clegg, Tan, 2004) (Szulanski, 2000). Also, some researchers have investigated how Western parent firms can transfer knowledge to the Chinese automotive subsidiaries, but have limited themselves to the study of certain specific mechanisms and processes (Buckley, Clegg, Tan, 2006), (Zhao, Anand, 2009), where the research has been relatively limited in providing an understanding of the interdependent mechanisms mutual effect on knowledge transfer, associated to the identified problems of the subsidiary organizations.

It is against this background that we believe that an investigation should be conducted of how Western automotive manufacturing MNC's, in their joint ventures with Chinese partners, can make use of knowledge transfer, to enhance the two partner's mutual collaboration subsidiary in the best way. More specifically it should investigate how the Western MNC's can be of assistance to the subsidiary in the pursuit of upgrading its competences to a globally competitive level and in improving the operations of the subsidiary through the transferring of organizational competences and knowledge that can remedy acknowledged problems.

### 1.3 Research Question

“How can Western automotive MNC's upgrade the competences of their joint venture subsidiaries in China through the transfer of knowledge?”

This research question will be answered through the analysis of two underlying questions.

- 1) What are the most significant problems the Chinese automotive industry faces, the competencies it lacks and which specific knowledge should be shared from the Western MNC's in order to upgrade their competencies?
- 2) How to successfully transfer knowledge between organizations in a joint venture?

### 1.4 Purpose

The purpose is to provide a comprehensive analysis of the major problems faced by joint venture subsidiaries in the Chinese automotive industry. As well as how Western joint venture partners can transfer knowledge to their joint venture subsidiaries in China successfully as a way to upgrade competences associated to the problems.

### 1.5 Limitations

We will not try to measure the success of knowledge transfer within this thesis. Furthermore we will not take governmental interference and regulations into account.

In this thesis we will present necessary strategies that both the Western firms and the Chinese subsidiaries will have to take to succeed in the ambition of upgrading the competences of the

Chinese subsidiaries. However, we will not engage in discussions with the Chinese organizations. Thus, the study is limited to a Western parenting firm perspective and we will focus our case study on solely one company.

In our thesis we identify the most stressing problems faced by the Chinese automotive organizations that their Western partners should help in remedy. We also account for how the Western firms successfully can transfer the best practices, competences and knowledge to remedy these problems. However we do not try to analyze the best solution to every problem since this would be a too extensive topic and since this is a very subjective opinion for each individual company.

## 1.6 Outline of the Thesis

### **Introduction**

The introduction will consist of a brief background to the problem followed by a problem discussion. We will then present our research questions and its two underlying questions. Finally, this will be followed an explanation of the purpose of thesis and the limitations of it.

### **Theoretical Framework**

In chapter two we bring forth a relevant theoretical framework for the mechanisms and processes of knowledge transfer and how to succeed with it. We later apply this theoretical framework to answer our research question in collaboration with our empirical findings.

### **Methodology**

In chapter three we will present the methodological approach used to conduct this paper. It includes a motivation for our choice of method and approach.

### **Empirical data**

The fourth chapter will present the results of our second and primary data findings that are connected to our two underlying questions.

The first part of the chapter will be dedicated to empirical evidence concerning our first underlying question which concerns the most significant problems for organizations in the

Chinese automotive industry, the competences they lack and what specific knowledge sharing from the Western MNC's that can help in upgrading their competences.

The second part of the chapter will be dedicated to empirical evidence concerning our second underlying question of how to succeed with knowledge transfer between organizations in a joint venture.

For a comprehensible setup of the reading and clarity for the reader, both primary and secondary data will be brought together to answer the two underlying questions and will not be presented in different parts.

### **Analysis**

In the fifth chapter there will be an analysis based on the empirical data as well as the applicable theoretical framework. Our analysis will be divided into two sections for clarity.

A first one that seeks to analyze the problems of the Chinese automotive industry and discuss solutions to the perceived problems. For this analysis there is no applicable theoretical framework. The second one will then be an analysis of how to successfully transfer knowledge.

### **Conclusion**

The sixth and last chapter will present the conclusions that can be drawn from this study by using the two analyses together. The main findings and discussion will be summarized with the aim to answer the research question and purpose.

## 2. Theoretical Framework

### 2.1 Why Knowledge Transfer to a Joint Venture Subsidiary is Beneficial

According to Kogut (1988) A joint venture is an entity comprising of two or more firms which have brought together their resources in a single common legal organization, where one of the most important reasons for forming a joint venture is to share knowledge between partners (Kogut, 1988). According to the knowledge based view, knowledge has a major impact on the competitiveness of firms (Kogut, Zander, 1992). As an entity between two partners with aligning goals, a joint venture provides the structure needed for the sharing of knowledge (Yan, 2000). Joint ventures can be a significant source of knowledge, with a potential major learning payoff for the partners involved, especially when bringing together firms with unique skills and competences. When joint ventures are being managed properly through the gain of valuable insights, tangible improvements can be achieved (Inkpen, 1998).

Joint ventures provide a platform for parent organizations to access each other's resources and competences (Kandemir, Hult, 2005). According to Szulanski (1996), the identification and transfer of best practices within a firm has emerged as one of the most important and widespread practical management strategies. The transfer of best practice cover the organization's replication of internal practices that is performed in superior ways in other parts of the organization and which can be deemed superior to alternate practices both internally and outside the company. The aspect of practice is combined of organizations routine use of knowledge, the tacit knowledge carried by individuals and collaborative arrangements in the organization (Szulanski, 1996), (Kogut, Zander, 1992). A transfer of best practices takes place when a need and the knowledge to remedy the need both exist within an organization. The discovery of the need may then trigger a search for potential solutions which can lead to the discovery and implementation of superior practices (Szulanski, 1996).

Furthermore the knowledge acquired from foreign parents can take root in the joint venture organization and create new knowledge that is useful in the joint venture context, where higher acquisition of knowledge is expected to lead to higher performance (Lyles, Salk, 1996) and where the success of joint ventures is said to be highly dependent on assets such as technology

and management expertise, which often are more important than pure financial assets (Yan, 2000).

Knowledge that is transferred from parent firms to the joint venture can be used to create and increase the competitive competences of the recipient. Therefore, making use of the knowledge, competences and skills of the foreign parent organization, which usually is situated in sophisticated and competitive markets can greatly enhance the competitive advantages and performance of a joint venture (Lyles, Salk, 1996), where knowledge transfer can also play a vital part in the innovativeness of firms. Innovativeness give organizations competitive advantages which enables them to survive and grow (Kandemir, Hult, 2005). For some companies knowledge accounts for a great part of value added, where the transfer of knowledge across boundaries has become an important competitive advantage in the new millennium (Fink, Holden, 2005), some even regard knowledge transfer to be of such paramount importance that it is key to whether or not a subsidiary survives in a foreign market (Buckley, Clegg, Tan, 2004).

## 2.2 How to Transfer Knowledge

The effective operation of global firms calls for coordination between corporate units. The enablement of straightforward information flows is of major benefit to companies, where performance of units within firms are improved through the transfer of knowledge (Argote, 2013). Knowledge is embodied by the customs in an organization and their beliefs (Buckley, Clegg, Tan, 2004). However transferring of knowledge is a complicated venture, where the transferring of technology within the same firm in one third of cases was discontinued after failing (Argote, 2013). Knowledge holds the feature that it is embedded (Cummings, Teng, 2003), where it can be embedded in people, technology, tools or routines (Argote, 2013).

### 2.2.1. Absorptive Capacity

One of the factors that are important for a firm or a subsidiary is the competence to recognize new information, to assimilate it and apply it to commercial purposes. This ability for a firm is called absorptive capacity (Cohen, Levinthal, 1990). The absorptive capacity of an organization will rely on the absorptive capacity of its individual members and it is developed through a

cumulative process (Cohen, Levinthal, 1990), where the quality of the staff assigned to joint ventures will affect knowledge transfer. Also limitations in the number of personnel being able to engage in knowledge transfer will set boundaries for knowledge transfer, where the dedicated resources shape the firms absorptive capacity (Simonin, 1999). However the absorptive capacity of an organization is not the mere sum of the capacity of its members, but it is also dependent on the attributes of the organization itself, where characteristics of the firm such as the communication structures between the firm and the external environment and between different parts of the firm have a strong impact on the absorptive capacity of the organization (Cohen, Levinthal, 1990), when inapt information processing and communication competences are limiting knowledge transfer (Simonin, 1999). There are ways for companies to enhance the absorptive capacity of their subsidiaries and thereby ease the knowledge transfer. Investment in increasing absorptive capacity is for example training in employee language or functional skills (Buckley, Clegg, Tan, 2004).

The efficiency of knowledge transfer is not alone dependent on the abilities of the recipient, but rather on the joint character of both the contributor of knowledge as well as the recipient (Buckley, Clegg, Tan, 2004). If the structure of the different corporate units is very different, the recipient of information will have difficulties to incorporate the knowledge (Buckley, Clegg, Tan, 2004). A subsidiary's absorptive capacity can also be affected by its management structure, where subsidiaries with a great proportion of local nationals have a lower absorptive capacity for incoming knowledge. This is mainly due to language barriers (Gupta, Govindarajan, 2000). Since organizational structure and climate strongly affects the absorptive capacity, it also ultimately affects innovativeness. Organizations must be characterized by behaviors that value and promote learning (Kandemir, Hult, 2005).

In their research, Kandemir and Hult (2005) recognize four imperative behavioral orientations that value and promote learning, which are mutually dependent and not independently sufficient. *Team orientation* concerns to which degree top management engage middle- and low-level management in decision making and encourage collaboration and cooperation. For organizational learning to be effective in a joint venture, hierarchy must occasionally be put aside and the joint venture members must think and work together. *System orientation* involves the requirement to understand the interrelationships and systems within a joint venture. *Learning orientation* concerns to which degree top management encourages organizational members to question the organizational norms that control their actions and behaviors.

Organizations that place high value on learning, can improve their ability to understand and change their actions, which enables them to better function in their environment and reach new effects. Finally, *memory orientation* concerns to which degree top management and organizational structures promote communication and distribution of knowledge between members of the organization. Memory orientation within an organization is strongly linked with process innovations, as it allows the organization to accumulate experience over time and allows an increased understanding of process interactions. Due to the ability for organization to store knowledge through memory orientation, improved performance can be achieved through cost and time reduction.

For knowledge absorption to be successful in a joint venture, organizational knowledge concerning *talent management* must also be transferred (Hartmann, Feisel, Schober, 2010). These are managerial principles concerning strategies to attract and retain highly qualified employees, who can be offered higher wages, better job opportunities and better quality of life elsewhere (Hartmann, Feisel, Schober, 2010), (Tung, 2008). Organizational talents should not only be measured by their added value but also by the difficulty involved in replacing them (Lewis, Heckman, 2006). According to Hartmann, Feisel and Schober (2010) talent management should therefore involve the establishment of an organizational culture that supports the identification, codification, retention and development of talented employees. Suggesting that working talent management principles in China are strategies that take personal well-being and personal plans of their employees into account. Examples of this could include career development opportunities, a communication of the organization's brand and strengths, and group-building spirit activities. Long-term strategic talent management is only possible with high employee retention and low turnover rates.

The speed of knowledge transfer between a Western partner and a Chinese partner are dependent on the ability to understand each other. To increase the amount of primary knowledge which can be implemented by the joint venture, communication between the corresponding parties must be direct. Deficiencies in language skills between the individuals communicating would lead to an increased reliance on translation centers. Not being able to effectively communicate with the source of information first hand does not only slow down knowledge transfer but may also diminish the amount of information being transferred and decrease the chances for that the knowledge being implemented at all in the joint venture (Buckley, Clegg, Tan, 2004).



Other measures such as job rotation or moving employees from subsidiaries to headquarters for learning can also improve absorptive capacity (Chang, Gong, Peng, 2012). However the degree of assimilation of information is highly dependent on the characteristics of the information itself. Knowledge which is tangible is more easily passed on than information which is tacit or otherwise hard to understand and information which is codified in documents and software is easier to pass on than competences not codified (Argote, 2013).

### 2.2.2 Collaboration Aspects between Joint Venture Partners

Many of the problems that joint ventures experience can be traced back to issues concerning cultural differences. Both the partner's organizational and national culture has the potential of effecting all aspects of collaboration between the partners (Simonin, 1999). Differences in culture can lead to cultural misunderstandings which stem from cultural differences can be a factor that severely limits knowledge transfer, though this does not necessarily accelerate conflict if managers are adequately prepared (Lyles, Salk, 1996). These cultural and organizational barriers to knowledge transfer can be removed by the joint venture partners by establishing a good inter-partner relationship (Buckley, Clegg, Tan, 2006).

A problematic issue with managing joint venture partnerships is that there can be disparate interests between the partners, something which creates difficult challenges. To create and maintain strategic alignment, when dealing with two corporate entities with separate shareholders and market pressures is a complicated venture. Where considerations such as whether to promote growth or cash flow can demonstrate how different the goals of the two joint venture partners can be (Bamford, Ernst, Fubini, 2004). The different views the partners may have on the prospect of implementing divergent corporate culture is one concern (Buckley, Clegg, Tan, 2004). Such conflicts can drastically reduce knowledge flows from the parents to the joint venture and also send signals to the joint venture employees that can be both negative and conflicting whether or not to use information sent from the foreign joint venture partner (Lyles, Salk, 1996). Conflicts regarding goals can also, dependent on the preference and perceptions of the two partners, result in that investments in research and development and in developing employee training are being put aside, an action which will reduce absorptive capacity and hold back knowledge transfer (Buckley, Clegg, Tan, 2004).

Knowledge transfer is dependent on the abundance of communication channels between the subsidiary and the knowledge source, (Gupta, Govindarajan, 2000) where networking among managers in different units will have a positive impact on the communication between the subsidiary and the headquarters (Ghosal, Korine, Szulanski, 1994).

### 2.2.3 Means of Transferring Knowledge

Knowledge can be transferred to a joint venture in many different fashions, mainly through the transferring of people, technology or routines to the recipient subsidiary or organization, where the transfer of knowledge embedded in processes and organizational practices are more difficult to transfer than technology alone (Argote, 2013).

Knowledge which is embedded in individuals can be transferred to another location by moving these individuals. This is regardless of the nature of the knowledge, tacit or explicit (Allen, 1977). The capacity to restructure information and apply it to different contexts is one of the reasons why individual are such effective carriers of information. More so they are capable of transferring tacit knowledge as well as explicit (Argote, 2013), where the creation and diffusion of tacit knowledge is facilitated by social interaction (Nonaka, Takeuchi, 1995). Individuals with experience have been found to be able to apply their knowledge to related tasks even when they have not been able to articulate their knowledge (Argote, 2013).

Corporate socialization mechanisms, which build interpersonal familiarity and personal affinity between members of different subsidiaries, increases communication flows between subsidiaries and thus eases knowledge transfer. This can be done by sending joint venture managers to the corporate headquarters (Gupta, Govindarajan, 2000).

Another mechanism for moving knowledge is electronic tools, such as e-mail, information systems, e-learning etc. Where the use of information tools has been found to facilitate knowledge transfer (Argote, 2013). These modern tools facilitate the transfer of both tacit and explicit knowledge where the individual knowledge of many, easily can be composed in one place, accessible for members of the organization independent of location (Argote, 2013). However it has been suggested that face-to-face communication still is the superior mode of interaction (Athanasiou, Nigh, 2000).

### 2.2.3.1 Expatriates

Modern technology have facilitated the connection between people spread across the globe, and is indeed a very important tool in knowledge transfer (Argote, 2013). However, the use of expatriates is viewed as the most important way of transferring knowledge from headquarters to joint ventures in order to increase the performance of the joint venture (Chang, Gong, Peng, 2012). This significance being given because of the expatriates' ability to assimilate and teach often complex information (Chang, Smale, 2013). However, arbitrary deployment of expatriates into subsidiaries is not to be recommended when considering the importance of how critical the competences of the individual expatriate is for the success of knowledge transfer (Chang, Gong, Peng, 2012).

Expatriates have the benefit of understanding the knowledge that the parent company want to transfer as well as have the necessary skills needed to utilize this knowledge. However having knowledge tied to an individual creates difficulties in the transfer of the same. A reason for this is that tacit knowledge is personal and built from the experience of an individual and subsequently hard to codify. It is also embedded in action and in individual commitment tied to a particular context. The transfer of this knowledge is highly dependent on the skills of the expatriate and this person's motivation and the opportunity this individual have of transferring it. In some cases the expatriate is chosen on the basis of this person's technical abilities, which could be someone who might not have the abilities needed in order to successfully and efficiently share their knowledge. Something which is particularly complicated when the knowledge is embedded in personal experience or when the goal is to transform the mind-sets of the employees of the subsidiary (Chang, Gong, Peng, 2012).

The role as expatriate demands a wide range of skills which ranges from everything from communicational ability, conflict resolution as well as the ability to function in a new cultural setting (Chang, Gong, Peng, 2012). The challenges for a Western expatriate manager in a joint venture in China could be extraordinary. In order to facilitate the experience cross-cultural training could be a helpful measure (Selmer, 2005) For the expatriate it is important to have the ability not only to overcome the language barrier, but also to understand how different values and learning styles associated with the new cultural context affects the transfer of knowledge to the joint venture (Chang, Gong, Peng, 2012), something which can be described as the expatriates *Cultural Awareness* (Darby, 1995). Failure of understanding the local culture and

social context could damage the relationship between the foreign and local executives (Selmer, 2005). If the expatriate can deal with these difficulties effectively, the transfer of knowledge to the subsidiary will increase (Chang, Gong, Peng, 2012).

The extent to which the expatriate interact with local employees can be of critical importance for the success of knowledge transfer, something which effectively occurs when social ties are established between the expatriate and the recipient. For instance the transfer of tacit knowledge requires extensive interaction (Chang, Gong, Peng, 2012). It is however suggested that knowledge and skill transfer most frequently occurs as a result of daily interaction at the operational level, not at top management level (Yan, 2000) where expatriates often are placed within the subsidiary (Tian, 2007).

The expatriate also need to strengthen ties with the office at home in order to create the ties between the offices in order to aid the building of a contact network, and thus assist the transfer or knowledge (Chang, Gong, Peng, 2012). The extensive use of expatriates, where all or most key positions within the subsidiary are occupied by expatriates can have several drawbacks for the company. For instance it could lead to a concept which is called *cultural myopia* where management fails to understand the host country environment and culture, which takes time to learn and during the meantime could provide dire results (Chang, Gong, Peng, 2012). Transfer of organizational expertise is highly dependent on the people involved and attempts to transfer this knowledge could be counterproductive if the people assigned with the tasks are not qualified to deal with cross-cultural issues (Fink, Holden, 2005).

Furthermore filling every key position within the subsidiary may cause resentment among local employees, whose career opportunities within the company are being heavily reduced. This could lead problems with retention of competent personnel, besides being a costly strategy where the cost of expatriates being multiple the cost of local managers (Tian, 2007).

However knowledge transfer always has to be studied with the consideration of the absorptive capacity of the subsidiary in mind. More knowledge can be transferred from the expatriate and received by the subsidiary if the absorptive capacity of the subsidiary is greater, something which will improve the performance of the same. Literature also suggest that the greater the absorptive capacity of a subsidiary the greater the extent of expatriate knowledge transfer

behavior, where high absorptive capacity of the subsidiary could serve as a motivation for the expatriate (Chang, Gong, Peng, 2012).

### 2.2.3.2 Collective Teaching

Organizations themselves can be depositories of knowledge where some memory and experience are accumulated and maintained within the routines of the organization, regardless of the passage of time or employee turnover (Levitt, March, 1988). When joint venture parents transfer organizational competences to the joint venture subsidiary, they transfer more than mere individually held skills. They also transfer knowledge which is embedded in the organization itself. This knowledge which is collective is embedded in the minds of the members of the organization, regarding how to coordinate, share, distribute and recombine knowledge (Zhao, Anand, 2009). According to Kogut and Zander (1992) collective knowledge is more valuable than individual knowledge because it recombines individual knowledge, something which is key to the value creation process.

In order to understand collective knowledge and how the community functions to solve complex problems, collective teaching is needed (Zhao, Anand, 2009). The concept highlights how problem solvers act when investigating and correcting problems, and how they use resources that are available to them when performing these tasks (Hong, Easterby-Smith, Stanley Snell, 2006). This is possible only through face-to-face interaction because its only then all senses can capture the entire spectrum of process embedded in human interaction (Athanassiou, Nigh, 2000), because of the intangible nature of interpersonal and cross-functional patterns (Zhao, Anand, 2009).

The benefits of collective teaching over individual teaching is mainly its ability to teach and explain contextualized knowledge, something which cannot be fully revealed by an individual teacher, when information is situational or otherwise difficult to explain (Zhao, Anand, 2009). Tacit elements may require learn-by-doing approaches which are commented by an experienced tutor (Athanassiou, Nigh, 2000).

One way of achieving this complex knowledge transfer is to send subsidiary employees to the knowledge source, allowing them to get a greater understanding of the cultural and institutional context in which the collective organizational knowledge is embedded (Zhao, Anand, 2009) The organizational ability is improved by the replication of knowledge on an experimental

basis, or basically learn-by-doing, where the recipients exposure to new routines by interacting and observing is something which will facilitate their learning (Yan, 2000). This process could also be reduplicated by sending a sufficient number of expatriates to the subsidiary (Zhao, Anand, 2009).

As previously mentioned, the absorptive capacity of an organization plays a key role when transferring knowledge between units of an organization, where Cohen and Levinthal (1990) argued that an organizations ability to receive information and put it to use is not alone dependent on the sum of the skills held by each of its members but also heavily affected by the company structure. The implication is that the firm holds a collective absorptive capacity for which the firm's ability to engage in knowledge transfer is highly dependent. This organizational ability is reliant on structural attributes as well as cultural attributes, where the former includes coordination issues and the latter being associated with employee motivation (Zhao, Anand, 2009).

### 2.3 Disadvantages of Knowledge Transfer

While knowledge transfer is essential to provide the synergies associated with forming joint ventures, these processes are expensive and involves not only direct costs, of for example the cost of sending expatriates, but also indirect costs. For instance, indirect costs could be the opportunity cost of a knowledge source as well as the recipient. Where the later spends time locating sources of information, negotiating and integrating the acquired knowledge. Also the quest for obtaining knowledge through transfer is an opportunity cost because one cannot search for information and engage in self-learning at the same time, as well as an opportunity cost for the source, taking time from other assignments (Levine, Prietula, 2011).

In some cases the use of knowledge transfer is marginally beneficial to the subsidiary. Employee learning at the individual level in combination with greater access to organizational memory can undermine the benefits of knowledge transfer (Argote, 2013). According to Walsh and Ungson (1991) organizations are memory processing systems which exhibit memory that is similar in function to humans. Individual learning and organizational memory emerge as substitutable to knowledge transfer, heavily inflicting on the possible advantages of the later (Argote, 2013).

## 2.4 Summary of the Theoretical Framework

Knowledge transfer has been given great importance in order to improve joint venture subsidiary performance (Inkpen, 1998), (Yan, 2000), (Buckley, Clegg, Tan, 2004), (Kandemir, Hult, 2005) and the competitiveness of firms (Fink, Holden, 2005), (Buckley, Clegg, Tan, 2004), where the implication of introducing best practice is seen as one of the most important management strategies (Szulanski, 1996). The theoretical framework on how to transfer knowledge was chosen on the basis of importance for improving joint venture subsidiary operations through the introduction of best practices. The receiving organization's absorptive capacity has been given great importance in the literature (Cohen, Levinthal, 1990), (Buckley, Clegg, Tan, 2004), (Argote, 2013), (Minbaeva, et al. 2003). Because of the weight being given to this ability on the receiving organizations behalf, it is reasonable to examine its effect on knowledge transfer in the Chinese automotive industry. Furthermore the success of joint ventures is highly dependent on the collaboration between the parent firms (Jeffries, Reed, 2000) where cultural factors both on the national level and the organizational level can affect all types of collaboration, this including the knowledge management (Simonin, 1999). Also the means of transferring both tacit and explicit knowledge (Argote, 2013), (Chang, Gong, Peng, 2012) is highly relevant to this study.

## 3. Methodology

### 3.1 Research Method

The writers Shields and Rangarajan (2013) state that applicability of quantitative and qualitative research method techniques depends on what the project is attempting to accomplish. But that when the researcher is trying to analyze an occurrence that is not directly measurable, where statistical data collection is not suitable and where the research can be characterized as preliminary, designed to orient or acquaint the researcher with a complex occurrence, the qualitative technique is more appropriate.

Jacobsen (2002) also states that a qualitative research approach is characterized by certain aspects. The approach is considered applicable when research in the field can be developed. While extensive research on knowledge transfer within joint ventures has been conducted, we are focusing our research on the small niche of knowledge transfer from Western MNC's to Chinese subsidiaries in joint ventures within the automotive industry as a mean to upgrade competences and remedy experienced problems. We therefore find the definition applicable. It is also appreciated as being more nuanced and comprehensive than the quantitative approach and it is also considered a more flexible approach in which you can adjust theoretical findings to collected empirical findings. Considering the abstract concept of knowledge transfer and the earlier limited research in our specific niche field of knowledge transfer, namely within joint venture operations in the Chinese automotive industry, we find a qualitative research approach to be most suitable

### 3.2 Research Approach

In order to relate the theory to our empirical results we will use inductive research approach, in opposition to the deductive research approach. When engaged in deductive research, the researcher moves toward the development of a logical explanation or theory and then tries to gather evidence to test the theory. Inductive research begins with a data collection and analysis that then leads to theorizing. As our process will be that of information and data collection followed by analysis and then formation of theory, we are engaged in inductive research (Shields, Rangarajan 2013).



### 3.3 Case Approach

For our thesis we have decided to use the case study as our research method. The case study method is an empirical inquiry method where the focus is on investigating a contemporary phenomenon within its real-life context and it is suitable for research questions that are typically formulated in the form of “how” or “why” (Yin, 2003). We therefore find it highly applicable to our research question.

Furthermore, case studies can be divided into three categories, exploratory, descriptive and explanatory (Yin, 2003). According to writers Shields and Rangarajan (2013) exploratory research is used when the understanding of a topic can be developed. We therefore perceive the research question to be of the exploratory kind.

The prevalent mean when conducting research based on the case study method is that data collection often derives from numerous sources such as reports, books and interviews, something which is exemplified in our thesis (Yin, 2003). Our aim with the thesis is to absorb as much information as possible to bridge the knowledge chasm. We will therefore follow the exploratory, qualitative and inductive research approach within the case study.

In order to answer our research question we found it to be of advantage to separate it into two underlying questions. One that focuses solely on how to successfully transfer knowledge between organizations in a joint venture. Then a second one that focuses on the most significant problems in the Chinese automotive industry, the competences it lacks and what specific knowledge sharing from the Western MNC's that can help in the upgrading its competences. This, since in order to be able to answer the question of how Western automotive MNC's can improve the operations of their joint venture subsidiaries in China through the transfer of knowledge, one must first identify what specific knowledge and competences that is in need of upgrading for Chinese automotive companies. Then secondly, what mechanisms and processes that are necessary for the Western organizations to succeed in the transferring of knowledge. It was important to form a comprehensive understanding of the two subjects independently and having accumulated thorough knowledge of the respective aspects, before making a joint conclusion.

### 3.3.1 Company Selection

The selection of cases is an important aspect of building theory from case studies. As the selection of the right research object(s) controls extraneous variation and can help in defining the limits for generalizing the findings. The selection also plays into effect when it comes to the scrutiny of empirical and theoretical findings and reaching an outcome of these (Eisenhardt, K. 1989).

Through the bachelor program International business and trade at the University of Gothenburg, School of Business, Economics and Law and their executive faculty we received contact with a representative of Volvo Group.

For our case study we therefore had the opportunity to receive information from and interview managers at Volvo Group. With the difficulty of finding a multitude of global Western automotive companies with operations in China in the near proximity, we appreciated the opportunity to accumulate an extensive depth instead of breadth from a large Western automotive company with great knowledge and experience within our field of study.

As a global automotive company with a previous history in China, and which currently is in the process of engaging in a joint venture with a Chinese automotive company, Volvo Group served as an exemplary organization to interview when researching knowledge transfer within joint ventures on the Chinese automotive industry.

## 3.4 Data Collection

Information supporting or contradicting in a case study can be derived from six different sources: direct observation, participant observation, physical artifacts, interviews, documents and archival material (Yin, 2003)

Our focus in the data collection has been mainly on interviews and secondary data collection from archival material, documents and reports. Where we have used an approach which can be described as triangulation of data, where the researcher makes cross-checks on the empirical findings of both primary and secondary data in order to compare the findings. This approach

could provide results which are controversial or even conflicting, but the method could also be a source of new ideas and angles (Eriksson, Kovalainen, 2008).

### 3.4.1 Primary Data

The source for primary data was qualitative interviews. The material used for the interviews consisted of 28 questions based upon the theoretical framework of knowledge transfer as well as empirical data concerning both the first and second underlying questions. The interviews were recorded in order to accurately present the answers given by the persons being interviewed and not to mistakenly alter the responses.

One of the interviews was conducted in English and one interview was conducted in Swedish. The later was translated, with the aim of accurately provide the meaning of the respondent.

#### 3.4.1.1 Approach and Choice of Interviewees

Writers Lindlof and Taylor (2011) state that while interviews can be divided into a structured, unstructured and semi-structured format, for qualitative information gathering and interviews, an informal and semi-structured approach is exemplary. Where the interviewers engage in some planning before the session, in particular by preparing research question. This plan is then followed to most extent, but the interviewers can also respond flexibly to any contingencies which arise during the interview. Allowing the interviewers to get additional depth and knowledge from the respondents. We therefore followed a semi-structured format when conducting our interviews.

We also placed great emphasis on finding the right interviewees for our research. We were looking for interviewees that possessed extensive experience within our field of research, knowledge transfer in joint ventures and experienced problems in the Chinese automotive industry. As we hoped they could provide us with a deeper and more thorough insight into the subject.

Within Volvo Group we were allowed to interview two managers with great insight into the company's joint venture operations who both had several years of international experience in subsidiaries of the company.

The third interviewee was an academic expert within the field of knowledge management and organizational learning at Chalmers University of Technology.

We had a great number of questions prepared to ask our interviewees, in order to gather as much empirical data as possible. Due to the fact that we had 1-1,5 hours per interview we still had sufficient time to ask all our questions and had time to ask follow up questions if anything was unclear or if we or the interviewee wanted to elaborate something.

The interviews took place at Volvo Group for the two managers of Volvo and at the University of Chalmers for the academic expert and was both audio recorded and transcribed at the consent of the interviewees.

After finishing the interviewees we spent a small amount of time to summarize the discussion to see that the interviewees agreed with our notes. Also, after having transcribed the audio recording into exact word for word text we then allowed the managers to give their consent by e-mail. The academic expert did not feel it was necessary for us to do the same.

Finally, after having put the interviewees with the managers of Volvo into written form in our thesis, the thesis was sent to Volvo for a last approval before we handed it for examination. The academic expert did not feel it was necessary for us to do this either and therefore we used that interview material directly in our thesis with his consent.

### 3.4.2 Secondary Data

The secondary data is comprised of empirical evidence from various sources such as industry publications and reports, academic journals, news articles and dissertations. The data was retrieved by searching on internet based search-engines and by searching the on-line based resources of the library of the University of Gothenburg, as well as loans of physical resources from the same library.

### 3.4.3 Data Analysis

A qualitative analysis can be divided into three different steps. *Interpretation* which is to translate the information into understandable form. *Structuring*, which is the strategy of arranging, collecting and grouping material into specific categories. Then finally *compression*,

which is the step of compiling and summing up the information (Langemar, 2008). In our analysis of the data we followed these steps.

When the collection of primary and secondary data was finished, we begun by doing a thorough analysis and a selection of the material, to be certain that all material was relevant to us in our research. When conducting the selection of the primary and secondary data we searched for relevance to answering our two underlying questions.

We firstly extracted primary and secondary data that could support our understanding concerning how to succeed with knowledge transfer in joint ventures.

Secondly we extracted primary and secondary data that could support our understanding concerning the most relevant problems faced by the Chinese automotive industry and what competences that was needed to respond to the problems and help the Chinese automotive industry reach a competitive level.

For the primary data this meant that we had to transcribe the interviews and search for comparing or contrasting opinions regarding information that was relevant to us in order to answer our research question. For the secondary data this meant that we had analyze the abundance of reports, documents, news articles and literature that discusses the Chinese automotive industry and try to find mutually acknowledged opinions that could help us answer our research question.

#### 3.4.4 Presentation of the Data

When presenting our empirical findings we used an approach where we divided the two underlying questions in to certain themes or specific aspects that affected the two underlying questions in their entirety. Within these themes we then used a mix of both primary and secondary data to thoroughly respond to the specific aspects that could help us in answering the two underlying questions. While this approach cannot be considered to be the most commonly used method to present empirical data it still falls within accepted methods of presenting empirical evidence. We used this approach since we believe it would provide a much more comprehensible understanding for the reader, since the setup of presenting consenting or dissenting information within certain specific research spaces would provide a far more coherent setup than presenting it apart.

### 3.5 Validity and Reliability

The study we have done is qualitative and researchers are divided in their beliefs whether or not the accuracy of reliability and validity can be evaluated in the classic definition of the words when qualitative analysis is being assessed (Eriksson, Kovalainen, 2008). Either way an attempt can be made.

As previously stated we have used multiple sources of information and these sources are both primary and secondary. This allowed us to get multiple views on the same subject. This use of multiple sources should increase the validity of the results (Eriksson, Kovalainen, 2008), although the results could prove to be conflicting.

The secondary empirical data consists of many sources, from both researchers and other highly recognized sources. The probability that their research reflects the actual situation in most cases is very high and can therefore be considered both reliable and have high validity (Sreejesh, Mohapatra, Anusree, 2014).

The primary data could also be regarded as being both reliable and to have high validity, this because of the fact that the people being interviewed have great knowledge in the field. The results provided by these persons have high validity and legitimacy because of the accumulated experience of these persons being interviewed, and their experience should therefore be very well linked to the real environment and in this aspect provide a high external validity (Sreejesh, Mohapatra, Anusree, 2014). The interview questions were linked to the theoretical background we had chosen in order properly relate the questions asked to the subject of investigation where most of them were open ended in order to get answers not distorted by being suggestive. Something which could decrease validity (Sreejesh, Mohapatra, Anusree, 2014).

### 3.6 Critique

However despite the legitimacy of the knowledge attributed to the persons we interviewed and the validity of our secondary sources, our ambition to provide a general view on how Western MNCs could improve the operations of a joint venture with a Chinese partner in China, is not a universal proposal. The results cannot be said to be fully applicable for every joint venture partnership in China. They could serve as guidelines, but the findings of our research can never

be universally applicable for joint venture partners establishing a joint venture in China, because of the existence of different organizational structures and cultures within organizations as well as different goals of the joint venture partners, where the market conditions can be said to fully comply with the research for every company (Sreejesh, Mohapatra, Anusree, 2014). Of course a larger sample of persons being interviewed would have provided us with even more information, with results that would be more comprehensive and more conflicting, increasing the connection to the real circumstances. Therefore the recommendation would be to have a larger sample. Another interesting aspect would be to conduct a large scale quantitative research, where aspects of knowledge transfer could have been ranked by their importance, something which could provide more quantifiable data.

Also, certain critique could be directed towards our selection of the theoretical framework, since certain specific parts of it refer to older sources. However the older sources, from which we draw support, are considered authorities in the research area due to their contribution to the theoretical framework and are often recurring in recent studies within the field of knowledge transfer.

Finally, after having conducted our interviews we felt that some of our interview questions were too similar. Also the interview questions might sometimes have been slightly ambiguous. This sometimes led to interviewees responding to questions in a manner that was not related to our research questions and therefore had to be left out of the thesis. Due to a limited timeframe, one cannot wait too long before conducting the interviews but in hindsight we wished we would have had the more thorough knowledge we possess today when formulating our research questions.

## 4. Empirical Findings

### 4.1 Empirical Findings Concerning the Chinese Automotive Industry

#### 4.1.1 A General Overview of the Chinese Automotive Industry

In order to cope with an ever increasing competitive global environment, voices are being raised that the Chinese automotive industry need to reinvent itself and come to grips with certain aspects that is making it limp behind its international competitors. The perception is that to capture its own rapidly growing market and not lose this to its foreign competitors and in order to be able to capture foreign markets, the Chinese automotive industry must become more innovative, more productive and increase the quality of its manufactured goods.

Considerations such as tightened regulations concerning emission standards is expected to put further increased pressure on the Chinese automotive manufacturers to decrease the fuel and electricity consumption in their production processes (China.cn, 2011) and to reduce the exhaust emission of the vehicles they produce (Kalmbach, Landmann, 2011), (Ban, et al. 2005), not only to gain access to foreign markets that have much stronger restrictions, but also to be able to remain on the Chinese market as the Chinese government implements stricter and stricter environmental restrictions.

The mentioned issues for the Chinese automotive industry coincide with a highly volatile employee market in China, characterized by high staff turnover (Eloot, Strube, Wang, n.d), (Yangpeng, 2013), (Shu, Liao, Bravery, 2011), fast increases in wages for Chinese employees and where Chinese manufacturers are struggling to find skilled and suitable personnel for their operations (Price, Bourgois, 2012). Consequently, the industry is regarded to have severe organizational structural and managerial issues that it needs to address.

In years to come, a consolidation on the Chinese automotive market is also expected to take place due to governmental policies and competition factors. While the implementations of the policies has not considered to have been successful so far, the Chinese government are seeking to decrease the number of actors on the market in order to make the remaining actors more competitive (Yu, 2013) (Chao, 2013). At the same time, competitive pressure is expected to push out ineffective companies. The fast growing Chinese automotive market will in opposition to common belief not enable many actors to profit on it, but instead create huge potential for the few actors who manage to capture it. (Shirouzu, 2009)



We will here bring up some of the major issues faced by the Chinese automotive organizations and present findings why these issues are perceived to be hampering growth and development.

#### 4.1.2 The Human Capital

One of the major observed difficulties for the Chinese automotive sector is divided into a tripartite issue, namely the challenge of finding qualified staff, the challenge of retaining them and the sharp increase in wage cost for these skilled employees.

The challenge of finding qualified staff is considered to be attributable to numerous factors. Firstly, the overall and long term outlook for the workforce has to do with the demographic transition in China towards an ageing population, a result of the one-child policy which will have a severe impact on the size of the labor force in the long run. In 2012, China passed a landmark when its 'working age' population decreased for the first time (Chang, 2013). Also, the cohort of 15 to 24 year olds which has entered or will enter the workforce, peaked in 2005 at 227 million and is expected to fall to 150 million by the year of 2024 (Jacob, Waldmeir, 2011). Secondly, the rural labor pool is no longer undepletable. The Eastern industrialized regions of China are struggling to find both skilled and unskilled labor as workers are resettling and locating in central or Western China, closer to home and where living conditions are cheaper (Xinhua, 2014). Furthermore, a very sincere problem that China faces is that while there is a great shortage of workers in many industries, the match between young graduates and the needs of the Chinese industry is poor. The Chinese society places high value on academic education while vocational education is held in contempt. This is occurring in a time when China needs well-trained workers for their product-oriented economy and not academic scholars (Wang, 2013) The mismatch of the education systems has gone so far that seven out of ten students in their final year have not signed an employment contract and it has created a generation of students that are regarded to be over-educated but under-skilled. (Wang, 2013)

Due to their high level of education many college graduates are also considered over-confident and unwilling to compromise when it comes to salaries, working conditions and career developments. Strengthening the downward spiral of mismatching between employees and employers. (China Labour Bulletin, 2013). To respond to the demand for well-qualified employees many foreign automotive companies with production in China have begun sponsoring the training of young specialists. The companies offer this training at separate

vocational schools and in collaboration with colleges and universities. In the training a strong emphasis is put on education and training towards the standards of each respective manufacturer and its products (Windelband, Arold, Spöttl, n.d). This, since more skilled employees are considered to have a positive effect on productivity and growth within organizations by increasing competences in adaptation, implementation and creation of new technologies and processes (Landesmann, Leitner, Stehrerand, Ward, 2009).

As a result of the labor shortage in China and the legislation which recently has been implemented, that defines minimum wage for workers, great increases in the wages of employees has taken place. (China Labour Bulletin, 2013), (China.cn, 2011).

Finally, in recent years a change of attitude among Chinese workers has been observed. The perception of Western manufacturing firms was long perceived to be that they perceived the main incentive for work among Chinese employees as money. However this perception is now being challenged as outdated and wrong (Metters, King-Metters, 2008). The impression is considered to once have held some value and therefore is considered to linger on among Western organizations from the early days of relocation to China in the 1980's. Furthermore some of these preconceptions is believe to stem from Western firms interaction with mainly migrant laborers in the special economic manufacturing zones, for whom the sole incentive of money might be more accurate, as these laborers to a greater extent seek to make money to send home to their families (Metters, King-Metters, 2008).

Today motivations of workers in China is also expected to have started to shift, which accentuates and explains the trend of high turnover rates of employees. Salary and benefits still play an important role for Chinese workers, but other values such as the public reputation of the company, management style, a good work-life balance, training systems and promotion opportunities have made strong headway in desired traits of companies (Price, Bourgois, 2012). It is considered a trend that is likely to continue and increase. It is therefore considered that major cultural shifts have changed the attitude of Chinese workers. This has been done to such an extent that studies now reveal that the main incentive for keeping employees within the automotive industry is no longer direct salary or benefit increases, but instead promotional opportunities and increased responsibilities within a company. (Price, Bourgois, 2012).

The notion of a mismatch between industry demand and education is brought up by one of our interviewed managers (Interviewee #2). He expresses that theoretical knowledge is available to a great extent but believe that experience is much harder to find. Especially hard is finding well-educated engineers with experience.

Connected to the issue of rising wages in China, one of the managers we speak to raise the awareness that there might be big differences between hiring Chinese workers from any of the big cities on the Eastern shore board, compared to workers coming from the countryside. He states that many of the people from the countryside are poor people who work hard for their own and their families living. When it comes to retention of workers, these workers are generally more motivated by money compared to workers from the rich coastal regions (Interviewee #1). Strategies for employee motivations and retention can therefore differ depending on the certain level the employee have met in living standards. One of our interviewees express that while money is still considered a very important aspect for most Chinese employees, motivational tools can start to differ when having reached a certain position within the company. Once you have reached a certain level of salary, other aspects might become more important (Interviewee #3).

Both the managers of Volvo we talked to expressed a perceived general issue of retaining personnel in China. However, they believe their organization to have succeeded in implementing strategies for the retention of workers and state that this is something they have had to work with in their subsidiary operations (Interviewee #1), (Interviewee #2). Successful strategies for employee attraction and retention was perceived to be employee recognition and appreciation, training and development opportunities, mediating the company's strong brand, flat and inclusive organizations with little hierarchy and lastly an organization with international opportunities which is perceived to especially attract young Chinese workers (Interviewee 1#), (Interviewee 2#).

Our third Interviewee also talked about the creation of a community surrounding the company, where social activities and social support could prove to be beneficial for personnel retention. In Chinese culture, people are very loyal towards their families and by turning the company into a sort of pseudo-family it is possible to reduce employee turnover and increase engagement (Interviewee #3).

The managers of Volvo do not perceive problems with investing in personnel even though they might be poached to other organizations, as they express that they have been quite lucky with their hiring and had little staff turnover. When it comes to competing for personnel it is mainly foreign brands that are perceived to be competing for the same talent (Interviewee #1). Concerning training of the employee's one of the managers also bring forward his view, "People may say, what if you educate people and they leave your company? But what if you don't and they stay? Then the cost is twice as high" (Interviewee #2).

#### 4.1.3 Organizational Structure and Managerial Principles

The Chinese automotive industry is perceived to be facing numerous issues connected to organizational management. As touched upon earlier the demands of Chinese workers have changed significantly and organizations must stand out in the competition for the human capital. We will here try to cover a few of the most significant issues concerning organizational structures, business culture and managerial principles that face companies on the Chinese automotive market.

The organizational structure and the management of employees in Chinese companies were long characterized by, what is referred to as *The Iron Rice Bowl Scheme* or *Danwei* in Chinese. It is a Chinese idiom that refers to a system of employment that offers good job security, if not life-time employment as well as high salary together with strong benefits, while not being connected in any way to job performance (Xie, Lai, Wu, 2010), (Curtis, 2011). Implemented under the rule of Mao Zedong, the idiom refers to a favor scheme often exercised in state organizations or state run companies, but which trickled out into Chinese business culture. In order to reach high ranking positions within state controlled organizations, connections, favors and cronyism was key. In this aspect the system can be compared to the traditional Chinese favor system *Guanxi*. Just as the *Iron Rice Bowl Scheme*, *Guanxi* refers to personal relationships between people who can make demands of each other. The stronger the *Guanxi* is between two people, the stronger demands can be put forward. Essentially both the favor systems bottoms down in a *who you know is more important than what you know* culture (Tung, Worm, 2001). As a result of the initially mentioned *Iron Rice Bowl Scheme*, Chinese workers without connections were discriminated from positions or advancement within state controlled organizations even while boasting stronger merits. The system led to highly ineffective

organizations and eventually had to be abolished due to crippling inefficiency, and since young Chinese to a large extent have adopted a Western mindset where benefits should be based on merit. However, backed up by long-standing traditions and people in positions of power wishing to keep their current position, the favor schemes are considered unlikely to disappear entirely (Xie, Lai, Wu, 2010).

The remnants of the *Iron Rice Bowl Scheme* is evident still today in state run organizations, such as the state controlled automotive manufacturing companies. Many of these companies is considered to be struggling to adapt to a competitive environment and in adopting a business mind-set (Eloot, Strube, Wang, 2013). One of the issues faced by these companies is that they lack an approach in creating incentives for employees, and in nurturing these to climb up the organizational hierarchy. Connected to the *Iron Rice Bowl Scheme*, the state-owned enterprises are also considered to fail in firing underperformers as well as failing to reward, promote or create incentives for employees and managers with strong merits (Eloot, Strube, Wang, 2013). Some experts also state that China has become a victim of its own success (The Economist, 2007). Since the Chinese manufacturing sector has been developing so fast, organizational competences has not been able to keep up. This mainly takes the form of a lack of experienced management with international know-how, which is a rare commodity in China and which is even harder to retain as the demand is growing significantly faster than the supply of qualified candidates (Eloot, Strube, Wang, 2013), (Eloot, Strube, Wang, n.d). With the aforementioned high turnover rate among employees, management cannot address the root causes of the observed issues, but must instead engage in full time *firefighting* (Eloot, Strube, Wang, n.d). This difficulty is considered to make it very hard to achieve success in skill-building efforts (Eloot, Strube, Wang, 2013).

Finally, current managerial practices and organizational structures within Chinese enterprises are perceived to serve as a great clog when it comes to fostering innovation, creativity and freethinking. In the large context, apart from the effect of *Guanxi* and *The Iron Rice Bowl Scheme*, this is expected to derive from the fact that Chinese society and Chinese companies are run according to traditional Confucian values. According to Confucian values everybody has their place within an organization, hierarchy is strictly adhered to and dissent is not expressed (Goh, Sullivan, 2010). As a result, management practices in China have been considered to educate workers to be obedient to their superiors and blindly follow instructions. Consequently the experienced issues have been that Chinese workers have done exactly as told,

no more and no less. In opposition to the west where feedback and personal opinions are accepted and often welcomed from employees by the management, Chinese workers are considered afraid to make their voice heard and express new ideas or dissent with current processes (Paritzky, 2011).

In recent years Chinese enterprises have been perceived to be taking steps towards a reformation though, as a generational change have taken place and as China have become aware that this attitude is depriving Chinese enterprises of progressivity (Paritzky, 2011). While the older generation of Chinese workers appreciate hierarchy and a strict top-down leading approach, young Chinese workers, who are now being hired and starting to join the management ranks of companies, have been exposed to new ideas through travelling, study and work experiences abroad and are considerably more outspoken and flexible in their view on hierarchy and leadership (Paritzky, 2011)

To attract and retain these coveted young professionals, which are considered so necessary for Chinese enterprises in the contemporary knowledge intensive and global economy. Corporate culture has become a competitive force, with the view that it is important that this culture is not only comprised of certain beliefs, but that it is expressed consistently through everyday business operations, management communication, and employee recognition (Raynaud, Eagan. 2013), (Frenkel, Li, 2010). In order to draw from this opportunity and the competences of this generation, experts state that automotive companies operating on the Chinese market should strive to overcome the shortcomings of obsolete Chinese management practices, rooted in traditions. Traditions that have rewarded good administrators over free-thinking innovators and created an organizational culture where the exchange of ideas between employees has been hindered by a culture which have discouraged creativity, curiosity, critical thinking and the collaborative approach, which are considered the fundamental brick stones of advanced manufacturing (Magnus, 2012).

Talent-driven innovation is considered the number one competitive factor among manufacturing companies in the world (Allen, Echevarria, Wince-Smith, 2013). Skill shortages within manufacturing companies therefore become problematic and may have a negative effect on innovative performance. (Tether, et al. 2005)

When asked if there was any certain organizational or business culture elements that was perceived to hamper development or innovation in the Chinese automotive industry, as well as

if there was any elements that could be perceived to be of advantage or disadvantage in attracting and retaining personnel. The managers both independently but very consistently identified a big problem with the hierarchical structures and closed culture in both China as a market and also the automotive industry as a very traditional and conservative industry, and also expressed very consistent views of the problems related to this (Interviewee #1), (Interviewee #2).

Within the Chinese organizations it was considered that there is a problem that employees and managers do not reveal shortcomings or lack of knowledge which makes competence development very hard. Managers in a more open cultures were perceived to understand that they do not need to know everything, and that organizations in themselves own and carry knowledge. Hierarchical organizations have a much harder time to disperse knowledge and have limited cross-functional collaboration within the organizations (Interviewee #2). Also, there has for long been a prevalent mentality of “If I do nothing, nobody can blame me that I have done something wrong” (Interviewee #1).

Furthermore, the hierarchical and closed business structure is perceived to have a strong effect on the innovative competences of the organizations, in terms of upgrading existing processes, problem solving or inventing new products or services (Interviewee #1), (Interviewee #2). In Chinese organizations high level knowledge is abundant, but the view is that organizations should focus less on solely carrying vast amounts of knowledge as means for upgrading these innovative competencies and instead carefully regard creative aspects, like thinking in new patterns and turning the knowledge into new solutions (Interviewee #2). However, while problem solving or developing new products or processes might be dependent on creativity. It is also considered highly dependent on control and defined frames. One manager states that Western organizations might have become too creative, which inevitably calls for clearer limitations and that Western automotive MNC’s can actually learn how to get things done faster and more forcefully from their joint venture partners in China. Democracy and openness within organizations generally provides very good results, something that Chinese partners should learn from the Western partners, but the view expressed is that it might slow things down and disperse focus (Interviewee #2).

Finally, both managers identified young Chinese workers as key in upgrading competences in the Chinese automotive industry (Interviewee #1), (Interviewee #2). The problem with the prevailing business culture is that unless you have reached a certain age or position your thinking is not worth much (Interviewee #1). China is considered a special case though, when

compared to many countries. Because today in China, the young people are the ones with education, who speak English and who have been abroad and accumulated international experience (Interviewee #1). They are more likely to accept and absorb new ways to do things (Interviewee #1), (Interviewee #2). The current issue only being that they lack experience (Interviewee #1). Therefore young people are expected to ultimately change the prevailing business culture and introduce more elements of an open and collaborative business environment (Interviewee #2).

#### 4.1.4 Product and Process Competitiveness

Low quality of their produced goods is observed as a significant issue for the Chinese automotive industry, where observers today express that a large gap exists between Chinese manufacturers and the world-class automotive manufacturers in products and processes (Ban, et al. 2005). With the aforementioned expected consolidation of the market, for any Chinese automotive company wishing to survive on the long-term it is considered necessary to develop competences equal to these manufacturers (Ban, et al. 2005)

While many Chinese automotive companies previously have been able to rely on support from local governments or the national government, this support is not expected to protect them from competitors with better quality vehicles in the future. The survival of any company in the next few years will instead depend on its ability to overcome the quality gap (Ban, et al. 2005).

Despite this evident need to upgrade their competences, many Chinese automotive companies are considered to have difficulties in increasing quality as they lag behind in spending on research and development. While many international companies are basing their research and development strategies on a 20 to 25 year future outlook, many Chinese companies limit themselves to a 5 to 6 years perspective. Core competences and technology is not something that an organization is considered able to develop quickly, it is instead an accumulative process of knowledge over time (Tham, 2013). Many Chinese organizations are expected to face difficulties in the strong and increased competition that will take place on the market in the next upcoming years, as they lack the possibility to develop these technologies and competences by themselves. To close the product and process gap between Chinese manufacturers and their world-class counterparts, the Chinese organizations themselves expect a time frame of 10 to 30 years. Where the biggest gaps are perceived to be in design competence of components,



production management competences and business management skills and experience (Ban, et al. 2005)

One interviewed manager also expressed the view and state that Chinese automotive organizations will need to upgrade competences concerning the quality of the produced goods. Currently the Chinese organizations are considered very good at reduplication and mass-production, but they have not yet reached equal competitive levels as the Western automotive MNC's in terms of quality. However, while it is expected to take time, they are considered to be moving in the right direction and are starting to realize the necessity of creative processes within manufacturing that can achieve the upgrading of quality competences (Interviewee #2).

#### 4.1.5 Responding to Stricter Emission Regulations

Great pressure is expected to be put on Chinese automotive companies in the future due to stricter environmental legislation and restrictions being implemented both in the domestic market as well as in foreign markets. For Chinese automotive manufacturers the problem is two folded. Firstly, greater pressure will be put on manufacturers to significantly reduce the exhaust emission of their vehicles, with the recent implementation of emission standards in China equivalent to the *Euro IV emission standard* (Rowe, 2013), (Road safety Authority, 2013), an older emission standard implemented in the European Union which defines exhaust limits for vehicles. Increased demand will be put on Chinese automotive manufacturers to upgrade their innovative competences, technological knowledge and to adhere to the standards. Similar or even stricter national policies have been or are being implemented all across the world and consequently manufacturers within the Chinese automotive industry that are seeking to become global players will be forced to respond to these raised standards. An issues which today is considered to hinder Chinese automotive manufacturers as they do not meet emission requirements in the more developed markets of the US, Europe or Japan (Waldmeir, 2010). The development of environmental standards have gone so far that in certain regions and cities, low or even zero emission regulations will soon be implemented, forcing manufacturers to produce hybrid or fully electric vehicles (Kalmbach, Landmann, 2011).

The Chinese government has so far been relatively unsuccessful in implementing the emission requirements and in forcing actors to adjust to the new legislative standards, due to numerous issues. Firstly, the policies for emission standards have been changing too much and too

frequently, which has made it hard for manufacturers to prepare for and implement the necessary changes. Secondly, there has been poor enforcement of the standards with no monitoring system that requires compliance. Lastly, high cost of vehicles that meet higher emission standards ultimately affects popularity which discourages manufacturers from obeying and adhering to new standards (Ban, et al. 2005).

However, the trend of stricter emission standards is only expected to intensify and monitoring and compliance systems will become more effective (Ban, et al. 2005). Also, the opportunity to offer customers low-CO<sub>2</sub> products with energy and cost-saving solutions is becoming increasingly important as a differentiating factor, as energy prices are climbing steadily in China and is expected to continue do so, which inevitably leads to increased costs of transportation (Kalmbach, Landmann, 2011).

The second problem for automotive manufacturers in China is that new environmental restrictions from the national government are expected to fundamentally change the Chinese production model. A model that was long characterized by low costs, high consumption and high emissions, but which evidently could not be sustainable on the long term (Yuanzheng, Chiu, 2012).

Energy consumption per produced unit in the Chinese manufacturing sector goes beyond the international standard (Xu, 2005) and with rising prices of energy, a majority of Chinese manufacturers perceives a significant problem of manufacturing costs rising faster than manufacturing development (China.cn, 2011). Today, factory emission standards in China are even tighter than in the US and Europe due environmental restriction policies (Rowe, 2013).

## 4.2 Empirical Findings Concerning Knowledge Transfer

### 4.2.1 Benefits of Knowledge Transfer

Joint ventures in China have substantially improved the production competence of the recipient firms through technological transfer from the foreign parents (Nam, 2010). Knowledge development is a key source of competitive advantage, something which both Western as well as Chinese partners have realized (Ding, 2013). The success for Shanghai Volkswagen and Shanghai General Motors, the most successful joint ventures in the automotive industry in China, are further examples of the benefits of knowledge transfer to joint venture subsidiaries (Nam, 2010). Moreover the success of Pan Asia Technical Automotive Center (PATAC), China's first joint venture in automotive design and engineering, is strongly correlated to knowledge transfer, where the absorption of knowledge from the foreign parent General Motors was very rapid (Zhao, Anand, 2009).

### 4.2.2 How to Transfer Knowledge

#### 4.2.2.1 Absorptive Capacity

According to interviewee #1, knowledge transfer is complicated by language issues. Even though many Chinese have sufficient English skills, there are still problems in the interior provinces of the country, even when using interpreters there might still be misunderstandings. On the other hand, the difficulties dealing with problems related to communication means that partners have to make more of an effort to understand each other which could lead to a greater insight. "In Asia it is often the listening part that is more important than what you say. Communication is therefore very important in order to succeed with joint venture operations" (Interviewee #1).

"Generally hierarchical cultures make internal knowledge transfer more difficult. In more open societies, managers understand that they do not need to know everything themselves. Instead organizations are the owners of knowledge. The more hierarchical a society and organization, the more complicated is the dispersion of knowledge within the organization. The hierarchical structure also serves as a limitation to cross-functional collaboration, where employees stay within their frame" (Interviewee #2). Hierarchy is considered to affect knowledge transfer, and also the traditional Chinese mentality is perceived to be affecting knowledge transfer

(Interviewee #1). Western firms tend to have much more flat organizations than in China, where hierarchies are more important. This is considered to be hampering innovation in China, where age and position is a determining factor of the value of your thinking. However, this culture is experienced to gradually having started to change. The country has experienced such massive development and young people are the ones that will be able to handle the situation, since they are the ones with the education, international experience and proficiency to speak English. Therefore the younger generation is considered key when it comes to absorbing and accepting to do things in a new manner; and considered the key for improving the knowledge transfer processes (Interviewee #1), (Interviewee #2). While the drawback is considered to be that they lack experience where more time is spent on explaining (Interviewee #1).

“Knowledge in China is about carrying as much information as possible, and not carefully regarding creative aspects, like thinking in new patterns, where brainstorming is important. In China high level knowledge is abundant, but the ability to turn this knowledge into something new is not established in the automotive industry” (Interviewee #2). “The establishment of a *Competence development council*, where everyone’s opinion matters, is something which previously has proven to be very effective and could help to improve processes” (Interviewee #2).

In competence development, the ways of working are perceived to be somewhat outdated, traditional classroom teaching is still used, where employees are still trained and lectured instead of coached and the use of electronic tools is still limited (Interviewee #1), (Interviewee #2). “Underinvestment in training of the employees is common, this because of problems with retention of the personnel” (Interviewee #2). However the interest from the Chinese managers to train their personnel seems to be high from recent experience, but in general there might not be the same interest among Chinese managers (Interviewee #1). Interviewee #2 also expressed that Chinese managers are increasingly willing to invest in training when they are convinced of the benefits of training their personnel. In a study performed by Antal, Dierkes and Marz (1999) it was found that in general Chinese managers highly valued training something which was seen as an important factor in transforming businesses, where trained staff was seen as more competent in solving problems, strategy development and as being more entrepreneurial. However the study also showed that managers expressed concerns about the difficulties of recruiting and retaining competent personnel (Antal, Dierkes, Marz, 1999). Another study showed that Chinese partners have been reluctant to invest in training where it has been seen

more as budgetary question rather than a strategic investment, where short term profit have been seen as more important than long term goals. (Buckley, Clegg, Tan, 2004).

Zhao and Anand (2009) stated in their research that having experienced or highly trained employees is no guarantee for that the subsidiary will acquire new knowledge more efficiently or quickly. The research suggests that it is important to develop an organizational structure which is flexible and develop an integrated team culture, in order to ensure knowledge transfer.

Survey data from a study of 161 engineering units, of multinational companies in the Chinese automotive industry, has shown that when ensuring knowledge transfer, collective absorptive is superior is fundamental, more so than individual absorptive capacity. Improving the structural and organizational absorptive capacity had great impact on the organizational knowledge as well as the individual knowledge (Zhao, Anand, 2009). The Pan Asia Technical Automotive Center (PATAC) was the first design and engineering joint venture in China. Started from scratch it did not inherit the corporate structure with inefficient organizational hierarchy common in China. The engineers employed by the company were mostly new graduates. However despite the lack of experience the collective absorptive capacity was high, which enabled PATAC to quickly adopt advanced research and development procedures (Zhao, Anand, 2009). In Shanghai Volkswagen a gradual approach to upgrading old models instead of develop new products at the joint venture sight were chosen because of the weak absorptive capacity of the joint venture (Zhao, Anand, 2009) In a study by Nam (2010) he found that investment in research and development in joint ventures is a function of the already existing local innovation competence. If investments in research and development have been made by the foreign parent they have been made because of the innovative structure already in place at the joint venture site.

#### 4.2.2.2 Collaboration between the Joint Venture Partners

“A joint venture is built on the premise that you have a common view and a common target and agree on what you want to achieve, where the joint venture structure is complicated because of the dual ownership, where management on one side cannot decide on their own. With two organizations represented on the board, there always has to agreement in order to make it work” (Interviewee #1).

“When forming a close relationship with our Chinese counterparts we are much more likely to succeed with whatever we do if we have made an effort of aligning our goals. Having different goals will affect knowledge transfer. If one partner dislikes a decision it is rather easy for them to obstruct and make it difficult for the other partner. And that of course affects the transfer of knowledge” (Interviewee #1).

In the Guangzhou Peugeot joint venture, the goals between the partners were anything but similar. Peugeot’s involvement lacked the characteristics of a long term commitment, where the strategic intention of the French company did not cope with the goals the Guangzhou local government had for the joint venture where they wanted to develop the industry in the Guangdong province. This was considered a contributing factor to the poor performance of the joint venture and ultimately one of the reasons that the joint venture partnership came to a premature end (Fernandez, Liu, 2007).

According to a study of the two pioneers in joint ventures in China’s automotive industry, Shanghai Volkswagen and Beijing Jeep Corp, a major problem for the joint ventures was the bad relationship between the partners with the development a mentality of *us and them* between the Western and the Chinese partners. This was not only due to the language barrier, where translations were considered time consuming but also disrespect of the Chinese management from the Westerners (Hoon-Halbauer, 1999).

In a recent study by Ding (2013), the relationship between joint venture partners was considered to have a major impact on knowledge transfer, where the amount of relationship capital positively correlates to the amount of knowledge transferred and subsequently joint venture performance. Another result of the study was that alliances with the appropriate structures and mechanisms could reduce the cultural misunderstandings, something which promoted inter-firm knowledge transfer.

#### 4.2.2.3 Means of Transferring Knowledge - Expatriates

“Using expatriates as a tool for knowledge transfer is very common. Their primary function is to get a connection between the parent firm and the joint venture subsidiary. The core of the joint venture is therefore often manned with expatriates. When using expatriates there should always be a clear purpose and the time they spend in the joint venture leadership should be

limited and a plan for succession should be in place, where hopefully a local person eventually will be able to take over the position. This person can be coached by the expatriate as an apprentice, where the studying of a good tutor while working is an excellent form of learning (Interviewee #2). However, it is very rare that a succession plan for an expatriate is established. Instead their contracts are extended, sometimes multiple times” (Interviewee #2). “Sending expatriates, if followed through in the right way with a plan of succession, is like a mentorship or coaching-ship which can be extraordinarily effective” (Interviewee #2). The concept of teacher and apprentice is a common way of transferring the tacit knowledge where the quality of communication is very high. The apprentice is allowed to see, understand and feel how the teacher reasons (Interviewee #3).

“The ideal situation when you send an expatriate is that it should be an expatriate who has a good knowledge about the parent firm and that has a very good network within the same” (Interviewee #1). “Sending out an expatriate is like sending out the network to the joint venture. Something which is among the most difficult things to acquire in any other way because of the intangible nature of the network” (Interviewee #2). “Preferably the person should also have knowledge about, in this case China, and the Chinese industry. A problem is that even in large organizations, people with the experience of working in China are limited” (Interviewee #1). According to interviewee #2, the perfect expatriate is someone who can easily understand the cultures and who can draw benefits from the cultural differences. In a study on how expatriates respond to cross-cultural training performed by Selmer (2005), there was evidence suggesting that cultural training could facilitate work adjustment for expatriate managers in a joint venture in China, however the results were tentative.

To be able to transfer not only knowledge but also values between organizations, personal contact is regarded as extremely important, where it is considered hard to teach tacit knowledge such as values through other tools, like electronic ones, and therefore they cannot replace personal contact and face-to-face interaction. However, other tools might be more beneficial when transferring more strict functions (Interviewee #1). Virtual tools were also considered to be able to increase effectiveness in the entire education process as a support mechanism (Interviewee #2). Information databases was considered an effective mean of knowledge transfer, especially if the databases had a good structure. “The best examples of these databases contain videos with a person speaking. This bridges some of the problems with transferring knowledge through electronic tools, as they contain the element of face-to-face communication” (Interviewee #3)

Chrysler implemented what they called *communities of practice*, which were thought to facilitate communication between engineers after a company restructure, which dispersed a well-functioning informal, socially constructed community working together locally. This led to a rapid depreciation of expertise something which the *communities of practice*, where members could interact both virtually and through real meetings, since it could not remedy the loss of the dynamic community after the restructure (Levine, Preitula, 2011), (Ruggles, 1998).

In Hoon-Halbauer's study (1999), the early expatriates assigned to a joint venture were selected on the basis of their technical knowledge and were inadequately prepared for the major cultural difference. Although they were aware of them to some extent, the depth of the differences were not fully understood, as well as the actions and behavior of the Chinese staff (Hoon-Halbauer, 1999). The answer to this problem could be to send Asian employees as expatriates to China as they might find it easier to adjust to the new environment. There is also evidence suggesting that Asian nationals receive more support from the local Chinese (Varma, et al. 2012).

Earlier studies have shown that a majority of the American expatriates being sent to developing nations was returning home prematurely, at great expense to the company. Adding to this problem, many of those who made the decision to stay at their position in the subsidiary also performed inefficiently due to failure to adopt to the host country environment (Tian, 2007). The findings of high costs associated with expatriates is also shared by one of the interviewed managers who also express that in a cost-cutting situation, the number of expatriates is likely to be reduced first (Interviewee #2).

“Regardless of sending Western expatriates to China or sending Chinese employees the opposite direction, it is important to send several individuals at the same time. Not only is this essential for social wellbeing and to enable the discussion and reflection of the individuals' experiences but also because a greater understanding of the new organization could be attained” (Interviewee #3).

While sending expatriates is an important tool for transferring knowledge, increasing the number of expatriates does not necessarily mean that more knowledge can be transferred to a joint venture. According to research the absorptive capacity of the receiving organization is more important than increasing the number of expatriates in order to increase flows of knowledge transfer (Chang, Gong, Peng, 2012).



#### 4.2.2.4 Means of Transferring knowledge - Collective Teaching

In Zhao and Anand's (2009) research they found that collective teaching was far superior to individual teaching, even when transferring individual knowledge. Shanghai Volkswagen used group teaching as their primary means of transferring research and development capacity. A research and development team was sent from China to Germany for job training and learning. This training immensely facilitated when the Chinese research and development team later on modified Volkswagen's models (Zhao, Anand, Mitchell, 2004). Sending subsidiary employees to the knowledge source have been proven to be an effective measure, allowing them to get a greater understanding of the cultural and institutional context in which the collective organizational knowledge is embedded (Zhao, Anand, 2009).

It is also important to manage knowledge transfer proactively. For the effective learning to take place between the joint venture and the parents it is insufficient to simply expose individuals to new knowledge, the intensity of the learning efforts is also a critical component. To fully capitalize on the learning opportunities in a joint venture the firms must create knowledge transfer mechanisms (Inkpen, 2008).

“An effective way of transferring knowledge is joint projects between the partners. By doing so you have formalized an organization where learning can take place by allowing effective connections between the partners” (Interviewee #2).

“Establishing a joint project is an effective way of transferring knowledge. This could be done by establishing a unit with consisting of product developers, production personnel and project managers. By establishing these cross-functional units the obstacles to knowledge transfer is effectively reduced. It is very important to have a forthright support from the top management in order to receive credibility” (Interviewee #3).

### 4.2.3 Disadvantages of Knowledge Transfer

“Knowledge transfer might not always be needed in already operating joint ventures since the operations are already functioning well but with different methods than the Western parent. Then, there is a risk that knowledge transfer might disrupt working processes, especially when trying to implement complex measures” (Interviewee #2). “There also needs to be respect for the fact that when trying to transfer knowledge, it will take time. When changing processes within the own organization, the targeted process is usually just one of a multitude of processes, and usually only concerns small changes made to the existing process. Sometimes when trying to transfer knowledge or other practices it can be a total overhaul of every process within an organization. Adapting the pace and focusing on the things that are needed the most are therefore important aspects in supporting a partner’s goal to upgrade competences” (Interviewee #1).

“Knowledge transfer can also be hampered by attempts to manage from the top, where it is important to understand that the implementation of processes are built from below and built by those who work with the processes. Also the transfer processes require tools and foundations which might not be there in China. A direct implementation is therefore not appropriate in all cases of knowledge transfer. Instead the better way of supporting the upgrade of the joint venture subsidiary's competences might to make suggestions which processes and how these process could be adjusted to the prevailing conditions” (Interviewee #2).

## 5. Analysis

In our study of the Chinese automotive industry and the problems it faces, all our empirical findings, both secondary and primary data, was largely coherent and consistent. Upon analyzing this occurrence we believe it to be attributable to the fact that our secondary data mainly consists of experts within the Chinese automotive industry expressing their predictions and views on trends. The high consistency between our secondary and primary data empirical findings therefore probably derives from the fact that our interview objects, as experts in the same industry, probably see the same trends and make similar predictions.

We also saw the same consistency when cross-referencing our empirical data concerning knowledge transfer and believe it to be attributable to the same reason.

### 5.1 Analysis of the Chinese Automotive Industry

Through all our empirical findings we have identified several issues that seem to be of importance for the Chinese automotive industry to respond to, this in order to upgrade its competences and become globally competitive.

Firstly, our empirical findings seem to suggest that the Chinese automotive companies are losing their low-cost production advantage. The implementation of environmental standards seems to put increased pressure on the Chinese automotive organizations to acquire competences related to more lean and effective production processes. The Chinese production model was long characterized by high energy consumption, high emission levels and low-cost labor advantages. But we now perceive this production model to be challenged by the implementation of national energy preservation policies, which is a result of rising costs of energy, as well as rising wages for employees. The changing production model in association with increased market pressure, has forced the Chinese automotive organizations to find ways to increase their competences associated to productivity, quality, innovation and internal collaboration to be able to better compete on a changing global market (Eloot, Strube, Wang, 2013).

Connected to emission standards, we also see the automotive market moving rapidly towards stricter standards and demands on exhaust emissions from vehicles, as governments all across

the world are implementing tougher environmental restrictions. These findings emphasize a need for Chinese automotive companies to upgrade their technological know-how associated to green technologies to be able to survive under increased legislative pressure.

Much of the empirical data also seem to point to the importance of strategies for knowledge retention within organizations in the Chinese automotive industry. In order for the transferring of knowledge between organizations and the upgrading of competences to be successful our findings suggest that companies must manage to retain the personnel that they are training. With the high turnover rate among Chinese employees, where studies show that as many as one-third of the employees are seriously considering to leave their organization (Shu, Liao, Bravery, 2011), competence building is experienced to be problematic. As the complexity of the industry and the markets increase, the importance of skilled and flexible workers within the automotive industry, who can stand for autonomous problem solving and decision making, seem to become increasingly evident (Cantre, Robbin, Smith, 2011). The findings also point to more skilled employees having positive effect on productivity and growth within organization by increasing competences in adaptation, implementation and creation of new technologies and processes (Landesmann, Leitner, Stehrerand, Ward, 2009).

However, the strategy to reform the human capital processes within Chinese organizations is problematic and may be hindered by the fact that poaching takes place between organizations. Organizations that have recognized the trend and necessity to invest in the training of their employees and which embraces the transferring of competences and knowledge from their Western partner firms, might be subject to competitors headhunting their well-trained staff (The Economist, 2007), (Interviewee #1).

Our findings suggest that motivational tools for employees can differ between regions and individuals, but that a shift is starting to take place where salary and promotional opportunities still remain as important motivational tools, but that they are also losing in value compared to other tools. Strategies that are considered effective for employee retention is softer-core values, consisting of employee recognition and appreciation, training and development opportunities, public reputation of the company, flat and inclusive organizations with little hierarchy, international working opportunities and good work-life balance. The shift seems to be especially evident for young Chinese workers (Price, Bourgois, 2012), (Interviewee #1), (Interviewee #2). Connected to our empirical findings we therefore perceive signs of many

Chinese automotive companies to have organizational structures and managerial principles that are out of sync with contemporary Chinese workers when it comes to retention, incentives and rewards, which greatly would decrease their competitive advantage.

The question of whether or not young Chinese workers can be considered to be of great importance for Chinese automotive organizations is complex. While some of the empirical findings point to the fact that there is large mismatch between educated young Chinese workers and the demands of the industry, where it is easy to find theoretical knowledge but where experience and more vocational skills is in short supply (Wang, 2013), (Interviewee #2). Other findings stress the importance of young Chinese workers as key to upgrade competences within the Chinese automotive industry since they possess international experience, new ways of thinking and speak English, which greatly facilitates in business as well as learning processes (Interviewee #1), (Interviewee #2). While there seem to be a shortage of vocational skills and experience among young Chinese workers the contradictory findings do not have to be mutually exclusive. The young workers still seem to possess the necessary mentality and absorptive capacity to acquire new knowledge that is needed in order to respond to the problems of the industry.

Organizational structure and managerial principles, while affecting knowledge retention, also seem to strongly affect the overall competitiveness of Chinese automotive organizations. Where our empirical findings stress the necessity to upgrade production management competences and business management skills and experience (Ban, et al. 2005). The existing organizational and business culture seem to derive to a great extent from national traditions and values such as *Confucian Value Principles*, *Guanxi* and the *Iron Rice Bowl Scheme*. Our findings suggest that this business culture is depriving Chinese organization of innovative competence and growth as it creates strict hierarchical organization that discourages engagement in decision making and free-thinking of workers. Also the business culture seems to be problematic since employees and managers do not dare to reveal shortcomings or lack of knowledge. Not being able to target the specific areas in which managers and employees are in need of training could be very problematic for competence development.

The findings also seem to highlight a need to remedy the problem of quality gaps in produced goods and processes between Chinese manufacturers and the world-class automotive manufacturers (Ban, et al. 2005). With the mentioned decrease and even disappearance of low-

cost advantages for Chinese automotive companies, the upgrading of quality will most probably become a competitive tool for survival for Chinese automotive organizations.

As the identified competencies are hard to acquire or develop on its own for organizations and most importantly take time, knowledge transfer from Western partners most probably can help the Chinese organizations to leapfrog the development.

## 5.2 Analysis of Knowledge Transfer

### 5.2.1 Benefits of Knowledge Transfer

Knowledge transfer from a foreign parent to the joint venture has been given great importance in the theoretical literature on the subject (Buckley, Clegg, Tan, 2004), (Inkpen, 1998), (Yan, 2000) (Kandemir, Hult, 2005). In the case of improving organizational processes and competences there were many examples found in the empirical data supporting this claim (Zhao, Anand, 2009), (Nam, 2010).

### 5.2.2 Absorptive Capacity

Theory is suggesting that training is one method which can increase absorptive capacity (Buckley, Clegg, Tan, 2004). There are conflicting results in the empirical data on how Chinese managers perceive training, where on one hand trained staff was considered to be more competent and training was seen as a strategic investment (Antal, Dierkes, Marz, 1999), while other findings pointed to training being regarded as unnecessary (Buckley, Clegg, Tan, 2004). Chinese managers seem to be willing to invest in training first when they are convinced of the benefits (Interviewee #2). The difficulty of retaining personnel in China may have had a negative impact on the Chinese managers' perception on training, where competent personnel are difficult to maintain within the companies.

The language barriers between the foreign parent and the joint venture subsidiary seems to complicate knowledge transfer, where language training is suggested in our findings to improve absorptive capacity in the joint venture (Buckley, Clegg, Tan, 2004). Furthermore there are empirical findings pointing out that the language barrier may also create a feeling of alienation between the partners, something which harm the relationship between the partners. However as one of the interviewees pointed out, the focus on interpretation could lead to a better

understanding since listening and understanding is given such emphasis (Interviewee #1). Due to the complexity of language barriers, young Chinese employees are also considered very important since they have a greater proficiency in English (Interviewee #2), which is considered to assist in increasing the absorptive capacity of organizations and which might also decrease alienation.

However highly trained or experienced, personnel alone seems to be no guarantee for increasing the subsidiary's absorptive capacity, it is also dependent on the structure of the organization (Zhao, Anand, 2009). Collective knowledge which is embedded in the corporate structure is proposed to be a key element of knowledge transfer and more valuable than individual knowledge. The example of Chrysler's *Communities of practice* (Levine, Preitula, 2011), (Ruggles, 1998) is suggesting that the claim could be accurate. Our interviewees expressed that China's hierarchical structure is far from optimal in order to transfer knowledge and where the dispersion of knowledge within the organization is hampered (Interviewee #1), (Interviewee #2). A development of the organizational structure, towards a more flat and open structure, with a more integrated team culture, seems to therefore increase the absorptive capacity and thus facilitate knowledge transfer to the organization and within the organization which ultimately seem to improve processes and innovativeness. Young people are expressed to be key in this development, as they are more open to new ideas and ways of thinking (Interviewee #1), (Interviewee #2).

This is something which could be seen in the example of PATAC (Zhao, Anand, 2009) as well as in the responses from our interviewees (Interviewee #1), (Interviewee #2).

This is connected to Kandemir and Hult's (2005) behavioral orientations which points to certain characteristics of organizations that are important when it comes to absorptive capacity. Such as the necessity of constructs and organizational structures that engage management and workers in the decision making, encourages collaboration and cooperation, at times puts hierarchy aside, encourages organizational members to question the organizational norms that control their actions and behaviors, place high value on learning and that encourages and promote communication and distribution of knowledge between members of the organization.

Finally, it seems that strategic investments in research and development are suggested to be affected by the innovative competence and the absorptive capacity already in place. In the case of Shanghai Volkswagen it seems that the weak absorptive capacity had implications to

strategy, where an approach to upgrade old models had to be chosen over the development of new ones (Zhao, Anand, 2009).

### 5.2.3 Collaboration Aspects

How well the partners can collaborate and the alignment of goals seems to be an important key to effectively transfer knowledge to the joint venture subsidiary (Interviewee #1), (Fernandez, Liu, 2007). Agreeing on goals seems to be important since partners can obstruct decisions they dislike. Being of the same opinion appear to be of great importance to knowledge transfer given the nature of a joint venture, where each party have part in decision making.

This is supported by the theoretical framework (Simonin, 1999), (Lyles, Salk, 1996), (Buckley, Clegg, Tan, 2006). The previously mentioned language barrier as well as cultural misunderstandings is probable sources of conflict (Hoon-Halbauer, 1999), which ultimately hurts the transfer of knowledge, where the partner can obstruct decisions that they do not like. It seems that there is a strong correlation between relationship of the partners and to the amount of knowledge being transferred to the joint venture (Ding, 2013).

### 5.2.4 Means of Transfer

Our findings point to that expatriates could be a very effective mean of knowledge transfer. The element of face-to-face contact, which seems to be of great importance for the transfer of tacit knowledge and values, is suggesting that sending expatriates is an important aspect of transferring knowledge to a joint venture. Other modern tools of communication do not seem to have been able to replace face-to-face interaction, however information databases seem to be a good tool for transferring explicit knowledge, especially when the database has a good structure where information is easily retrieved (Interviewee #3). Assigning an expatriate with an apprentice is likely to be a very efficient method of knowledge transfer (Interviewee #2), (Interviewee #3). The theory suggest that extensive connection is required to transfer tacit knowledge (Chang, Gong, Peng, 2012) which can be based on personal experience, something which is expected to be facilitated by the extensive contact between an expatriate and an apprentice. Also when sending an expatriate to a joint venture, the network of an organization is being transferred to the joint venture (Interviewee #2), something which is tacit in nature and therefore very complicated to transfer in itself.



An expatriate's ability to transfer knowledge to the joint venture is very likely to be dependent on the cultural understanding of the expatriate; however the effects of cultural training as a way to improve the performance of an expatriate are not confirmed (Selmer, 2005). Sending an expatriate with experience is likely to be a preferable method since the probability of success is greater (Chang, Gong, Peng, 2012), (Interviewee #1), (Interviewee #2) as well as the likeliness of premature return (Tian, 2007) should be lower because adjustment to the host country environment is easier.

Since sending expatriates to the joint venture is an expensive measure, there seems to be strong reason for establishing a succession plan for the expatriate (Interviewee #2). Also having expatriates occupying every key position in the joint venture in the long run is a probable cause of resentment from local employees (Chang, Gong, Peng, 2012), leaving them with less opportunity for promotion (Tian, 2007).

It is also to be noted that the success of knowledge transfer from expatriates seems to be highly dependent on the absorptive capacity of the subsidiary (Chang, Gong, Peng, 2012). It is also probable that a higher absorptive capacity of the joint venture subsidiary serve as motivation for the expatriate to engage in knowledge transfer (Chang, Gong, Peng, 2012). However, sending several expatriates could be very important in order to understand the joint venture organization (Interviewee #3).

Collective teaching seems to be an excellent mean for transferring collective knowledge which is embedded in corporate structure, as well as being a seemingly great way of transferring knowledge which is behavioral. Collective teaching facilitated immensely for Volkswagen when they later modified their models in their joint venture sites (Zhao, Anand, Mitchell, 2004).

As a knowledge transfer mechanism, joint projects seems to be an efficient and excellent measure (Interviewee #2), (Interviewee #3) where a knowledge transfer platform is formalized, which encourages knowledge transfer (Inkpen, 2008). The exposure of collective elements in such projects could have the same benefits as collective teaching (Zhao, Anand, 2009).

### 5.2.5 Disadvantages of Knowledge Transfer

It is possible that knowledge transfer could disrupt working processes, something which depends on the complexity of the measures (Interviewee #2). It seems that knowledge transfer can be substitutable to organizational learning instead of complementing (Argote, 2013). For these reasons the transfer of knowledge often seems to be best assessed through the gradual process, in order not to overwhelm the joint venture subsidiary (Interviewee #1). It is also possible that the tools and organizational structure needed for knowledge transfer is not available in China (Interviewee #2), where they have to be upgraded first before certain elements can be transferred, otherwise attempts to implement them could only be complicating operations. The cost of knowledge also has to be weighed against the advantages (Levine, Prietula, 2011).

## 6. Conclusions

### 6.1 A Conclusion of the Two Research Questions

#### 6.1.1 Which Knowledge Should Be Transferred

There are several competences that we consider necessary to upgrade in order to increase the competitiveness of the Chinese automotive organizations. The general problem of the loss of low-cost production advantages, accentuates the need to develop competencies related to quality, productivity, innovation, green technology and internal collaboration.

When it comes to quality, the Chinese automotive organizations have a hard time to match the world-class automotive manufacturers in their produced goods. Productivity and innovative capacity is considered low due to the lack of skilled workers and the organizational structure, since the closed and hierarchical structure is hampering internal collaboration. Finally we have identified an issue of responding to changed emission standards both in production and in produced goods which emphasizes the need for Chinese automotive companies to upgrade their technological know-how associated to green technologies to be able to survive under increased legislative pressure.

We believe that the lack of these competences derive from both a lack of collective knowledge in the organizations as well as individual knowledge of the employees.

The organizational structure and strict hierarchy of the Chinese automotive companies is creating a framework that is discouraging the creation and accumulation of collective knowledge, where collective knowledge is a product of the shared knowledge of an organization and the organization's ability to use this knowledge. The amount of shared knowledge depends on the total individual knowledge of the members of an organization and how the structure of the organization allows this individual knowledge to be dispersed.

The prevailing structure of the organizations thwarts collective knowledge accumulations since it deters; free-thinking and creativity, employee engagement in decision making, innovation connected to problem solving in processes or the upgrading of processes, innovation connected to the development of new products or services, the tendency to share information within the organization, the tendency of employees not to admit their lack of knowledge or competence and since it is discouraging knowledge retention within the organizations.

Secondly, in the complex contemporary automotive industry, the importance of competent, skilled and experienced employees who can stand for autonomous problem solving and decision making has become rudimentary. The skilled employees have a direct effect on productivity, growth and the innovative competences in organizations as they have the necessary skills for the adaptation, implementation and creation of new technologies and processes. Not only because individuals are depositories of individual knowledge but also because they serve as bearers of, and network links in the collective knowledge of an organization. Organizational structures that discourage knowledge retention within organizations therefore have a direct effect on the ability to upgrade competences. We therefore also believe that many of the problems for the Chinese automotive organizations exist because they have been negligent to invest in and retain their personnel.

These structural problems of the organization's and the skill problem of individuals, make competence building difficult in the Chinese automotive organizations and ultimately affects the possibility for the Chinese automotive organizations to upgrade the competences that we have brought forward as most needed.

We believe that most but not all Western automotive companies possess the necessary knowledge, strategies and competences needed to create organizational structures that are successful in responding to the problems of the Chinese organizations.

These are competences that are connected to creating an organizational structure that engage employees in the decision making process, encourages free-thinking and knowledge seeking, promotes knowledge dispersion, and where the development and training of employees is highly valued.

Many Western automotive companies also seem to possess the necessary motivational tools to succeed in knowledge retention on the Chinese market, such as offering Chinese employees recognition and appreciation, training and development opportunities, flat and inclusive organizations with little hierarchy, international working opportunities and good work-life balance which stands in line with the beginning shift of employee motivations in China.

Western companies who want to upgrade the competences of their joint venture subsidiaries in China should therefore focus on transferring knowledge connected to managerial principles and organizational structures.

The transfer of managerial principles and organizational structural competences can help to turn the joint venture subsidiaries into organizations characterized by knowledge sharing, creation and accumulation, which increases the collective knowledge. We believe that this increase in knowledge will lead to a greater innovativeness with the ability to create and improve processes, products and services.

By transferring knowledge and competences that turns the subsidiary into a knowledge sharing, accumulating and developing organization, the Western parent firm also creates an organizational culture within the subsidiary that is more susceptible to new information, that is, increasing its absorptive capacity. This will increase the speed of further knowledge transfer into the joint venture subsidiary, as well as enabling the organization to absorb and disperse more complex information. These structural improvements are more important than individual training of the employees in increasing the absorptive capacity of the joint venture subsidiary. We also believe young people to be key to implementing this sort of flat corporate structure because they are more open to new ideas and ways of thinking.

### 6.1.2 How to Successfully Transfer Knowledge

Increasing the absorptive capacity of the joint venture subsidiary is necessary to transfer knowledge effectively. But the absorptive capacity is not only dependent on the collective knowledge of the joint venture subsidiary, it is also dependent on joint characteristics between the sender of information and the receiver. Being able to communicate effectively between the parties will be a factor increasing the absorptive capacity. Most multinational organizations use English as their main language for communication within the organization. Therefore improving the proficiency in English among the employees in the joint venture subsidiary is vital for efficient direct communication between the foreign parent and the members of the joint venture subsidiary. However using interpreters could increase the emphasis placed on understanding and listening, although in the long run an emphasis on a better direct communication increases the speed of knowledge transfer speed as well as increasing the possibility of transferring complex knowledge. Being able to communicate effectively is also

important for the cooperation between the partners, where young people which often have greater proficiency in English, once again play an important role.

In order to enable knowledge transfer to the joint venture subsidiary it is fundamental for the joint venture partners to agree on goals of knowledge transfer. Being sensitive to cultural differences and establishing and maintaining a good relationship is essential for the transfer of knowledge.

To improve the organizational structure of the joint venture subsidiary the transfer of organizational knowledge and organizational values is needed, which is tacit in its nature. In order to efficiently transfer tacit knowledge, face-to-face communication is immensely important. Without face-to-face communication the tacit elements are impossible to transfer. Some elements of improving the organizational structure can be transferred by individual expatriates. For example using experienced expatriates with cultural understanding of China is incredibly efficient in the sense that expatriates can transfer the network of an organization and thereby transferring knowledge which is embedded in the corporate structure and therefore collective. The most efficient way for an expatriate to transfer knowledge is possibly to have an apprentice working alongside with the expatriate; as some aspects of the organizational mechanisms that the foreign parent would like to transfer to the joint venture subsidiary could be demonstrated. However when transferring types of collective knowledge that are based on cooperative aspects between the members of an organization, collective teaching is needed. This is the case when the understanding of the corporate structure is dependent on the understanding of the interactions of members of that organization. In order to implement the organizational structure of such an organization, the behavioral patterns of the organization needs to be understood, something which could only be achieved by observation. To enable observers to learn from these processes either a sufficient number of expatriates could be sent to the joint venture subsidiary or it could be achieved by sending employees from the joint venture subsidiary to the foreign parent organization.

The use of joint projects between the foreign partner and the joint venture is a platform which provides the basis for extensive knowledge transfer between the parties, where the same benefits as with collective teaching could be achieved. It is important to understand that the implementation of new measures is something which should be approached gradually, because a rapid transformation is likely to disrupt working processes.

## 6.2 Contributions

Our study shows that the Western automotive parent firms should focus on knowledge transfer associated to the establishment of new organizational structures and managerial principles. Most of the problems faced by the Chinese automotive industry derives from difficulties of retaining skilled personnel which makes competence building hard and that the Chinese organizations are not knowledge sharing, accumulating and creating organizations. By creating knowledge orientated organizations with a high knowledge retention, not only will the Chinese subsidiaries be able to absorb competences associated directly to their faced issues but it will also facilitate any future knowledge transfer between the organizations.

We have also reached the conclusion that to transfer this specific knowledge, in the context of the Chinese automotive industry, extensive observation and communication is needed between the partner firms and the use of joint projects is than an excellent mean to provide platforms where this knowledge sharing can take place.

## 6.3 Suggestions for Future Research

There are certain aspects that would allow for a more thorough and comprehensible understanding of the subject. Firstly an investigation into the role and effect of the Chinese government would be interesting due to the control it exercises over the Chinese automotive industry and thus, in a way, the success of the knowledge transfer and implementation of new structures and principles. Also, engaging in discussions with Chinese organizations that operate in the automotive industry and look at the experienced problems and needs from their perspective would facilitate in making a deeper analysis of the subjects. Finally, attempts could be made to measure the success of knowledge transfer in a quantitative way to receive a better understanding of exactly what strategies of knowledge transfer that would be most suitable and successful in the context of knowledge transfer from Western parent firms to their Chinese joint venture subsidiaries in the Chinese automotive industry.

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## 7.2 Interviews

Interviewee #1, Mats Ahlin, Director - Alliance Office at Volvo Group, interviewed in person, 2014-05-08

Interviewee #2, Jan Garp, TSM Joint Ventures APAC - Volvo Group, interviewed in person, 2014-05-08

Interviewee #3, Dan Paulin, University lecturer and Vice-prefect at Chalmers University of Technology, interviewed in person, 2014-05-19

## 8. Appendix

### Interview questions:

- 1) What competencies do you perceive that the Chinese automotive industry in general lack?  
-Do you think that these are problems that Volvo Trucks have the ability to overcome?  
- Do you believe that knowledge transfer can remedy the problems?
  
- 2) Do you think there is a problem with certain organizational structural/ organizational cultural elements in the Chinese automotive industry that hampers innovation, productivity or quality?  
What adjustments do you think need to be made?
  
- 3) How do you perceive the problem of high turnover rates among employees in the Chinese automotive industry?
  
- 4) What would be your action to solve the problem?
  
- 5) Do you have a problem with retaining personnel in your Chinese operations?
  
- 6) What do you perceive as the best incentive to attract and retain expertise and important personnel in your business operations in China?
  
- 7) What do you perceive as the main advantages characteristic of Volvo Group organizational culture that should be transferred to new Joint venture? Are they transferable?
  
- 8). Are there any certain characteristic of an organization that is important to transfer in order to upgrade innovative competences in the receiving organization?
  
- 9) Do you perceive that the managers of Western automotive companies have a greater interest than Chinese managers in training their workforce?
  
- 10) Do you believe that national or business cultures affect the success of knowledge transfer?

11) Do you think that having different goals (in the organizations) affect knowledge transfer?  
(The focus?)

12) Do you believe that organizational structure and climate affects absorptive capacity?

13) What do you do to increase the absorptive capacity in knowledge receiving partner organizations?

14) In your process of creating successful joint ventures in the past. Have sending expat's to the new subsidiary turned out to be an effective strategy? What skills are you looking for in an expat?

15) How do you prepare expats for successful knowledge transfer in a new cultural setting?

16) Have sending employees of the subsidiary to the headquarters been a part of your strategy?

17) Which of the two strategies do you perceive to be most effective?

18) What do you perceive is the best way of transferring organizational knowledge?

19) What tools are most effective in your opinion when it comes to transferring organizational knowledge? (Modern tools to facilitate knowledge flows between corporate units)

-How do you compare modern communication tools to face-to-face communication in the effectiveness of knowledge transfer?

20) Do you believe that there is any difference in transferring explicit or tacit knowledge?

21) Do you see any evident problems with transferring organizational knowledge?

22) There is an expression called absorptive capacity which means how ready organizations are at receiving knowledge. What has been done to improve the absorptive capacity in the receiving organization? Educate them in language or processes?

23) What can Dong Feng do to facilitate your process of transferring organizational competences and knowledge?

24) Do you use collective teaching when transferring knowledge?

25) How do you believe the startup-process of the joint venture affects knowledge transfer in the operations in the long-run?

26) With the goal to increase efficiency and productivity in the new joint venture, do you perceive that knowledge transfer holds any disadvantages? Do you believe that the process of knowledge transfer is taken at the expense of individual learning and organization memory (changing working structures?) Is it worth costs?

27) Do you perceive that there is a mismatch between Chinese graduate and the needs of the automotive industry? If yes, what could be done to better match the two?

28) Do you have one general assumption about what is the main key to upgrade the Chinese automotive industry's competences?