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Upgrading Innovativeness of Supply Chain Partners in Asia

A case study of SKF in China and Korea

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Abstract

The globalized nature of today's market has put pressure on MNCs to find new ways to survive and innovation has been identified as a key source for improving a MNCs competitive advantage. However, due to the increased complexity of new innovations it is hard for a single MNC to act alone, as such there is a need to leverage external sources of innovation strategically. This thesis builds on previous studies which have identified the ability to use the supply chain for strategic innovation. The purpose of the study is to explore factors that will upgrade the innovativeness of a MNC's supply chain partners in order to improve the MNCs competitive advantages. The study is based on a theoretical framework that covers supply chain management, knowledge and relationship management and has been conducted through a case study of a Swedish MNC together with its' suppliers in China and Korea. The findings show that the supplier's innovative climate and the strategic relations between the supplier and the MNC have a direct impact on the innovativeness. The findings also reveal that a MNC is indirectly able to improve the supplier's innovative climate through strategic relations.

Key words: Innovation, Relationship management, Supply chain management, Supply chain innovativeness, Supply chain partner innovativeness, Innovative climate, Strategic relationships

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Abbreviations

GVC	Global Value Chain
KBT	Knowledge Based Theory
MNC	Multinational Corporation
NPD	New Product Development
SCM	Supply Chain Management
SCI	Supply Chain Innovation
SCPI	Supply Chain Partner Innovativeness
SME	Small and Medium Enterprise

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1. Introduction

The following chapter will present a background around globalization, global enterprises and global value chains as well as a problem discussion and presentation of the proposed research question, purpose, and delimitations.

1.1. Introduction

The reduction of trade and investment barriers together with great advancements in communication and lowered transportation costs have resulted in a much lower total cost of doing business all over the world. This has enabled companies to access markets that are much larger than in their home country and as a result the world market economies have become more integrated and interdependent. Another crucial part of the globalization phenomenon is the Multinational Corporations (MNCs), large firms that invest in and deploys resources and capabilities in sourcing, manufacturing and distribution of goods and services in at least two countries (Rothaermel, 2013). As a consequence of globalization, MNCs production is heavily reliant on complex networks of suppliers around the world. These resources and relations are typically organized within the concept of Global Value Chains (GVCs). As a result of GVCs, the production process within a firm has been broken up within different parts and these parts are implemented in various countries around the world. Historically, sourcing within GVCs goes back hundreds of years, however since the 1970s it has steadily increased in importance and is now the most dominant mode of international trade (Milberg & Winkler, 2013). Today, about 80 per cent of all GVCs are controlled by MNCs. In terms of regionality, East and South-East Asia has the highest level of GVC activities due to the regions importance when it comes to export oriented manufacturing and processing activities (UNCTAD, 2013).

Globalization and competition forces MNCs to engage themselves in different countries in order to meet local or regional demand and supply (Kotabe & Murray, 2004). When spreading production internationally, a MNC contributes to the economic growth to the countries in where it operates (Held et. al., 1999). In order to compete on the global market, firms need to enhance their competitiveness through the creation and strengthening of their backward linkages, i.e. suppliers (UNCTAD, 2001). Additionally, for firms to be able to survive they will need to continuously link their operations with the right resources and capabilities, structure and systems, as well as goals and values (Grant, 2003). Also, many MNCs can set

up supplier development programs which facilitate training, knowledge sharing and financial support (UNCTAD, 2001). In order for MNCs to gain and sustain competitive advantages when competing with both local and foreign firms around the world there is a need of effective global strategies (Rothaermel, 2013).

By viewing the supply chain as an opportunity for strategic innovation MNCs can leverage their suppliers abilities to achieve their own goals (Taylor & Rhey, 2008). Strong international supply chain relations can create an innovative climate for both parties which results in a competitive edge that can outperform offerings from competitors (Myers & Cheung, 2008). During the last decades, the pressures toward cost reduction and increased profits has pushed many firms to look to outsourcing, offshoring and lean manufacturing. This has forced supply chain strategies toward requiring heavily on technology (Simchi-Levi et al., 2008). Firms that are successful in their Supply Chain Management (SCM) are more likely to apply new technologies which will allow the supply chain to improve its effectiveness in order to improve customer value creation (Myers & Cheung, 2008; Modi & Mabert, 2010). A structured approach to knowledge sharing will improve the overall competitiveness of the supply chain which will positively impact both the buyer and the supplier (Myers & Cheung, 2008).

1.2. Problem Discussion

Oke et al. (2013) identified innovation as a key source for a firm's competitive advantage, which typically creates profits and growth by creating and protecting knowledge advantages over rivals (Milberg & Winkler, 2013). In order to further enhance the competitive advantage, there has been a realization that there is a need to leverage innovation strategically. Due to the increased complexity of innovation external actors such as customers and suppliers have become important to the success of firms innovation strategies (Oke et al., 2013). Taylor & Rhey (2008) argues that if innovation is a critical aspect of competitive advantage; it is important to realize that successful innovation is a result of contributions from the whole value chain and not only as a result of a firm's own capabilities. Therefore, one of the most important challenges in SCM today is to identify supply chain factors that impact a firm's innovative performance and to understand how to leverage external innovative resources and capabilities in order to gain competitive advantages (Craighead et al., 2009; Taylor & Rhey, 2008). The current problems with the existing literature are that the majority of the research has been focusing on the internal innovation process while external innovation transfers from

the suppliers are still limited (Monczka et al., 2010; Schiele, 2012). It is important to realize that firms are connected to many different interorganizational actors, such as customers and suppliers (Ghoshal & Bartlett, 1990). However, among these actors, suppliers are the most important source of innovation (Azadegan & Dooley, 2010).

Recent studies have also focused on how firms can identify innovation, stimulate suppliers through incentives, integrate and utilize innovation from their suppliers (Perols et al., 2013; Petersen et al., 2005a; Dyer & Singh, 1998; Koufteros et al., 2005; Song & Di Benedetto, 2008). A number of studies related to this field were mainly focused on organizations' internal innovativeness, such as the impact of leadership patterns by Oke et al. (2009), internal processes by Jespersen (2012) and human resources related to innovation performance by Beugelsdijk (2008). As mentioned earlier, nowadays it is hard for a firm to operate without leverage its supply chain in order to compete on the market. Jayaram (2008) did a study on the effects of involving suppliers in new product development (NPD) and pointed out that suppliers have significant contributions on the process and the product itself. Similar studies done by various authors, such as Petersen et al. (2005b) and Wagner (2012) show similar results. Thus it is important to look at how a company can achieve innovation through knowledge exchange and relationships with its suppliers.

A related important management challenge for MNCs is the fact that the supply chain often is affected by other development chains within the firm. Therefore, supply chain management strategies cannot be determined in isolation. In fact, it is also hard to effectively design a supply chain that minimize the total cost which creates uncertainty and risk (Simchi-Levi et al., 2008). A small supply chain is more vulnerable to external events, such as natural disasters and political instability. A larger supply chain with multiple suppliers has a higher chance of being more stable due to more sourcing options (Manners-Bell, 2014). However, in order to effectively leverage larger supply chains, MNCs are required to coordinate a complex system of supplier relations and governance structures (UNCTAD, 2013). A more complex supply chain structure introduces the risks of reduced visibility and the development inefficient networks (Manners-Bell, 2014). As the globalization of manufacturing processes and offshoring activities will continue to grow among MNCs the risks related to increased organizational complexity will also be increased. Therefore, there is a need for MNCs to evaluate their supply chain strategies in order to make better use of existing resources and infrastructure (Simchi-Levi et al., 2008). To sustain competitiveness in the supply chain,

coordination with the current suppliers should be a central theme of the strategic development (Taylor & Rhey 2008).

It seems that the effectiveness of a firm's supply chain management as well as the quality of the relationship with its supply chain partners plays an important role on the overall innovative capacity for the firm. Ivarsson & Alvstam (2009) identified that suppliers had great potential to upgrade their technological competence by being part of producer driven GVCs in engineering industries. However, studies on the reverse situation where a MNC leverage innovativeness of the supply chain strategically in order to become more competitive seems to be limited. Additionally, the problem discussion also highlighted that supply chains that grows too large and complex generates reduced visibility and risks of suboptimal performance. Thus our research question is:

1.3. Research Question

How can MNCs upgrade innovativeness in existing supply chain partners in Asia to improve the firm's competitive advantages?

1.4. Purpose

The purpose of this thesis is to explore how a MNC can influence and participate in the upgrade of the innovativeness of their supply chain partners in the Asia in order to increase the MNCs competitive advantages. The study will bring in the aspect of knowledge based theory and relationships management in order to determine its impact on innovativeness. The outcome of this study is expected to bring a managerial contribution in terms of strategy changes that will improve the abilities to upgrade innovativeness in the Asian supply chain. The study is also expected to generate a theoretical contribution in terms of better understanding of relations and innovativeness in the Asian business context.

1.5. Delimitation

There is a need to create a manageable scope of research, hence, there are three major delimitations in this thesis. The first delimitation is the region of choice for the field study. For the last decades a large portion of the world's manufacturing has been shifted to Asia, therefore, the chosen countries for the field research are China and Korea. In the past years, Korea has transformed itself from being a poor country to one of the technological leaders in the world. In addition, China is gradually shifting from an economy dominated by

manufacturing for export towards a more domestic consumption based economy. These two countries will provide a good insight into the innovative ability and relations with foreign MNCs. The second delimitation is the choice of case company and the supply chain partners. A Swedish bearing manufacturer with operations and suppliers worldwide, SKF, is the chosen company. With a long history of being an engineering and manufacturing company, the case study of SKF will provide a good insight on innovation, knowledge sharing and management strategies related to GVCs. Lastly, as the problem discussion has already established that innovation can be leveraged strategically this study will not cover the aspect of how to leverage supply chain partner innovativeness, instead the focus will be on the factors that impact the innovativeness of the supply chain partners.

1.6. Definitions

Due to the similarity of the terms *innovation* and *innovativeness*, there is a need to clearly define how we interpret them. By the term *innovation* we refer to the outcome or result of a process, such as a new product or a new technology. By the term *innovativeness* we refer to the ability of an entity to generate the actual innovation.

2. Theoretical Framework

This chapter will provide a theoretical overview of supply chain and supply chain management, knowledge based theory and relationship management and their perspective on the thesis' topic. The theoretical overview will be used to create a conceptual model meant to answer the research question.

2.1. Supply Chain Management

The concept of supply chain management derived from various strategies that have been used by enterprises, such as just-in-time manufacturing, kanban, lean manufacturing, and total quality management. During the 80s, implementing these strategies were the main focus of firms' resources. When enterprises realized that these strategies could help gaining profit, the focuses have been shifted to managing supply chain effectively in order to be more beneficial and to expand their market shares (Simchi-Levi et al., 2008). A supply chain refers to a number of processes including different organizations, people, knowledge, information, and resources (Oliver & Webber 1992). SCM deals with activities throughout the supply chain on a strategic decision making level; for example, supplier selection, which component to produce internally and what to outsource, policies, and production planning. Although there has been different opinions on viewing SCM, some view it as an operation process that involve flows of products and materials, some interpret it as a philosophy that management use, and some see it as a management process (Mentzer et al, 2001). In this study, we use Mentzer et al. (2001)'s definition and he states that supply chain management is the *"strategic and systematic coordination of the traditional business functions and the tactics across these business functions within a particular firm and across business within a supply chain, for the purposes of improving the long-term performance of the individual companies and the supply chain as a whole"* (p.18). In other words, integrating and collaborating with various partners throughout the supply chain is critical for the growth of each individual firm within the chain as well as maintaining competitiveness throughout the chain (Frohlich & Westbrook, 2001). It is important for a focal company to integrate its supply chain, and classifying which members in the supply chain network that are the keys actors (Gunasekaran et al., 2008). When companies plan to build strategic networks, suppliers are often mentioned that they are the *"backbones of economic activities in the modern world"* (Nagurney, 2010, p. 200). Suppliers are considered to have tight relationships with their buyers based on their importance in providing components and raw material, as well as their well understanding of the production

process (Lee and Klassen 2008, Wolf 2011). A tight collaboration with suppliers can enhance competitiveness (Kotabe et al., 2003). Strategic partnership involves knowledge and information exchange (Simchi-Levi et al., 2008). By constant exchanging knowledge and technologies, firms are enabled to put in new innovative ideas and enhanced technologies into each other operations, as well as foresee future potential problems and solving current issues (Ragatz et al., 2002). Similarly, Ajmera and Cook (2009) suggest that being inside a network; companies can enhance the speed of product design, achieve higher quality and reduce costs. Therefore, there is a need to have a match between the buyer and supplier, strategic and operational fits are very important in a partnership, which can improve product quality, enhance production process, and cost reduction (Gadde & Snehota, 2000).

2.2. Knowledge Based Theory (KBT)

In order for a company to utilize knowledge in their value creation process, Grant (1996) establishes a set of characteristics. According to Grant (1996), knowledge has to have *transferability*, not only within the organization but also between organizations. There is also a distinction between the notion of knowing how (practical) and the notion of knowing about (theoretical) where the level of transferability is significantly different. The potential for knowledge *aggregation* depends to a great deal on the individual and organizational levels of absorptive ability. The capacity of knowledge aggregation will typically be improved by the use of a common language. *Appropriability* refers to the ability to transfer the knowledge value from the sender to the receiver. Practical knowledge cannot be easily transferred without subjective interpretation and training, therefore the knowledge value will not be directly transferable. It is also important to realize that the human brain has a limited capacity of acquiring, storing and processing knowledge, thus there is a need for specialization in certain areas of knowledge (Grant, 1996).

In order to use knowledge for obtaining a competitive advantage, a link between knowledge and organizational capacity is essential (Kaplan et al., 2001). A firm's competitive advantage depends on its ability to access and integrate the specialized knowledge of its employees (Grant, 1996). Cohen & Levinthal (1990) define absorptive capacity as the *"ability to recognize the value of new external information, assimilate it, and apply it to commercial ends"*. According to Szulanski (1996), firms can practice their routine tasks and transfer their practices throughout the organization. However, some knowledge is difficult to transfer due to knowledge stickiness. The barriers of the knowledge transfer lie in the absorptive capacity of

the recipient, as well as if both transferee and recipient are motivated enough in order to transfer the knowledge (Szulanski, 1996). In fact, the level of knowledge transfer is greatly impacted by the firm's level of absorptive capacity among its employees. Both ability and motivation are necessary in order to optimize the knowledge absorption process, hence, investments in corporate culture and training will have a positive contribution on knowledge transfer (Minbaeva, et al., 2003). Another study done by Malhotra et al., (2005) states that there is a need of partnerships in sharing information and that the consistency of a set of capabilities will then lead to knowledge creation to be shared between partners.

External and internal knowledge sharing seem to complement each other which results in greater innovative capabilities for the firm (Yamin & Otto, 2004). Firms which have innovative partners enhance their capabilities for innovation creation within their organization (Yamin & Otto, 2004; Oke et al., 2013). In order to facilitate external knowledge creation and sharing, it is important for firms to accept that innovative activities in the host country will most likely focus on local rather than internal partners (Yamin & Otto, 2004). Firms can achieve innovation through process development and organizational structure (Quintane et al., 2011). The scale and quality of innovation is increasingly more dependent on specific sourcing and local innovation, hence, MNC subsidiaries and local partners have started to play an increasingly and more specialized role. An example is that the Taiwanese electronics and semiconductor industry with a dominant position on the market which has created information asymmetry with highly specialized knowledge that cannot be found anywhere else. Generally, knowledge of the host country gained from local subsidiaries and partners plays a more significant role than knowledge absorbed at the headquarters (Phene & Almeida, 2008). In terms of innovative performance, Yamin & Otto (2004) emphasize the need for firm's conscious efforts in order to create an environment that encourages knowledge sharing between organizational units and local partners. Automatic knowledge flows are less likely to have a significant impact on innovation, since direct involvement and participation to facilitate knowledge transfer flows are required, especially in the case of local partners (Yamin & Otto, 2004). When analyzing local supply chain partners it is also important to realize that the partner who has more power and irreplaceable characteristics is likely to influence knowledge transfer. In this regard, managers will need to identify the characteristics of their supply chain partners in order to facilitate a better knowledge transfer process (He et al., 2013).

2.3. Relationship Management

Due to the fast changes in global trends, such as shortened product life cycles and rapidly growing technology, it has become harder for firms to run their business in isolation. Therefore, supplier partnerships have been a focus in supply chain studies (Lambert and Cooper, 2000). Ailawadi et al. (1999) suggest that partnership can enhance profitability and innovation collaboration while decreasing operational costs. In addition, a firm engages into a partnership to gain benefit, namely competitive advantage (Nielsen, 1998). The involvement of suppliers on product development and constant product improvement can enhance manufacturing performance (Tracey & Vonderembse, 2000). Supplier involvement on product development and continuing product development results in a positive impact on firm performance, hence, they will also have a positive effect on customer satisfaction (Tracey & Tan, 2001). Rather than offering lower price, Goetsch and Davis (1997) suggest that firm's ability to produce high quality products can better contribute to relationships building.

Supplier relationships can range from short traditional relationships to partnerships and alliances (Leenders and Flynn, 1995). When two firms are moving toward a long-term strategic partnership, soft factors, such as reliability, flexibility and consistency, management compatibility and goal agreements become increasingly important (Ellram, 1990; Cheraghi et al., 2004). Emphasized by numerous scholars, trust is a crucial factor in order to have a successful collaborative supplier relationship (Doney & Cannon, 1998; Villena et al., 2011). Sako (1992: 37) defines trust as *"a state of mind, an expectation held by one trading partner about another that the other behaves or responds in a predictable and mutually acceptable manner"*. Expressing a similar point of view on trust, Dyer and Chu (2003) define trust as two or more parties having confidence in each other's behavior, i.e. not exploiting each other's vulnerabilities. It is also suggested that trust in an alliance is based on two different aspects, a rational and an emotional base (Cullen et al., 2000). The rational base refers to credibility trust, where partners have confidence in each other with the intent and ability to achieve what they have agreed and do what they have promised each other. On the other hand, the emotional base refers to benevolent trust, which means that partners will treat each other with goodwill. This kind of trust is subjective and relating to the partners' believing in the relationship. Dependence exists and is applicable on both suppliers and buyers (Buchanan, 1992; Geyskens et al, 1996). There are many scholars who suggest that mutual trust has positive effects on building good relationships (Kale et al., 2000), as it can enhance social bonds between the parties involved (Barney & Hansen., 1994).

MNCs face some challenges when doing business in a different environment; hence, a change in the business environment may create a need of adaptation in relationships. Administrative routines and product related factors, i.e. production process, schedules and routines, are the main focus of adaptation for both suppliers and buyers. Adaptation will bring the two involved firms closer in the relationship since they make adjustments in order to fit each other (Hallen et al., 1991). Han (1991) described that structural bond function as glue that stick organizations together and that the backbone of this bond is derived from the economy decisions made by the organization. Han (1991) also found that structural bond derives from adaptation of processes, knowledge sharing, as well as non-retrievable investments by the buyers. Personal social bonds derive from subjective social interaction. In other words, social bonds derive from relationships between people, typically between employees from the companies rather than the companies themselves. Wilson (1995) concluded that buyers and sellers who are more active in personal relationships result in having higher dedication to maintain the relationships.

The fact that the involved partners are willing to make extra efforts in order to have a good collaboration and do more than what they are obligated by the contracts can be labeled as commitment. Although facing risks, both parties are willing to invest resources and time in order to benefit the collaboration (Cullen et al., 2000). Landeros and Monczka (1989) suggest that buyer-supplier co-operation is about joint investment and effort in enhancing quality and productivity, as well as ultimately reducing overall operation costs. Ng (2008) also pointed out that, a firm's commitment in investing specific resources, such as capital improvement, training, equipment and software etc., is considered non-retrievable investment. This will enhance a firm's value creation, as well as create stronger social and structural bonds between buyers and suppliers. It is also critical for partner firms to have mutual strategic meaning and goal in a partnership (Burnes & New, 1996; Spekman et al., 1998).

2.4. The Role of Innovation in the Supply Chain

A study by Aboelmaged (2012) shows that innovation practice and specific organizational knowledge can influence cost, quality, as well as delivery and result into flexible outcome. The competitive advantages that lead to innovation are likely to derive from innovative supply chain design, practices and enabling technology (Arlbjorn et al., 2011). SCM and innovation have often been viewed as separate areas and there is still lack of research in Supply Chain Innovation (SCI) (Arlbjorn et al., 2011). Arlbjorn et al. (2011:8) define SCI as *"a change*

(incremental or radical) within the supply chain network, supply chain technology or supply chain processes (or combinations of these) that can take place in a company function, within a company, in an industry or in a supply chain in order to enhance new value creation for the stakeholder". According to Arlbjorn et al. (2011) this definition illustrates a number of features of the supply chain innovation. First of all, SCI is of a dynamic nature since it is part of a change process. Secondly, SCI can be incrementally measured on a scale of innovative effect. Thirdly, SCI can impact different business functions and it can take place inter-firm, intra-firm, through networks and industries. Lastly, SCI is more than just an idea since it has to prove an actual commercial value for the stakeholders.

SCM could lead to innovation and cluster development which are able to create competitive advantages for firms (Yung et al., 2009). Innovativeness within the cluster is created by all the firms' innovation capabilities and performance, and this enables the cluster to create and maintain its innovativeness and performance (Röttmer, 2011). In other words, cluster and innovation are interdependent. Firms are attracted by the competitiveness they can gain from the clusters. The competitiveness refers to innovation which is the main trend of nowadays knowledge driven and globalized economy (Nallari & Griffith, 2013). With effective supplier segmentation, both the company and its suppliers can achieve competitiveness by having a long lasting close collaboration (Schroder & Powell, 2012). In fact, a long term close collaboration can lead to supply chain innovation and cost reduction (Kim, 2000).

In a study conducted in Australia, Oke et al. (2013), made an attempt to analyze the correlation between the innovation chain and the notion of an innovative climate. The overall conclusion is that innovativeness in the supply chain has a positive impact on a firm's product innovation performance. The study acknowledges the relationship between successful product innovation and a match between a firm's internal environment and ideas around innovation with the innovative efforts in the supply chain. Instead, a strategic relationship seems to be the key factor to ensure innovativeness for both the firm and its supply chain partners (Oke et al., 2013).

2.5. Conceptual Model

2.5.1. Supply Chain Innovativeness (SCI)

As a result of globalization supplier expectations have risen beyond basic values of cost and quality to include more indirect values (Azadegan, 2011). Arlbjorn et al. (2011) note that the

introduction of new products or the entry into a new market will have a higher chance of success if it is supported by innovation and innovativeness in the supply chain, not only in the design of the supply chain itself but also in management practices and enabling technology. As a result of supplier innovativeness, a firm may gain benefits around cost, quality, and product development as well as improvement around delivery and flexibility (Azadegan & Dooley, 2010). The term *innovativeness* can be seen as the firms' ability to repeatedly develop, accept or reject innovations. Therefore, *supply chain innovativeness* would be the ability of the companies within the supply chain to develop, accept or reject ideas associated with design or manufacturing tasks. Supply chain innovativeness may result in product or process innovations which in turn may benefit the firm (Azadegan, 2008).

2.5.2. Supply Chain Partner Innovativeness (SCPI)

To improve and sustain the supply chain in terms of products and innovation, supply chain partners are important resources (Azadegan & Dooley, 2010). According to Oke et al. (2013), a supply chain partner's innovativeness is *"the extent to which the supply chain partner possesses the ability to produce new ideas and innovations"* (pp. 44). A firms limited ability for innovation, risk sharing or short time to market requirement are all driving forces for leveraging the innovativeness of the supply chain (Oke et al., 2013). In addition to full integration with important suppliers in the new product development process there is also a possibility of innovative spillover effects from the supplier to the firm (Houghland, 2007). Firms that seek to gain competitive advantage through outsourcing with innovative partners will allow MNCs to develop their own capabilities and ability for innovation, for example, interaction with innovative suppliers will expose a firm to new technology which it will able to incorporate in its own development or production processes. By using supply chain innovativeness strategically, a firm is able to adapt and import the external knowledge to improve the internal capabilities for innovation (Oke et al., 2013). Additionally, information sharing in the supply chain network is also important for strategic decisions regarding innovation, for example sales figures at the edges of a network for certain product types can be translated into a change of resource spending on product development projects in the center of the network (Houghland, 2007). As the flow of knowledge is at the core of innovativeness, the knowledge based theory which positions the creation, integration, and application at the center of the firm, provides some additional insights to supply chain partner innovativeness. A basic knowledge based principle is that firms often get caught up in

routines which will actually improve knowledge due to the repetitions of tasks (Oke et al., 2013).

A match in the learning style of the future partners is critical for their co-operation. In addition, the supplier innovativeness can really affect the improvement of cost, quality, product development, delivery and flexibility performance. The environment is also an important factor that can result into innovativeness (Azadegan & Dooley, 2010). A study by Oke et al., (2013) states that supply chain partners' innovativeness could further improve firm's innovation. The key element is that stronger relationships with key supply chain partners could enhance innovativeness and innovation strategy (Oke et al., 2013). However, in order to understand which supplier is more effective than the others, there is a need of supplier evaluation program through quantitative measurements (Azadegan, 2011). In order for a firm to effectively make use of the innovativeness in the supply chain for its own processes there is a need for the firm to create and develop its own set of capabilities for gathering and utilizing innovation effectively (Amabile, 1998). The following section will therefore discuss the concept of an innovative climate.

2.5.3. Innovative Climate

Oke et al. (2013) define innovative climate as "the *extent to which the firm encourages and builds a climate that supports innovation"* (pp. 44). Köhler et al. (2010) highlight the importance of workplace health management strategies that strengthen social and relational trust which is important to create an innovative friendly internal climate. Sun et al. (2011) also suggest that innovativeness is positively affected by a climate that promotes individual autonomy and provides safe emotional relations between the firm and the employees. Additionally, the level of trust, communication, and collaboration among team members is also very important. There is also a need for organizational support for innovative thinking and risk taking as well as access to resources and training in order to find creative ways to solve challenging problems (Sun et al., 2011). Azadegan (2011) determines that the company type results in varying degrees of innovativeness. Suppliers that typically perform routine based tasks will show less innovativeness compared to suppliers involved in more knowledge intensive processes. Sun et al. (2011) find that a firm's current stage in the life cycle also plays an important role on the innovative climate. The innovative level of a firm in the startup stage is much higher than a firm in a growth stage. Secondly, the industry type and the organizational structure also influence the innovative climate. By observing Chinese

companies with different organizational structures they could identify significant differences in the innovative climate between state owned enterprises and for example joint venture firms (Sun et al., 2011).

The external environment also influences the firm's innovative climate. For example, innovativeness is increased in an environment that is experiencing a high degree of technological turbulence (Lichtenthaler, 2009). Another example is cluster membership, which enhances the innovativeness due to close geographical proximity with likeminded companies and managers (Bell, 2005). Strong public institutions may positively influence innovativeness through sound administration, development of technology markets and intellectual property legislations. Intellectual property policies can prove especially important in joint development efforts which are based on a combination of external and internal research (Savitskaya, 2011). In addition to simple apply extra national resources for R&D activities, Furman et al. (2002), highlights the importance of establishing and funding technological universities and market interference based on innovative capacity, for example through the manipulation of the tax system and opening up national markets for international competition. However, public institutional pressure may also cause a firm to shift to innovation in order to meet institutional requirements instead of innovate in order to generate growth for the business and its partners (Chou, et al., 2003).

2.5.4. Strategic Relationships

In terms of the relationship between a firm and supplier, Azadegan et al. (2008) determine that the learning style of a firm should match that of the supplier in order to facilitate a better transfer of innovativeness. However, there seems to be an exception in the cases where the level of innovation is desired to reach a maximum. In a follow up study by Azadegan & Dooley (2010), they confirm these findings and conclude that the level of product innovation improvements is indeed determined by the fit between the learning styles of the two partners but that a firm that aligns with a supplier that has a contrasting learning style is likely to benefit more from the supplier's innovativeness. This may be explained by the fact that contrasting learning styles are of less importance when there is a time pressure for new product innovation due to strong external competitive pressure. Inemek & Matthyssens (2012) find that joint product development relates positively to supplier innovativeness since it provides knowledge sharing which allows the supplier to upgrade existing weaknesses which encourages the supplier to initiate new ideas, products and services.

MNCs seek to create a mutual relationship as they can have more efficient suppliers and on the other hand, the suppliers can improve their capabilities (UNCTAD, 2001). A number of studies, Panayides & Lun (2009), Oke et al. (2013) and Inemek & Matthyssens (2012), highlight trust as an important factor for enabling supply chain innovativeness. Trust will create a better understanding for the needs and services required to process innovations in the supply chain more correctly. Trust in relationship will create an atmosphere where exchange and sharing of innovative ideas is more likely to occur, i.e. improving the ability to innovate. It is critical to share mutual goals and benefits, especially in an early stage of the relationship as it will improve the ability to build trust (Burnes and New, 1996; Spekman et al., 1998). Meanwhile, commitment from both sides is necessary. Dwyer et al. (1987: 19) interpret commitment as an "implicit *or explicit pledge of relational continuity between exchange partners"*. According to Cullen et al. (2000), there are two types of commitment in an alliance, namely *calculative commitment* and *attitudinal commitment.* Calculative commitment is related to the rational and economic aspect. For a relationship to continue and develop, it is necessary that it benefits the parties involved. Attitudinal commitment refers to the fact that involved partners are willing to give extra effort to make the collaboration work and do more than what is stated in the contracts. Although facing risk, both parties are willing to invest resources and time in order to benefit the collaboration. When trust in an alliance is built and reaches a point where both sides are willing to dedicate attitudinal commitment, both firms should have enough confidence in each other and be able to collaborate. Landeros & Monczka (1989) suggest that buyer-supplier co-operation is about joint investment and effort in enhancing quality and productivity, as well as ultimately reduce overall operation costs. Long term collaboration with the right suppliers can lead to value creation and benefit both sides. However, there are always challenges during the collaboration process. Mutual trust is among the most crucial elements in having successful collaborative supplier relationships (Doney & Cannon, 1998; Villena et al., 2011).

In order to achieve competitive advantages, there is a need of finding new approaches and promoting mechanisms for innovativeness throughout the supply chain. Therefore, through the conceptual framework, the focus of the analysis will look at the supply chain innovativeness and the ability of a MNC to innovate through its supply chain partners, most importantly with its suppliers (see figure 1).

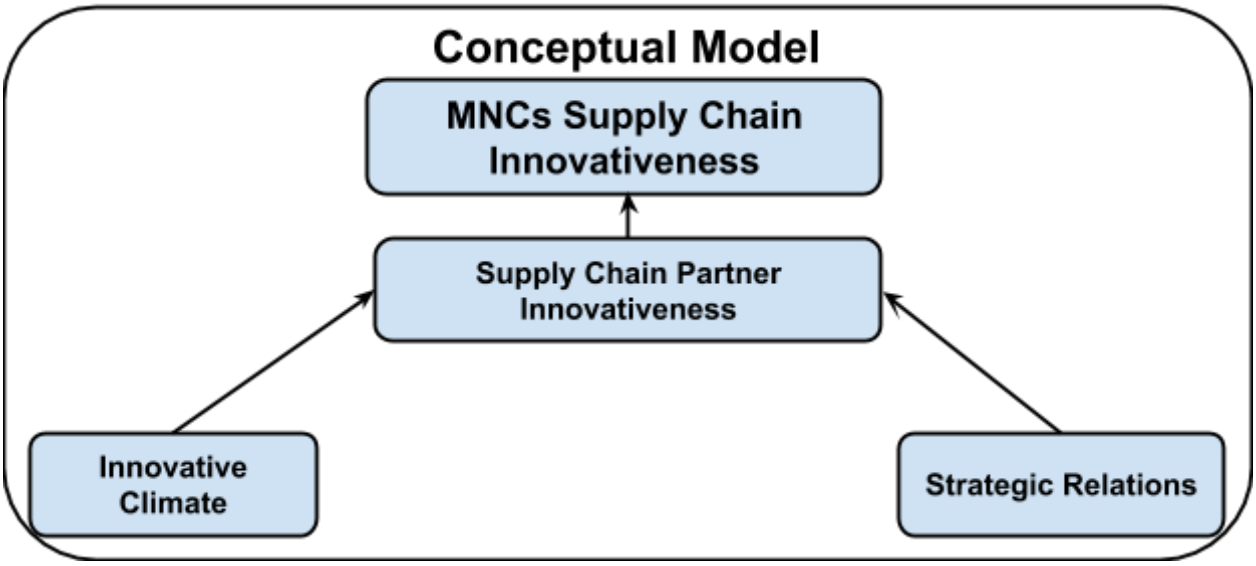

Figure 1: Conceptual Model Illustration

In our conceptual framework, we assume that supply chain partner innovativeness is based on two concepts, strategic relations and innovative climates. Additionally, we make an assumption that through a positive impact of these factors, a MNC is able to leverage the innovativeness of individual supply partners to improve the supply chain innovativeness as a whole. In order to investigate these relations it is necessary to understand which factors could affect an innovative climate and strategic relation which may provide a positive contribution to the supply chain partner innovativeness. The methodology being used to answer the research question for this study will be discussed in the next section.

3. Methodology

This chapter will outline, discuss, and argue for the academic methods that are being used in this study. There will also follow a presentation and argumentation for the relationship between the research question and the chosen research approach together with a more detailed discussion about the implementation of the field study as well as the analytical process.

3.1. Research Approach

The study have used an exploratory approach to identify how a MNC can improve the competitive advantage by upgrading supply chain partner innovativeness; a qualitative research approach based on interviews and observations has been chosen. The qualitative research is appropriate because it is a suitable approach when trying to generate new ideas around a research topic (Gibsson et al., 2004). While a quantitative research approach can turn words into numbers when researching with particular dimensions there is still a need to turn quantitative in to qualitative when analyzing different contexts (Bernard, 2011). As there seems to be a need to understand how supply chain innovativeness is affected in the Asian context, a qualitative approach is a more suitable approach than a quantitative one (Babbie, 2004).

This study has used a combination of deductive and inductive approach, which is called an abductive approach. The abductive approach seeks to generate new concepts and theories rather than the confirmation of an existing theory. The abductive research approach is appropriate when trying to discover new things, such as unknown variables and relationships (Dubois & Gadde, 2002). The abductive approach is used to get a deeper understanding of the relationship between the business environment and the theoretical framework continuously. In order to answer the research question through the case study in China and Korea, there is a need to gain a deeper insight on how a Swedish firm can upgrade supply chain partner innovativeness. In fact, the abductive approach is a flexible process compared to only using deductive or inductive; the abductive logic allows the researcher to go back and forth between the theories and the empirical data which will strengthen the case study (see figure 2) (Salmi, 2011). We argue to use abductive approach due to its appropriateness when trying to see interlinked issues in our study. In addition to the qualitative research, the abductive approach will help the findings to be connected with each other (Lipscomb, 2012).

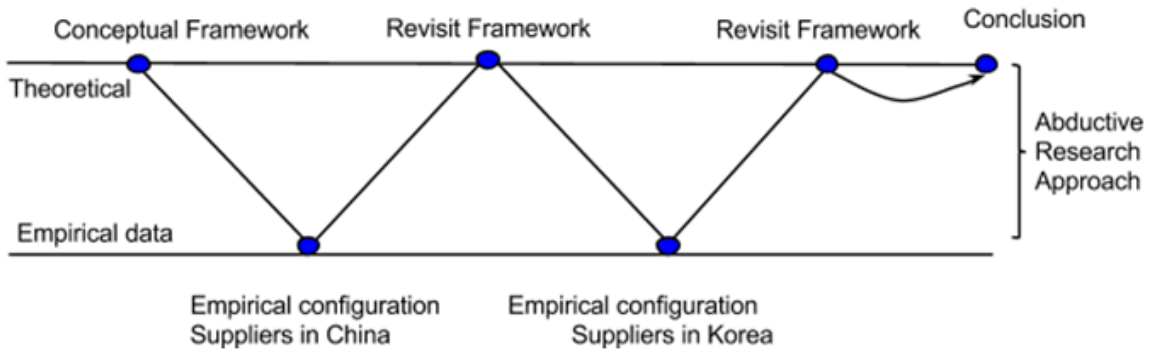

Figure 2: Our Abductive Research Method

3.2. Research Design

In order to implement our qualitative research we have chosen to do a case study. By using the case study approach the researcher will be able to get a deeper understanding of the certain interactions between actors, and behavior that occur in a certain process (Woodside, 2010). According to Yin (1994, pp.13) "*a case study is an empirical inquiry that investigates a contemporary phenomenon within its real life context, especially when boundaries between the phenomenon and the context are not clearly evident*". However, the case study approach has often been criticized due to the incompatibility between generalization and the close connection to context of the phenomenon under observation (Welch et al., 2011) . In contrast to the common interpretation of the work of Yin (1994), Welch et al. (2011) introduce the concept of contextualized explanation which allows generalization by "*reconciling context and explanation by acknowledging the complexity of the social world, the bounded scope and the contingency of causal relationships, and the simultaneous operation of multiple interaction effects*" (Welch et al., 2011, pp. 756). A case study can often be seen as a research strategy which can be used together with a number of data gathering actions and data sources studying a single phenomenon in a particular context (Pekkari & Welch, 2011). Nevertheless, case studies have the ability to generate theoretical propositions which can be validated with large scale quantitative testing. Thus, case studies are generally seen as suitable for the early phases in exploratory research (Welch et al., 2011).

The research design has attempted to map the conceptual model in terms of strategic relations, innovative climate, and supply chain innovativeness, on to the case study. By using this approach it has been possible to identify which factors that influence supply chain partner innovativeness through innovative climate and strategic relations. We believe that by using

this approach we have been able to provide insights into how MNCs can adapt their existing processes and relations in order to upgrade supply chain partner innovativeness more strategically. The research design regarding samples, data collection, interviewing process, empirical gathering and validity, and analytical process will be presented subsequently.

3.3. Research Unit and Samples

Sampling is the choice of case study as we have to consider, where, when, what to observe (Merriam, 1998). A single case study is appropriate to the research due to the study of explanation and the approach of abductive research (Ghauri, 2004). Using case study as a sampling can allow us to test the theory (Fletcher & Plakoyiannaki, 2011). The selection process is country first, then looking into companies in Sweden when selecting due to the fact that the research topic can cover many different industries. In the end we got the opportunity to work with a Swedish MNC , SKF, which was selected as our case study for this thesis. In fact choosing one MNC as a case study allowed us to get access to different countries and their suppliers which is useful for exploratory research in order to see the pattern of the study. Also, this can increase the validity of the study (Lervik, 2011). Therefore, due to the research question and methods, we have chosen one case study company and its suppliers located in two different geographical areas. Through SKF we received the opportunity to visit factories and suppliers in a number of countries in the Asian region. However, due to scheduling conflicts and a limitation of research resources and time, Korea and China are our chosen locations for supplier samples. Three suppliers in China and two in Korea are included in our study. Four of these suppliers are considered to be strategic partners and one of them is a potential supplier to SKF. Among these three suppliers in China, two of them are American companies and the other one is Chinese owned. All three companies have already been in a partnership with SKF for a number of years. Both suppliers in Korea are transitional Korean established firms. One of them has experience working with SKF and the other one is a potential supplier which recently entered an evaluating process.

3.4. Data Collection Method

We use an open library source, the internet and books throughout the research. In the data collection process, we use interviews, observation, and company archives and other documents which are traditional for qualitative research (Merriam, 2002). In the qualitative data research we have collaborated with a main contact person in our case study, the company SKF. Through this collaboration, it has been possible to access many internal SKF resources

located in Asia. Using the SKF supplier relations network in China and Korea led us to many key suppliers and people that we could interview during our field study. However, it is important to note that, before establishing a relationship with SKF, we have already established some contacts by e-mailing companies in Asia. We have therefore tried to combine the approach of having SKF as a case study while at the same time having the external opinion regarding innovative topics to ensure validity for our findings. We have been at the SKF headquarters a few times followed by our field study in two countries, China, Korea. In China, we were able to conduct interviews during a supplier meeting in Shanghai. In Korea, we were invited to visit SKF suppliers and a potential supplier's factory. Our interview subjects have been from a range of positions, from manager, director up to managing director, and vice president. Our research questions have directed us to use many samples requiring external opinions, as this multiple interviewee approach enhances validity (Merriam, 2002).

3.5. Interview Protocol and Interview Process

In total, 23 interviews have been conducted in the field study (see table in the appendix 10.1). During the interview, an interview guide was used to during the conversations (see appendix 10.2-10.5), however, the interviews were typically open where follow up and new questions could be added during the discussion. All interviews were conducted face to face with an average length of approximately 1 hour. In the majority of cases all the interviews were conducted in English directly with the interviewee, however in one interview in Korea local language was used with the help of local translators from SKF and with some suppliers in China, our local language abilities were used. All the interviews have been recorded and then transcribed during the field research stay in Asia. During the interview observations we have also been taking notes. In addition, we have been in contact with some suppliers that were interviewed through email in order to do some follow-up to confirm and get additional data.

3.6. Empirical Gathering and Validity

Babbie (2004) determines that the samples of analysis are largely dependent on the unit of analysis defined for the research topic. The samples selected for interviews in this study have been chosen carefully to match the research topic. The empirical data has come from three major sample groups. The first group was formed by representatives of MNCs with a Swedish perspective based at the headquarters which have been able to give insights into supply chain management, relationship management and innovation. The second group was formed by

external representatives working in Asia which have provided general information about business, culture and innovativeness in Asia. The third sample group consisted of suppliers from China and Korea with a relationship to headquarters in Sweden. The three groups were able to confirm or reject theories based on information from each other as well as being able to provide deeper insights into the contextual differences between China and Korea in terms of innovative climate and strategic relations.

3.7. The Analytical Process

Qualitative research is the continuous interaction between data collection and theory. The goal of data analysis is to discover patterns in the research data, patterns that point to the theoretical understanding of social life (Babbie, 2004). As the research is trying to understand the underlying factors that come into play in order to determine how supplier innovativeness is affected by strategic relationship and its environment we have used a case oriented analysis. According to Babbie (2004), it is possible to use an in depth analysis of subjects experiences as instances of more general social concepts and variables. The base of the data analysis has been the coding and mapping of the research data in form of our transcribed interviews on to our conceptual model. During the mapping process the coded data has also been separated based on the context, i.e. the country of the supplier. By using this technique it has been possible to get a contextualized perspective on the conceptual model as well as contextual differences which allowed us to find out how and why supplier innovativeness relates to the environment. Also, when doing the analysis we visited and revisited the theoretical framework and empirical data.

3.8. Ethical Considerations

Whether a qualitative study is successful or not is often dependent on if it was performed in an ethical way. Much of the validity and reliability of the result is based on the ethics of the researcher (Merriam, 2002). The authors of this thesis have no prior connections to SKF or the bearing industry, therefore it has been possible to view the company and the facts gathered around it more objectively. The field research for this study has always been performed with an open mind and with respect for the interview respondents. All respondents have has the opportunity to see the interview questions beforehand and all of them have been asked if they object to being recorded. The wishes from some of the interview subjects to remain anonymous have also been fulfilled.

3.9. Reflection of the Methodology

Through the empirical study we have been able to interview respondents of many different nationalities which have allowed us to see the problems of local companies. However, some of the respondents among the local suppliers had been studying abroad, something that might have had some impact on their view of strategic relations and innovation compared to local general opinion. Additionally, some of the Korean suppliers were having a hard time expressing themselves which required local SKF people that could help with the translation. The fact that SKF sometimes was involved in the translation might have had a negative impact on the ability for the suppliers to express themselves open and freely.

4. Empirical Background

The chapter contains a presentation of the case study firm and the business environments, China and Korea in which the suppliers are located. The information provided in this chapter will help the reader to better understand the empirical findings and the analysis.

4.1. The Case Study Company: SKF

The Swedish enterprise of our study is SKF. Founded in 1907, SKF is one of the biggest companies in Sweden with a rich history and experience in bearing manufacturing. Since its early history, the company has grown rapidly and now SKF group is a successful global supplier of industrial products, solutions and services within rolling bearings, seals, mechatronics, services and lubrication systems (SKF annual report, 2013). With their experience and expertise, SKF divides its technologies into five platforms: Bearings and Units, Seals, Mechatronics, Service and Lubrication. These platforms enable SKF to provide tailor-made services and products for customers from different industries, helping them enhancing performance, decrease energy spending and reduce total costs (Ibid.).

Nowadays, SKF has approximately 140 manufacturing and operational sites in 32 countries (SKF, 2014b). In order to support these manufacturing plants, SKF spent SEK 35 billion (Swedish Kronor) or USD 5.2 billion in purchasing in 2011. Adding up both primary and secondary suppliers, the company has around 10,000 suppliers all over the world. These suppliers are mainly from four different regions: USA, Europe, India and China (SKF lecture notes). In order to provide good quality products and solutions for its customers, SKF put a lot of weight on its sourcing policy and suppliers. All the suppliers need to have the capability to meet SKF requirements as well as to integrate into the SKF supplier network. As SKF stresses responsible sourcing, it requires all its suppliers to adopt SKFs code of conduct. Regarding supplier monitoring, SKF organizes a yearly event with suppliers in order to encourage them to achieve excellent performance in the areas of Quality, Cost, Delivery, Innovation and Management (SKF China Interview, Six Sigma Development Manager, 2014a).

4.2. China Background

For many years, China has been in the focus since it is the fastest growing major economy in the world. However, as the economy moves from the industrial stage towards knowledge based development (Sachs, 2004), the Chinese business environment changes and it is very

important for firms which operate in China to adapt and adjust. As industrialization is supported by strong export, healthy investment, technology transfer and skilled labor (Ibid.), the foundation for China's development became ready and the shift started. Consumption begins to be the driving force instead of investment. The service sector will take over as the biggest share of economy from industry and the massive low cost labor oriented manufacturing will shift to environmentally friendly production (Yao & Wheatley, 2010). Since Chinese economy development continues, the standard of products has increased due to the main trend of luxury and good quality commodities in most of the advanced markets (Ibid.). Thus, in order to meet the demand, product quality starts being the focus.

To satisfy the demand and boost its service sector the Chinese government emphasized that innovation would be a national priority (Vaitheeswaran, 2013). Unlike the state and European Union market-based driven innovation, China innovation is mainly initiated by governmental innovation policy (Someren & Someren-Wang, 2013). China's innovation development is heavily driven by the central government as the former President Hu said "*the government would play a leading role in the scientific and technological innovation, while the basic role of the market will be given a full play in the allocation of scientific and technological resources.*" (Someren & Someren-Wang, 2013, p.73). The Chinese science and technology management system will be restructured and tailored to encourage businesses driving technological innovation. One of the most important efforts is that the government will apply a talent development plan in order to improve the protection of intellectual property rights (China Daily, 2014). While encouraging innovation, Chinese government tends to protect and develop some of the industries, for example, the bearing industry. In order to help China's bearing industry to compete on the global market, the government provides incentives and financial support for the domestic bearing companies, such as facilitating the creation of high quality machinery tools, as well as metal-working equipment (Carr, 2010). Central and regional government initiated the three Special Economic Zones in order to support and stimulate the development of a high-tech innovation based economy. These Special Economic Zones attract foreign companies to invest and set up major operation functions in the regions, which give the development an extra help by knowledge and management capabilities exchange (Someren & Someren-Wang, 2013).

Chinese government strongly emphasizes innovation activities that are related to information technology (IT), new materials, and high-tech manufacturing technology (Ibid). National

universities and research and development institutions (R&D) are stimulated to collaborate with overseas R&D organizations. The government will also foster and support local companies that produce advanced technology goods in order to increase their export, as well as to set up R&D centers abroad. Meanwhile, foreign firms are encouraged to establish R&D facilities in China (Someren & Someren-Wang, 2013). Besides the economic development and government policy direction, foreign enterprises need to be aware of the Chinese culture in business. Due to the culture variation, many foreign companies face challenges as Chinese people's behaviors and concepts are very much influenced by Confucianism and Taoism, which are very different from the Judeo-Christian values (Llamazares, 2012; Li & Fan, 2011). There are some things that are very important when doing business with Chinese companies. First and the most important of all is *Guanxi* which means personal contacts (Li et al, 2000). This is considered to be one's social capital as it plays an important role in one's professional career. On the second place comes *Zhongjian Ren* which means the intermediary (Graham & Lam, 2003). It is almost impossible for a foreigner to discuss a business deal without an intermediary. Thirdly *social status* or hierarchy emphasizes obedience and respect to people who are older than oneself and who are superior to oneself. In addition, *Mianzi* which means reputation, giving face, is very important in both daily life and business environment (Llamazares, 2012). Furthermore, the Chinese emphasizes on *interpersonal harmony* in their relationship with their partner companies (Graham & Lam, 2003). In addition, *holistic thinking* refers to the fact that Chinese tend to think in terms of the whole. This specific way of thinking is in direct conflict with the west, as in the west, people like to segment complex tasks into smaller items in order to reach the result. Nevertheless, *thrift* is one of the characteristics of the Chinese due to the poverty history of the country. Chinese tend to give a rather high price which is considered unreasonable by most of the people, and then they start to bargain down the price. By doing this, they leave some room enabling further adjustment and at the end manage to save cost (Ibid.).

4.3. Korea Background

Korea was once one of the poorest countries in the world, after the war in 1960 (The Economist, 2011). However, with the well-known *Miracle on the Han River* which is a reference to the extraordinary export driven economic growth implying fast development of industrialization , technological achievement and tremendous improvement in living standard (Zelenovskaya, 2012), Korea managed to become richer than the European Union average (The Economist, 2011). With a fast growth in the past few decades, Korea's economy is

driven by high-tech export industry (Forbes, 2014). While knowledge-based manufacturing is still the dominant sector in Korea, the government sees the need to develop the country's service sector (Kim & Seo, 2014). The Korean government concentrates on boosting corporate investment and increasing domestic consumption, thus the country won't have to rely on exports to the same extent as today (Yonhap, 2014). After the industrialization reached its peak, Korean companies started to create and foster new advanced technology in order to compete in the high-tech commodities global markets, such as semiconductors, digital displays, mobile phones and automobiles. Nowadays, Korea is one of the countries that devote large part their resources to develop advanced technological learning and technological progress (Hemmert, 2007).

Similar to other advanced nations, Korea's business sector plays an important role for innovation. Among all the industries, the electronic component sector, the automobile sector and the audio/video/communication equipment sector are the top three that invest the most into R&D development (Hemmert, 2007). Bedsides the effort made by the business sector, Korean government also supports innovation. There are three types of non-business research institutions supported by the Korean government in different ways. Most of them dedicate to engineering-related research and development, which matches the focus of the business sector's R&D. Korean government also provides financial support to the business sector's R&D undertakings (Ibid.). In order to nurture innovation in the SME sector, the Korean government will spend 818.4 billion won (USD 779 million) in the sector's R&D activities (Kim, 2014). Nevertheless, more funding will be injected into the program "*R&D villages*", where SMEs can operate their R&D activities inside university research institutes within their regions (Ibid.). With the efforts and dedications of the business sector and the financial support of the government, Korea aims to enhance its competitiveness in innovation-intensive industries.

In order to have a good business relationship with Korean firms, one needs to understand how they think and act. Similar to the Chinese, Korean culture is also under Confucian influence (The Canadian Trade Commissioner Service, 2014), these cultures both put emphasis on hierarchy/power distance (Lee, 2012). However, the two cultures are still somewhat different. In general, Korea's culture is group oriented but comparing to the rest of the Asian cultures, they are rather individualistic. Therefore, when doing business with Korea, building long lasting trustful relationships is crucial (Katz, 2008). Trustful relationships in Korea exist

between individuals or groups of people but not between firms. In other words, your Korean business partner has friendships and trusts you, however, he or she doesn't necessarily trust the company behind you (Ibid.). In Korea, Kibun refers to a person's balancing mood or feeling (Lee, 2012). Knowing that *Kibun* is very important for Koreans, trying to maintain harmony in the business world is critical. It is rude to disturb others' *Kibun*, thus it is necessary to respect the others' suggestions and emotions (Ibid.). Saving face is also a very common behavior in Korea, it is impolite if one causes embarrassment to another person (Lee, 2012 and Katz, 2008). In addition, Koreans use a lot of non-verbal communication and body language. Therefore, knowing how to read these non-verbal signals is essential (Lee, 2012).

5. Empirical Findings

In this chapter we will present the findings from our empirical study. We will then present our case study results from SKF headquarters, China and Korea, and external actors in Asia.

5.1. SKF Supply Chain

Sourcing within SKF has been regionalized, for example, if a region has been able to standardize production and produce high volumes at low cost it is beneficial to focus sourcing for that product on that region. (SKF Interview, Global Purchasing Manager, 2014c). Typically SKF will look at the total need of sourcing and then break it down into the different needs around the world. Before selecting a supplier, SKF will have a discussion with the supplier regarding Quality, Cost, Delivery, Innovation, and Management (QCDIM). Suppliers also realize that they can benefit from the partnership due to SKF's strong brand. In many cases, suppliers are willing to work extra in order to partner up with SKF (SKF Interview, Purchasing Director, Components, 2014b). If there is a high sale in a particular region, SKF will build more factories to serve the demand (SKF Interview, Global Supply Market Development Manager, 2014d).

5.1.1. SKF Supply Chain Innovativeness

There are some opinions that SKF should work more with innovation scouting in order to bring in more external innovation to the company. Efforts to do this have been started in the international purchasing organization (SKF Interview, Global Supply Market Development Manager, 2014d & SKF Interview, Group Purchasing, Business Excellence Manager, 2014f). As a way to stimulate innovativeness among the suppliers, SKF helps facilitate yearly workshops in China (Shanghai), India, US (Chicago) and Europe. During these workshops SKF suppliers come together to discuss common problems and future possibilities which results in a long action list which is ranked in order to determine activities that can be converted to projects. Some of these projects take year to complete, for example, for new product development supplier technology may have to be developed which is very complex and requires that different types of knowledge are put together. Typically there are a lot of good ideas coming up as a result of these workshops but in order to further improve the results there should be an effort to connect supplier representatives with the right people from SKF (SKF Interview, Global Purchasing Manager, Renewable energy BU, 2014c).

When it comes to supplier capacity, quality and cost SKF is always in a position to offer support. But it is always the supplier that has to be the driving force. SKF will set targets in terms of cost reduction or quality improvements but it is up to the supplier to find ways to reach these goals. SKF will not provide the machinery to help the supplier but will instead provide specialist knowledge in order to identify improvement areas in the existing machinery and processes within the supplier's organization. Some of the information provided to the suppliers is protected by confidentiality agreements in order to prevent it from leaking to a third party. In reverse, it depends on each country how much a supplier is willing to give back to SKF (SKF Interview, Commodity Manager, Semi-Finished Components, 2014a). One opinion from SKF is that the company sometimes shares too much. European companies in China can be naive and underestimate the risks of too much knowledge sharing with local suppliers. A written legal document in China is worth less than in Europe, instead, the quality of the relationship is very important. The current business climate is also a factor. A supplier relationship during a period of growth is typically good and there are no issues regarding intellectual property rights, however, when sales volume decreases suddenly the intellectual property is used for other customers of the supplier (SKF Interview, Global Purchasing Manager, Renewable energy BU, 2014c).

5.1.2. SKF Relationship Management

SKF and supplier trust is something fundamental because without trust there is no way of doing business with each other (SKF Interview, Group Purchasing, Business Excellence Manager, 2014f). Cultural barriers during negotiations with suppliers can usually be managed as long as the negotiator has the cultural context in mind. However, in some cases there is a need for a local negotiator (SKF Interview, Commodity Manager, Semi-Finished Components, 2014a). Most of the time suppliers communicate with local SKF representatives since this is more efficient. In certain cases a representative from one of the European SKF offices may be involved (SKF Interview, Purchasing Director, Components, 2014b). When operations have been going on for a long time they have resulted in a certain size in volumes and staff and also a localization of the local culture into the company. For example in China, the view of SKF has somewhat shifted from a global to a local company which means the local SKF facilities share the same culture as the suppliers (SKF Interview, Global Purchasing Manager, Renewable energy BU, 2014c).

The reason for a SKF supplier relationship ending is typically financial problems for the supplier, something that is difficult for SKF to influence. The other reasons are negative quality development, price discussions, not competitive suppliers, and in compliance audits results. However, if severe breaches of the code of conduct are found, for example, child labor, the relationship would be terminated immediately (SKF Interview, Global Supply Market Development Manager, 2014d).

5.2. China

Through collaborating with local suppliers together with SKF's code of conduct, SKF aims to produce standard products globally. It would not be different products made in different countries but *"made in SKF"*. This has been printed on products sold in China and on those that will be exported to other places in the world (SKF Interview, Purchasing Director, China, 2014g). Localizing suppliers is needed in Asia due to the variation of customer's needs and the demand led by the globalization and the fast economic growth in Asia. With a global and shorter supply chain, SKF can respond fast to the different markets (Ibid.).

To continue improving the whole supply chain, SKF employs experienced people for further SCM development at its factories (SKF China Interview, Six Sigma Development Manager, 2014a). SKF started to include its suppliers in improvement activities because competition does not exist only between MNCs but also in different supply chain. In order to facilitate supplier development, SKF applies six-sigma in manufacturing principle. As an example, for the employees working in the purchasing department, the major task is to negotiate with the suppliers in order to achieve cost savings. Although putting quality requirements to the suppliers can also lead to the cost saving, whatever later complaints about quality defects will be reported to the quality departments (SKF China Interview, Six Sigma Development Manager, 2014a).

Cost is the easiest and the most commonly used instrument for evaluating projects or businesses, however, it cannot be the single tool to use. For example, it is possible to translate the quality improvement to cost reduction; innovation can be a way to improve quality that leads to cost reduction as well as improving the delivery (SKF China Interview, Six Sigma Development Manager, 2014a). Obviously there is a conflict between cost and quality, however, by having the same person as both quality and purchasing departments' manager can help reduce tension and bring balance. On the suppliers' side, it is important for the

suppliers to reach SKF baseline, i.e. quality before they can start to discuss the cost reduction. If the supplier meets the SKF requirements but has a hard time to reduce the cost, SKF will provide support. However, it is still up to the supplier how to balance it internally; otherwise SKF will need to look for another supplier in the market. Although relationship with the suppliers is important, SKF needs to keep the competition in the supply chain since it will improve its performance (SKF China Interview, Six Sigma Development Manager, 2014a).

In order to cope with the various suppliers in China, SKF China's purchasing organization is structured in three parts. The first part is purchasing while the second part refers to the sourcing center, which works with verifying suppliers, supporting them to resolve technical issues, as well as establishing quality system. The last one is the business excellence department; where the major task is to manage and improve the policies in the purchasing department, thus enhance its competitiveness. There are different functions, such as strategy management, handling contract, people development and supply chain management. Although the purchasing China team is only responsible for China, the business excellence department is designed to collaborate with other groups from other departments outside the country in order to enhance the competitiveness in China. One good example is the innovation activity in Shanghai, where two senior employees from France organized and led the event and conference (SKF China Interview, Six Sigma Development Manager, 2014a).

Due to the overproduction situation in China, suppliers seek to improve their competitiveness in order to survive on the market. They have started to turn their focus on their internal business process and advanced methodologies. Therefore, SKF introduced the concept of business excellence in order to facilitate their development (SKF China Interview, Six Sigma Development Manager, 2014a). SKF might lose these suppliers for the wrong reason due to the variation of expectation and concept of doing business. The Chinese are typically relationship oriented; relationship should be built first before moving on to business. However, western companies are fact oriented, i.e. focused on cost reduction, efficiency etc. SKF purchasers might ignore this culture gap since they are mostly from other countries where they have difference practices. Fortunately, there are some suppliers that have experience in working with foreign firms (SKF Interview, Global Purchasing Manager, Renewable energy BU, 2014c). To those high potential suppliers that collaborate with SKF, the firm will provide more support and business opportunities which will lead to cost reduction for both (SKF China interview, Six Sigma Development Manager, 2014a).

However, even with the support in knowledge sharing; that which SKF exposes to the suppliers is limited. The know-how is kept within SKF, only limited technological documents and common knowledge is shared. This is due to the fact that China has very low intellectual property protection. SKF needs to protect itself and try to slow down the knowledge leakage. The company does its best to facilitate and to improve suppliers production process and technology. In this manner, SKF is guiding its suppliers instead of just feeding them with information. Besides guiding suppliers in their process and technological development, SKF also influences their innovative culture as they start to understand the purpose of SKF requirements and the benefit that they can gain. By doing this, SKF becomes more allied with the suppliers instead of only telling the suppliers what should be implemented (Ibid.).

5.2.1. Supply Chain Partner Innovativeness

Innovation is considered one of the most important factors in business strategies. Innovation can improve technologies in the manufacturing which leads to cost reduction. It can also have a positive effect on the management process, for example, a company might be able to make faster decision with a better managerial structure (Supplier C Interview, Quality Manager of the Technology Center, 2014). By following SKFs concept of QCDIM, the supplier improves the quality gradually. It is important that if there is any error with the product the supplier will not just ignore it but instead take responsibility. In order to keep the standard, an employee is assigned to walk through and audit two to three different processes daily. By doing this, the supplier aims to reduce error (Supplier B interview, General Manager, 2014).

From a supplier's perspective, a new product or production process cannot have higher cost than the previous method or product. Additionally, an innovative product might last longer but it affects a firm's revenue since the market does not need to buy replacements as often as before (Supplier B interview, General Manager, 2014). If there is a new project that requires design and concepts of the products, a close collaboration with customers will be needed. One supplier indicates that the close collaboration in the regard of technology with customers will eventually bring higher revenue for the supplier (Supplier A interview, Asian Business Development manager, 2014). There is a limitation of the types of products that can be manufactured with the current technology, thus new products might require new technology. The planning of new products is done on a yearly basis (Supplier A interview, Asian Business Development manager, 2014). To improve innovation in the supply chain, suppliers have emphasized on cost reductions. The demand for cost reductions typically comes from

customers. Although cost reductions in the bearing industry are required each year, it is still not as high as other industries such as television, computers, or mobile phones. Therefore, a significant change in technology is not needed. The strategy to achieve innovativeness is to improve the process, however, it is depending on which part of the components that the supplier is producing (Supplier B interview, General Manager, 2014).

5.2.2. Innovative Climate

As China has been growing so fast, companies are used to act with fast routines and processes. A supplier pointed out that there is a Chinese and Western business culture clash. They have to follow many different kinds of rules and procedures, everything needs to be done in accordance to different steps which can be hard to match (Supplier C interview, Quality Manager of the Technology Center, 2014). To create an innovative climate, one supplier used an award system where employees can suggest ideas and where a team then evaluates these ideas (Supplier A interview, Asian Business Development manager, 2014). Rather than focusing more on product innovation, more attention has been placed on innovation in the production process which will improve the product quality. By using a cross functional team the most creative solutions will be identified. The most relevant topics are mostly technology challenges. Another important challenge is the fact that some operators do not have much experience in working with high expectations from a foreign company. This challenge creates problems with maintaining the production equipment which have a negative effect on production outcome. Although there is technical support the operator seems to have a hard time figure it out. A conflict is created when technical support blames the operator with comments *"he did not know what to do"* (Supplier B interview, General Manager, 2014).

A routine of sitting down and list current problems and solutions as well as having a team that continuously works on short and long term problems is used as an innovative strategy by one supplier (Supplier B interview, General Manager, 2014). Another supplier claimed that it constantly engages its employees in innovation and suggested that encouragement is applied. Also, guidance is very critical in building employees capabilities (Supplier C interview, Quality Manager of the Technology Center, 2014). In some cases supplier knows that innovation can help to improve the competitiveness, however, it finds it difficult to achieve new innovation and to keep up with the yearly cost reduction requested by SKF (Supplier B interview, General Manager, 2014). SKF shares its technology to some extent but due to the fact that the two companies have different product types, therefore sharing of technology is

not necessary (Supplier A interview, Asian Business Development manager, 2014). One of the suppliers emphasized that it has a close collaboration with SKF and gets a lot of support from SKF, such as HR, technology and innovation. However, there is a lack of early cooperation in project startups (Supplier C interview, Quality Manager of the Technology Center, 2014). Concerning technical issues, SKF and suppliers will communicate more often and try to solve the problem together (Ibid.). However, the suppliers still wish SKF shared more knowledge with them in order for them to produce better quality components for SKF, "*I want them to offer fundamental bearing design courses to suppliers. How's performance measured, and why is that performance measured and how does it relate to end customers.*" (Supplier B interview, General Manager, 2014). SKF should, for example, shorten down the long and complex company approval process in order to match the organizational agility of the suppliers. SKF will sometimes accept a supplier's suggestion and change its process if both sides agree. Suppliers also suggested that the QCDIM award program is discouraging due to the strict evaluation. For example, if a supplier produces for SKF using ten factories and only one of the factories has quality issues according to SKF, none of the rest of the factories will be awarded no matter how good they are (Supplier C interview, Quality Manager of the Technology Center, 2014).

5.2.3. Strategic Relationships with SKF

Some suppliers have been working with SKF for more than five years and have trust in SKF (Supplier A interview, Asian Business Development manager, 2014; Supplier B interview, General Manager, 2014; Supplier C interview, Quality Manager of the Technology Center, 2014). SKF is trustworthy since it has established good reputation in China; also it is one of the earliest foreign companies in China (Supplier A interview, Asian Business Development manager, 2014). The supplier wants to have a long relationship with SKF and believes that the two companies are close (Supplier C interview, Quality Manager of the Technology Center, 2014). However, the supplier suggested that there is a contradiction between upper management and implementing employees. Upper management seems to align with the principle of SKF, but at the implementing level, it does not seem to match (Ibid.).

In most cases, there are some requirements and adjustments demanded by SKF. It seems that suppliers is willing to corporate, however much of the concern is depending on the cost that suppliers should invest (Supplier A interview, Asian Business Development manager, 2014). The suppliers claimed to work continuously on their own innovation projects, as well as

collaborating closely with their customers on developing new products, which will lead to mutual benefits. Also, suppliers believe that there might be a lot of joint problem solving and projects with SKF in the long run (Supplier A interview, Asian Business Development manager, 2014; Supplier B interview, General Manager, 2014). Never the less, suppliers wish to have a long term relationship with SKF since SKF is a market leader globally in the bearing industry. It also claimed that SKF and the company both need each other (Supplier A interview, Asian Business Development manager, 2014). Suppliers suggested that they are having long-term relationship already; as they align with SKF practices. They tend to see cost reduction, innovation, and quality as their goals. However, cost is still the main issue they concern when initiating new projects and investing in improvement, thus they wish to share the cost and benefit with SKF equally (Supplier B interview, General Manager, 2014; Supplier C interview, Quality Manager of the Technology Center, 2014).

5.3. Korea

The main task for a local subsidiary is to implement the global sourcing strategy, maintaining a good relationship with suppliers, find new suppliers, as well as a continuous search for local innovation. However, in many cases, the problem is that suppliers are not willing to share knowledge with SKF due to their current relationship with their local partners and other customers (SKF Interview, Supplier Market Development Manager, 2014f). For example, some major suppliers in Korea also work with Korean customers, such as Hyundai (SKF Interview, Supplier Market Development Manager, 2014e). The relationship with suppliers is quite simple, as long as cost and quality are acceptable both parties are satisfied and the relationship will most likely continue. However, the suppliers' ability to follow the SKF process is the key to further development of their own manufacturing process in terms of cost and quality (SKF Interview, Supplier Market Development Manager, 2014f). For SKF, it is important that the total cost of the product should decrease each year, however, it is still negotiable depending on the situation and SKF will make sure that local suppliers still continue to make a profit. The principle should be based on *"As their productivity increase, the quality increase and total cost should be lower"* (SKF Interview, Supplier Market Development Manager, 2014e). Korean suppliers regularly gather ideas from their own employees in order to maintain production quality. Typically employees will need to list some ideas every day, however, some employees have been working in the same place for almost ten years which makes it quite hard to generate more ideas, still, employees *"need to do it"* (SKF Interview, Supplier Market Development Manager, 2014f).

From the Korean point of view, *"innovation means improvement in cost and quality"* (SKF Interview, Supplier Market Development Manager, 2014e). The most important elements are to maintain the machine, be innovative and keep the machine able to operate in a long period of time (SKF Interview, Supplier Market Development Manager, 2014e).

5.3.1. Supply Chain Partner Innovativeness

Korean suppliers based their company principles on trying to create a culture within the company and to make employees realize the core values of the company while at the same time respond to customer needs. It is embedded in the company process to create value for customers and employees. In order to create a long term value adding operation, it is crucial to continuously improving the process and know how to compete. The primary strategy of the suppliers is to create quality products that aim to supply reliable products in order to increase customer satisfaction. Aiming to improve the quality of the products continually, everyone should participate by suggesting ideas to the quality system (Supplier E Interview, Overseas Sales and Team Leader, 2014). Innovation is important for the company to survive in the market. To achieve innovation, there is need to take care of the company's employees, processes and activities (Supplier D Interview, Director, 2014). Due to the fast growth among some of the suppliers, there is a need to use the latest technology and processes (Supplier E Interview, Overseas Sales and Team Leader, 2014).

5.3.2. Innovative Climate

Two characteristics about the Korean workforce are that people enjoy hard work and that they have good teamwork. If the employer is working hard, it is expected that the employees and suppliers work just as hard (SKF Korea interview, Sales Engineer, 2014). The reasons for this is that, historically speaking, from 1910-1945s during the Japanese occupation, Korea was a poor country and many had no education. During the Korean War in the 1950s much of the country infrastructure was destroyed. From 1960s and onward, the government started to subsidize some particular industries and companies to the development of the nation, for example, in agriculture and food supply support, as well as the continuous improvement in education of nurses. Historically there have been many campaigns by the Korean government to encourage for example innovativeness. These government campaigns have allowed the government to receive full support of its citizens, one example is the request by the government in the 1980s for 24 hours manufacturing in the shipping industry (SKF Korea interview, Sales Engineer, 2014).

The increased global trade with China can also be a reason for the economic and innovative growth in Korea (SKF Korea interview, Sales Engineer, 2014). Competition can also cause workers to work more with repetitive tasks which reduces the ability to generation new ideas. In these circumstances a supplier will have problems sustaining its business (Supplier D Interview, Director, 2014). Korean customers focus on quality, delivery time and a low price and for each year they expect a lower price (Customer A, Assistant Manager Procurement Reform, 2014). Although there is a quite high level of competition between SKF and others companies, SKF is known for good quality, however, customers are still looking at price and delivery (Customer B, Sales Manager, 2014). Since Korean customers also play a role in influencing innovativeness, customers often ask suppliers to generate and offer more ideas (SKF Korea interview, Sales Engineer, 2014). Therefore, suppliers still need more support from SKF since there is still a need of designing technical support for each factory which SKF is supporting. In fact, there is always a lot of discussion with SKF before each project is getting started (Supplier E Interview Overseas Sales and Team Leader, 2014).

In the case of additional requirements in new technology, Korean suppliers have the capacity to change; however, there is still a need of improving new processes and developing more technology. By using routine processes it is possible to divert more time towards innovative thinking (Supplier E Interview, Overseas Sales and Team Leader, 2014). In fact, one of the most important aspects of the Korean suppliers is the ability of process optimization. Korean employees typically keep thinking of how to improve the working process to be better day by day. Another reason, besides the expected hard work of employees, could be that suppliers also give the employee awards and maintain good relationship with the workers. Enhancing the relationship would allow workers to be more open-minded and increase their motivation of working (Supplier D Interview, Director, 2014). One supplier organizes daily meetings to ask for ideas on how to improve the company and its processes. Additionally, there is a monthly meeting where all employees can participate and bring a large amount of suggestions on what to change for the next month, to compensate, the employees may be awarded with a gift valued up to USD 1,000. At least twelve ideas are being picked each month (Supplier E Interview, Overseas Sales and Team Leader, 2014). The winning award can be based on the ability of the idea to improve quality, efficiency, productivity and to reduce cost. The supplier suggests two ways of encouraging workers to create more ideas. The first one is that the company should give awards to ideas about innovation, it is also important that this happens

periodically. Another approach is to yearly award excellence among employees (Supplier D Interview, Director, 2014).

5.3.3. Strategic Relationships with SKF

SKF has been established in Korea for quite some time and have become more and more important for customers through much collaboration. In this regard, suppliers are hoping that the relationship with SKF will continue. *"It is always encouraging to collaborate with those who provide technical support so that it is more feasible to improve products"*, noted by suppliers (Supplier E Interview, Overseas Sales and Team Leader, 2014). One of the most important factors for the relationship between SKF and suppliers to continue is the fact that a small supplier typically wants to grow. Overall, Korean suppliers are expecting to learn more about a sustainable approach as well as exporting experience (Potential Supplier D Interview, Director, 2014). To improve the relationship through collaboration, there are meetings held twice a week which cover products and new processes that SKF is implementing. Typically SKF requires more process improvements compared to other customers. However, there are a lot of good impressions with SKF and it is always encouraging to collaborate. In order to ensure a longer relationship with Korean suppliers, trust is the key; if there is no trust, the business cannot continue. From the Korean supplier's point of view, trust can be built by keeping what has been promised (Supplier E Interview, Overseas Sales and Team Leader, 2014). The personal relation in Korea is just as important as trust, for example *"I trust you, but I don't trust your company because I don't believe your company is willing to lower the price or willing to strategically approach us. We accept you, but we want your company to come to our supplier"* (SKF Korea interview, Sales Engineer, 2014).

5.4. External Opinion in Asia

5.4.1. Factors Affecting the Innovative Climate

Cultural differences, such as punctuality, can give birth to misunderstandings or conflicts between people or companies. Northern countries, such as Sweden, have changing seasons while many countries in Southeast Asia never had any concerns in this regarding. This has created a different view on time and deadlines which might impact the delivery of products. East Asian is closer to northern countries; China is similar to Sweden while Japan has a more extreme perception of time (Volvo Group Thailand Interview, Managing Director, 2014a). Asian culture is very family oriented with many family owned businesses where the business

will be passed from generation to generation. The problem is that the lack of outside ideas will reduce the ability to innovate (UNESCAP Interview, Director, 2014). In some Asian cultures there is also a short sightedness among employees. This can be manifested by the fact that employees are willing to change employer every one to two years just to increase their salary. When an employee is more interested in salary rather than in learning, it will block knowledge sharing in the company. As a long term effect there would be a knowledge drain among the remaining employees which might result in layoffs due to reduced competitiveness (Wah Tech Industrial Interview, Managing Director, 2014).

One way to view the innovativeness is at the speed of building up the necessary industrial infrastructure. For example, in China, it is very easy to find substitutes when something goes wrong in the supply chain (Wah Tech Industrial Interview, Managing Director, 2014).

Teamwork is one of the strengths in Asia; one explanation can be the equality between men and women at the workplace. In order to make employees become more productive it is important to create an environment where there is safe to work, decent working hours, and train employees. By doing this, an MNC also benefits from the supplier (Volvo Group Thailand Interview, Managing Director, 2014a). MNCs can also influence knowledge sharing by ensuring training which will help the company grow (Wah Tech Industrial Interview, Managing Director, 2014). One way to increase production quality is to *"not only ask your employees to use arms and legs, but also ask them to think"*. Productivity is one way for companies to grow, the ideas of the employees needs to be encouraged. As the time goes by, employees will start to think about the production process and ways to improve it. This is gradually changing in China but an obvious example of this is in Japan where a factory may have 1500 employees but still being able to generate 100 ideas per person each year, which means that the company will benefit from 1.5 million ideas each year. In addition, a good relationship between company and employees and among the employees themselves will lead to more ideas (Volvo Group Thailand Interview, Managing Director, 2014b).

5.4.2. Strategic Relationships Outlook

Frequent meetings among MNCs and local companies in the same region or host countries help get more knowledge about the current business environment, for example changes in regulations (Volvo Group Thailand Interview, Managing Director, 2014a). From the relationship perspective, people will need to establish trust before exchanging knowledge.

Typically, when establishing trust, local language is essential, for example, it would be harder to establish trust with someone from Japan if the business contact is not a Japanese nor speak Japanese, while it would be easier in China if you are from Taiwan or Hong Kong. This is due to the fact that the same language lowers the barriers for knowledge transfer and facilitates the establishment of relationships. Knowing about your partner's culture is extremely important before doing business and building trust (Wah Tech Industrial Interview, Managing Director, 2014). In Asia there is a tendency that trust only exists when there is a business benefit involved and the relationship and it will only continue as long as the business is stable (Barco Interview, Business development Manager, 2014). A very likely reason for terminating in business relation with an Asian partner is misunderstanding to cultural differences (UNESCAP Interview, Director, 2014).Creating corporate culture in learning and knowledge sharing can also be a key to success (Wah Tech Industrial Interview, Managing Director, 2014).

6. Analysis

The following section will analyze how the innovative climate and strategic relations can affect innovativeness in the supply chain. We will link the concepts of innovative climate and strategic relations to supply chain partner innovativeness and will finally analyze how these concepts affect the supply chain innovativeness as a whole. The results of the analysis will be used to revisit the conceptual model in order to confirm, reject or modify the previous assumptions.

6.1. Innovative Climate and Supply Chain Partner Innovativeness

Overall, there is a need of improvement of process and organizational structure in order to foster knowledge sharing (Quintane et al., 2011). In China, the economy is growing rapidly and the suppliers want to use the momentum to grow with the economy. The Chinese suppliers will list activities which they see are required in order to act. However, there seems to be a mismatch of ability between SKF and their suppliers in China to act on opportunities in the local environment. The Chinese workers in the supply chain seem to be aware of how to solve the problems and will often alert their employers on how to act. Although it is unclear whether this would improve the innovativeness and encourage the development of local knowledge, it is likely that such work culture would foster company innovativeness. By implementing a clearer managerial process these types of small scale initiatives and ideas could lead to innovativeness on a larger scale for the suppliers (Kyrgidou & Spyropoulou, 2013). One of the most innovative suppliers from China also has a company policy where a designated team gathers and evaluates ideas from the employees. Typically, global suppliers state ideas that their current innovative climate improvement strategy is being used to upgrade their processes with regard to technical problems.

According to Grant (1996), the specialized knowledge from multiple individuals and organizational capacity can improve a productive process. However, Azadegan (2011) states that suppliers who perform routine tasks will be less innovative compared to suppliers involved in more knowledge or research intensive processes. When asking Korean suppliers about the level of innovativeness related to the skill level of the task in the production process, they believe that the skill level is of minor relevance. They state that gathering new ideas is an usual thing to do every day and it can happen in all the processes within the company. One Korean supplier also says that they have daily meetings where they gather ideas. In fact, Korean suppliers attempt to create an innovative climate where they encourage employees to

think about cost reduction and quality improvement. This would create an environment where they train their employees to be innovative and ready to solve the next problems that they could face every day. These findings match the conclusions of Köhler et al. (2004) and Sun et al. (2011) that highlight the importance of purposely creating a work environment where the employees are encouraged to and comfortably can present new ideas.

To make knowledge transfer between the firms work, there is a need to create a link between knowledge and organizational capacity (Kaplan et al., 2001). A Chinese supplier claims that they are not sure whether a higher degree of innovativeness would help with cost reductions. It seems that the main problem that chinese suppliers face is when operators do not take care of the machine in the production process. When a machine is out of function, it needs to be repaired which means resources that putting in improving innovativeness and bring storming new ideas will be less since it is shared for repairing the machine. Additionally, Chinese suppliers claim that they have to follow many rules and procedures instead of growing their businesses. According to Sun et al., (2011), companies that are in a state where they are more focused on simple growing their business typically have less innovative capacity than for example more startup oriented companies.

When analyzing the innovative climate in the overall Asian region, the first noticeable thing is the ability of working in teams which is very strong in many countries. Good collaboration between team members can positively influence the innovative capacity (Sun et al., 2011). Secondly, in Asia there is often a cultural tradition of passing the businesses from generation to generation. However, this reduces the external influence on the business which in the long term is likely to reduce innovative capacity. Lastly, absorptive capacity influences knowledge transfer between a firm and its suppliers (Grant, 1996; Szulanski, 1996; Minbaeva et al., 2003). The empirical findings show that there exists a shortsightedness among some Asian workers which results in low sense of commitment to the employer. Typically this is expressed by easiness for employees to simply switch companies for just a small increase in the salary instead of investing the time and effort to build up knowledge and skill and eventually occupy a managerial position. We believe that this is a negative indicator for an innovative climate and that it also poses as a potential risk for firms that invest in their supplier's innovative capacity.

6.2. Strategic Relationships and Supply Chain Partner Innovativeness

Trust is one of the essential elements that determine a successful collaborative supplier relationship (Doney & Cannon; 1997; Villena et al., 2011). SKF sees trust between itself and its suppliers as a fundamental factor; otherwise, there would not be collaborations (SKF interview, 2014f). According to the study made by Wagner (2011), at the beginning of a buyer-supplier relationship, reputation is a measurement for future collaboration. This matches the empirical findings which show that suppliers in China tend to trust SKF most of the time, as it is a global market leader in the bearing industry, as well as its good reputation worldwide. However, some suppliers have doubts sometimes towards SKF due to bad past experience. SKFs yearly cost reduction policy is slightly affecting the suppliers' trust in SKF. In Korea, findings illustrate that suppliers think trust is very important in the collaboration with SKF. They claimed that they have a good opinion about SKF; however, it will take some time for them to fully trust SKF. Supplier E in Korea suggested that in order to build trust, the most critical thing is that SKF honor its promises and does what has been agreed upon (Supplier E interview, 2014). SKF should pay attention to this critical point mentioned by the suppliers since trust developed during the collaboration has a positive impact on future buyer-supplier relationships (Wagner, 2011). If SKF strictly applies policies, suppliers might think that SKF values cost reduction more important than other factors in their relationships. Thus, communication is an important element in solving problems, as well as building trust in buyer-supplier relationship (Gullet et al., 2009).

In addition to trust, the findings also confirm the assertion of Burnes and New (1996) and Spekman et al. (1998) that mutual meaning and goals are important in a partnership. Suppliers in China tend to think that the relationship between them and SKF is interdependent, as they both need each other. In terms of mutual goals, suppliers in both China and Korea consider that their targets are basically in line with SKF, as producing high quality products and having competitive costs are their first priorities. The findings also support what Katz (2008) suggested when stating that a Korean businessman can have trust in the company's representative but not necessarily in the firm. Therefore, having mutual goals and benefits is important when collaborating with Korean suppliers in order to have a foundation to build trust. The empirical finding highlighted the importance of mutual meaning through the interpretation of the concept of innovation.

Co-operation happens often between suppliers in China and SKF, the goal is process and quality improvements that lead to cost reduction. This result agrees with the statement of Landeros and Monczka (1989) that co-operation between suppliers-buyers joint activities in enhancing quality and productivity can lead to minimization of overall production costs. However, suppliers in China suggested that SKF should start involving earlier when they have new development projects, so that their relationship can be tighter. In terms of Korea, the co-operation exists and it aims to reduce production costs, as well as to quality improvement. However, mentioned by suppliers in Korea, it is only the beginning of the partnership, so that joint projects will increase as time goes by (Supplier E interview, 2014). Mclvor & Humpreys (2004) suggested that early involvement of buyer and supplier in co-operation can enhance supplier's capabilities, as well as lead to a long-term relationships. SKF could take the suppliers' ideas and consider involving both sides from the beginning of a project in order to develop long lasting mutually beneficial relationships with its suppliers.

According to the study made by Li (2006), long-term commitment is one of the important factors that result into cooperative relationship. This is in accordance to our findings, in both China and Korea, SKF and the suppliers are willing to make extra effort in order to have a collaborative relationship. SKF provides support for suppliers to upgrade their production process and technology through collaboration meetings, as well as a yearly innovation day where strategic partners will gather and discuss their issues and new technologies. Furthermore, in order to cope with the suppliers in China, SKF tends to adapt itself as one of the local companies, aiming to close the cultural gap with the local suppliers. On the other hand, efforts can be seen from the suppliers in China and Korea, they work hard to meet SKF's requirements and standards as they try to produce innovative ideas internally, as well as to improve their daily working process. Long approval time appears in our finding have caused some of the suppliers losing time and money in the beginning of their relationships. According to the study by Twigg (1998), commitment can cause a tighter relationship that will lead to innovation. Thus, this is up to SKF to evaluate in its approval process and maybe adopt a shorter assessment process. Although suppliers in China suggested that SKF China can slightly adjust its long approval time, both cases in China and Korea are generally aligned with what Cullen et al. (2000) suggested on attitudinal commitment, which refers to the fact that partners need to make extra efforts voluntarily in order to make the relationship work.

Discussed by Volsky and Wilson (1994), sharing knowledge and information can enhance the partners' relationship as well as strengthen the relationship in time. SKF and suppliers in

China and Korea frequently exchange knowledge and technology, through workshops. As we observed, SKF invited some strategic Chinese suppliers to attend a technology meeting in SKF Sweden headquarter, where SKF gave a presentation on production technology and discussed problems with suppliers. During the observation, we noticed that the conversation was open and there was knowledge exchange. Although SKF shares plenty of knowledge with its suppliers, know-how and some technological specifics are not being shared, as these are considered the assets of the company. Some suppliers in China wish that SKF could be more open than it is now in sharing technology. According to Savitskaya (2011) institutional policies such as intellectual property legislations plays an important role in joint development efforts between internal and external resources. However due to the lack of intellectual property legislations policies in China, SKF will typically not share specific product knowledge and technological specifications. The inability for knowledge sharing due to lack of trust in the institutional system is likely to have a negative impact on the supply chain partner innovativeness. It seems that Chinese suppliers are willing to share knowledge and technology with SKF, however, in a some cases their technology is at a lower level than SKF, therefore is not so much for them to share.

6.3. Supply Chain Innovativeness

The conceptual model in this thesis suggests that the effective utilization of an innovative climate and strategic relation would lead to supply chain partner innovativeness. This section will attempt to analyze how the innovative climate and strategic relations affects the innovativeness of SKFs supply chain.

One SKF employee identifies a need for more scouting for external innovation that could be imported into SKF. Yamin & Otto (2004) promote the importance of a conscious effort to facilitate knowledge sharing between organizational units and local partners. Currently, it seems that SKF is on the right path through the organization of yearly innovative workshops around the world. However, the process of managing the ideas generated at these workshops seems to have a potential for improvement. Typically these workshops will generate a very long list of ideas and some of these ideas can take years to complete due to complex skill and technological requirements. Another SKF employee believes that this process can be improved by having a better matching process in order to establish the right connections between SKF and the suppliers. It is also worth mentioning that both the Chinese and Korean suppliers internally utilize an award system to encourage new ideas from their employees.

Azadegan (2011) noted the importance of quantitative measurements when evaluating supplier effectiveness; however we have not been able to identify an effective quantitative measurement system to rank supplier innovativeness. If it would be possible to rank suppliers by their innovativeness SKF apply the ideas of Oke et al. (2013) to better utilize their suppliers as a strategic resource in order to nurture their own innovative processes as well as to absorb technological improvements from the supply chain.

A higher level of trust will allow for a more open dialogue where information is shared which will create better understanding of the requirements needed by the suppliers to process new knowledge and technology (Panayides & Lun (2009), Oke et al. (2013) and Inemek & Matthyssens (2012). With a strong brand as a global market leader in the bearing industry and a reputation of producing quality products SKF are able to automatically create a base level of trust among the suppliers in both China and Korea. However, the policy of yearly cost reductions have a negative impact of the supplier trust for SKF and there is a risk that supplier might think that overall cost reduction for SKF is more important than their relationships. In order to build trust, a supplier highlights the importance of keeping promises. At the same time the empirical findings shows that suppliers in both China and Korea are willing to make extra efforts in order to sustain and improve their relationships with SKF. Suppliers in both countries work hard to meet SKF's requirements and standards. However, sometimes with negative consequences for the supplier due to long approval times from SKF. As a consequence there seems to be a mismatch between SKF and its suppliers in the ability to respond fast to market changes which leads to missed opportunities.

6.4. Revisiting the Conceptual Model

In this section we revisit our initial conceptual model that was defined in the theoretical overview. We will use the results from the three previous sections in order confirm, reject or add to our initial assumptions.

The analysis is able to confirm the assumption that a good innovative climate has a positive effect on supply chain partner innovativeness. The findings show that the innovative climate is positively impacted by the supply chain partner's ability create an environment in which innovative ideas are encouraged. Innovative ideas can be generated through more managed processes such as idea gathering events or by using incentives in order to encourage employees to generate ideas. However, it is also important to realize that ad hoc innovation is heavily dependent on an open climate where thinking of and expressing new ideas are

encouraged (Köhler et al., 2004; Sun et al., 2011). In order to leverage new ideas it is important that there is a managerial process that is able to effectively gather and organize new ideas (Kyrgidou & Spyropoulou, 2013). Another relevant finding relation to the Asian business context is the fact that many smaller companies are family owned with a small number of external influences which is likely to have a negative impact on the innovative climate.

The findings are also able to confirm the assumption that it is possible to leverage strategic relations to improve supply chain partner innovativeness. For example, SKF invites selected strategic partners for knowledge exchanges and technology meetings which will have a positive impact on supply chain partner innovativeness. Overall, all efforts that promotes trust, commitment, co-operation, mutual knowledge and goals have a positive impact on knowledge transfers and thus supply chain partner innovativeness. More specifically, the empirical findings highlighted the importance of early collaborations in new development projects which creates trust among both parties as well as fostering long term relationships. The analysis also highlighted that lack of local institutional policies in terms of intellectual property legislations may prevent MNCs from sharing certain types of knowledge. Additionally, by adapting to local cultures a MNC will reduce cultural barriers which facilitate better knowledge transfers and thus increasing the supply chain partner innovativeness.

Unfortunately the analysis could not confirm that the individual supply chain partner innovativeness provides a positive contribution to the supply chain innovativeness as a whole. However our findings have identified a number of factors that positively impact a MNCs ability improve and leverage supply chain innovativeness better. Firstly, a MNC is able to improve supply chain innovativeness by facilitating an increase in the number of innovative ideas generated. By establishing a standardized process that encourage supply chain partners to generate new ideas and at the same time collect and quantify these ideas in such a way that it is possible to prioritize and organize the results. Secondly, MNCs should also establish a procedure that allows for better matching between MNC and supply chain partner resources in order to facilitate a fast response for a new idea. Thirdly, the findings have also showed that by having a strong brand name and a reputation of quality and excellence supply chain partners are willing to make extra efforts when establishing a relation. By setting a minimum level supply chain partner standards a MNC would able to force their suppliers to reach a minimum level of capabilities and thus a minimum level of innovative potential.

The findings have also identified a link between strategic relations and innovative climate (see figure 3). By using strategic relations a MNC could have positive impacts on the innovative climate and thus an indirect positive contribution to supply chain partner innovativeness. By establishing a strategic relationship that promotes ease of doing business and technological support, supply chain partners will be able to focus more on their own processes and thus the ability of improving the internal innovative climate and the supply chain partner innovativeness. However, it is also important to highlight some of the risk factors related to supply chain partner relations in the Asia. Firstly, intellectual property rights, in particular in China, might have a significant impact on the type of knowledge that can be shared which might have a negative impact on knowledge sharing and the innovative capabilities of the supply chain partner. Secondly, in some Asian countries there is a risk of shortsightedness among the supplier employees which is manifested by low sense of loyalty towards the employer. For MNCs that invest in their supply chain partner innovativeness this creates a risk that the investment is bound to specific employees which might leave the company.

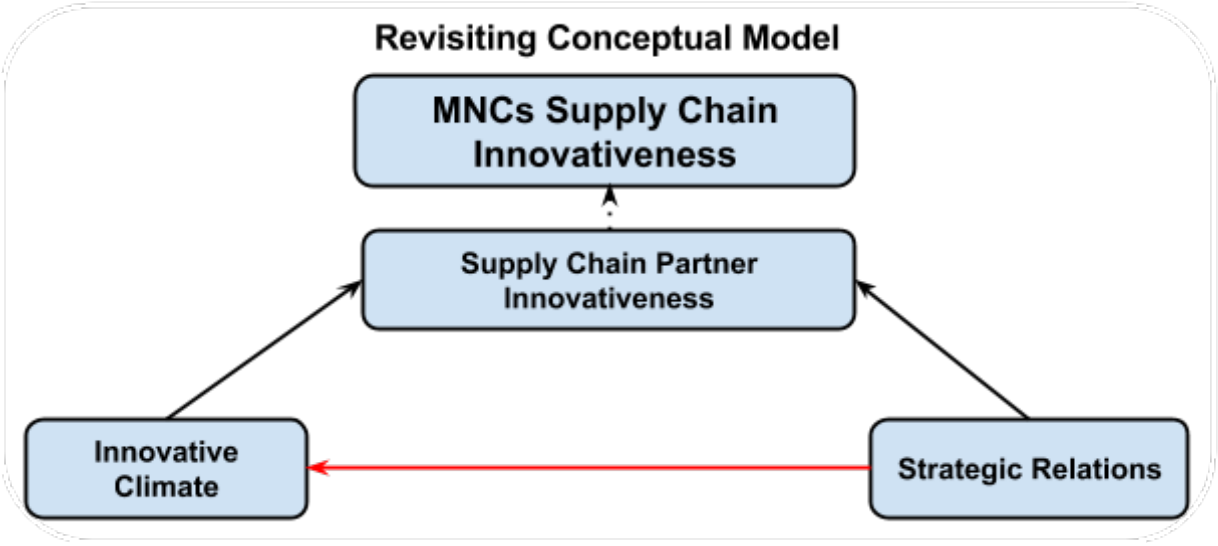

Figure 3: Revisited Conceptual Model Illustration

7. Conclusion

In this final chapter we will present our conclusion based on the analysis of our findings in relation to our research question. We will also provide a discussion about our theoretical and managerial contributions as well as limitations and future research directions.

The problem discussion identified innovation as a key source for improving a firm's competitive advantage. However, due to increasing complexity around the innovation of new products there is a need for firms to be able to leverage innovation strategically (Oke et al., 2013; Milberg & Winkler, 2013). By viewing the supply chain as an opportunity for strategic innovation MNCs can leverage their suppliers abilities to achieve their own goals (Taylor & Rhey, 2008) However, due to increased complexity of GVCs there is potential risk of reduced visibility and sub optimization. As a result there is a need to make better use of existing GVC resources (Simchi-Levi et al., 2008). Existing literature already have identified the important link between competitive advantage and strategic use of innovation in the supply chain. Therefore, the purpose of this study has been to explore and identify factors that allow MNCs to influence and participate in the upgrading of the innovativeness of their existing supply chain partners. By utilizing theories around supply chain management, knowledge based view together with relationship management; we have been able to create a conceptual model which uses existing theoretical knowledge to understand the impacts of an innovative climate and strategic relations on supply chain partner's innovativeness.

Before we continue the discussion, we would like to reiterate the research question for this study: *How can MNCs upgrade innovativeness in existing supply chain partners in Asia to improve the firm's competitive advantages?*

The findings have identified that both an innovative climate and strategic relations have positive impact on the innovativeness of Asian supply chain partners. An open environment that encourages innovative ideas as well as managerial support processes that are able to collect, organize and turn these ideas into actions are important factors for a good innovative climate (Köhler et al., 2004; Sun et al., 2011; Kyrgidou & Spyropoulou, 2013). The research has also highlighted the importance of maintaining a good relation with the supply chain partners in order to support the innovative climate and supply chain partner innovativeness. One way for MNCs to improve supply chain partner relations seems to be to participate in early collaborations during product development. Early participation signals trust between the sharing partners and creates a climate where discussions and ideas can be shared openly. This

facilitates further supply chain knowledge upgrades and increased supply chain partner innovativeness (Inemek & Matthyssens, 2012). There is a need of conscious investment in strategic relationships to generate more knowledge sharing and thus innovation. However, lack of local institutional policies in terms of intellectual property legislations may prevent MNCs from sharing certain types of knowledge which may have a negative effect on the innovative ability in the supply chain. The findings also identified that it is possible for a MNC to leverage strategic relations in order to positively impact the innovative climate. By reducing the complexity of doing business and by providing technical support around machinery and equipment suppliers will be given more time to improve internal processes and internal innovation.

Moreover, the study was able to identify a number of factors that would allow a MNC to indirectly contribute to the supply chain partner innovativeness. Firstly, there is a need for MNCs to act more actively in order to increase the potential for new innovative ideas among their supply chain partners. One such way could be to create an innovative development concept, for example by organizing networking events with the purpose of idea generation. However, in order to successfully leverage the increase in the number of innovative ideas, there is a need to create a standardized measurement system that would ensure that evaluation and quantification is done in the same way among all the suppliers which makes it possible to prioritize what to implement first. A positive side effect of introducing an innovative development concept in the supply chain would be the creation of data of supply chain partner innovativeness that would be measurable quantitatively. This would help use the supply chain partner innovativeness as a strategic resource as proposed by Oke et al. (2013). Secondly, MNCs should create a matching process that connects MNC resources with the source of the innovation in order to reduce the time it takes to conceptualize and implement the innovative idea. Lastly, Supply chain partners are often willing to make extra efforts in order to collaborate with MNCs that have strong brand names or a reputation of quality and excellence. This allows such MNCs to set a standard of minimum level capabilities which forces upgrades of the innovative capabilities of potential supply chain partners.

In conclusion, MNCs operate closely with their complex supplier network due to the current globalized business environment. As technology and consumer demand grow rapidly, MNCs need to spread their productions around the globe in order meet with the local demand and supply. In order to stay on the market and be competitive, MNCs aim to enhance the competitiveness throughout the supplier chain by leveraging supply chain partner

innovativeness strategically. Our findings have showed that innovative climate and strategic relations are important concepts to consider when attempting to increase competitive advantages by upgrading the innovativeness of supply chain partners.

7.1. Contributions

Suppliers are seen as one of the most important actors toward generating innovation (Azadegan & Dooley, 2010), but the stream of the research covering the transfer of innovation from suppliers is still limited (Monczka et al., 2010; Schiele, 2012). Although a number of studies have been trying to identify, utilised innovation through incentives from suppliers (Perols et al., 2013; Petersen et al., 2005a; Dyer & Singh, 1998; Koufteros et al., 2005; Song & Di Benedetto, 2008), it is still focusing on leaderships pattern (Oke et al., 2009), internal process (Jespersen, 2012), and human resources to innovation performance (Beugelsdijk, 2008). As suppliers has a great potential to upgrade their technological competence (Ivarsson & Alvstam, 2009), our study focuses on how to upgrade supply chain partner innovativeness as a way to increase competitive advantage (Oke et. al., 2013). First of all we have been able to add an Asian perspective to existing theories regarding knowledge and relationship management through our findings related to the innovative climate and strategic relations. We have also been able to identify a relation between strategic relations and innovative climate which adds to the literature of relationship management and supply chain management. Lastly, we have also identified the possibility for a MNC to indirectly improve supply chain partner innovativeness through brand recognition and reputation which adds to the existing literature for SCM.

The findings in this study also have a number of managerial implications. First of all the results identifies the importance of long term well-functioning strategic relations. From a managerial perspective the results highlights early new product collaborations as an important factor for establishing trust and improving knowledge exchange between the involved parties. Through strategic relations, a MNC is able to have an indirect positive impact on a supplier's innovative climate. This fact allows for a number of possible actions that would improve the supply chain partner innovativeness, for example using strategic relations to assist in supply chain partner process improvements that facilitate generation of new ideas. Additionally, strong brand recognition and a reputation of excellence will also have an indirect impact on supply chain partner innovativeness. For example, by striving to be the best in the field a firm will be able to get a higher level of acceptance from supply chain partners concerning strict

demand and standards concerning knowledge, capabilities and technology which forces upgrades of the supply chain partner innovativeness. Lastly, by creating a standardized framework that produces a quantifiable result for generating innovative ideas a manager would be able to increase the number of external innovative ideas that are generated as well as create a ranking system of innovativeness among suppliers which could be used as an input for new strategic relations.

7.2. Limitations and Future Research

Due to the limited time, our field study only covered supplier from two countries, China and Korea. The two countries were analyzed complementary rather than by comparison. As the Asian region covers a large geographical area with many cultural differences, our findings might not be applicable for all the nations in Asia. Additionally, the case study is based on a Swedish MNC which is likely to play an important factor in the findings related to relationship management, different cultures match differently with each other which might create a difference in the relevance based on the MNC's home country. Moreover, as the case study firm is an engineering based company, the innovative culture may also already be at place which could have impacted the study's result.

The study has highlighted a few important aspects that would be interesting for future studies. Firstly, our study has shown that both innovative climate and strategic relations have an impact on supply chain partner innovativeness. An interesting future study would be to understand the priority hierarchy between innovative climate and strategic relations. This would generate more knowledge that would allow MNCs to more effectively modify its strategies in order to leverage supply chain innovativeness. Secondly, we have been able to determine that a MNC is able to influence the supply chain partner innovativeness positively through strategic relations. An interesting complementary study would be to see how MNCs can achieve the same effects indirectly through for example lobbying around intellectual property legislation or through the development of industry clusters. Thirdly, our study was not able to support the assumption that supply chain partner innovativeness brings a positive contribution to the innovativeness of the supply chain as a whole. An interesting future study would be to explore how supply chain partner innovativeness can be shared in the whole supply chain and which role a MNC has in this process. A result of such a study would potentially bring valuable knowledge that would allow MNCs to coordinate supply chain innovativeness in a better way and if leveraged correctly would increase the firm's

competitive advantages further. Lastly it would also be interesting to identify supply chain partner motives and incentives for innovativeness. Results from such a study could be leveraged through strategic relations in order to improve the supply chain partner innovativeness further.

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9. List of Interviews

Barco 2014, Business development manager, [Interview by: Ip, Y. K. and Chumchai, S.], Bangkok, Thailand, March 11, 2014.

Customer A 2014, Procurement Reform Team 1, Assistant Manager, [Interview by: Ip, Y. K. and Chumchai, S.], Busan, Korea, April 1, 2014.

Customer B 2014, Sales Manager, [Interview by: Ip, Y. K. and Chumchai, S.], Busan, Korea, April 1, 2014.

SKF Interview 2014a, Commodity Manager, Semi-Finished Components. [Interview by: Ip, Y. K. and Chumchai, S.], Gothenburg, Sweden, February 25, 2014.

SKF Interview 2014b, Purchasing Director, Components, [Interview by: Ip, Y. K. and Chumchai, S.], Gothenburg, Sweden, February 25, 2014.

SKF Interview 2014c, Global Purchasing Manager, Renewable energy BU, [Interview by: Ip, Y. K. and Chumchai, S.], Gothenburg, Sweden, February 25, 2014.

SKF Interview 2014d, Global Supply Market Development Manager, [Interview by: Ip, Y. K. and Chumchai, S.], Gothenburg, Sweden, February 25, 2014.

SKF Interview 2014e, Supplier Market Development Manager, [Interview by: Ip, Y. K. and Chumchai, S.], Gothenburg, Sweden, February 26, 2014.

SKF Interview 2014f, Supplier Market Development Manager, [Interview by: Ip, Y. K. and Chumchai, S.], Gothenburg, Sweden, February 26, 2014.

SKF Interview 2014g, Purchasing Director, China, [Interview by: Ip, Y. K. and Chumchai, S.], Gothenburg, Sweden, February 28, 2014.

SKF Interview 2014f, Group Phurchasing, Business Exellence Manager, [Interview by: Ip, Y. K. and Chumchai, S.], Shanghai, China, March 28, 2014.

SKF China Interview 2014a, Six Sigma Development Manager, Suppliers, [Interview by: Ip, Y. K. and Chumchai, S.], Shanghai, March 28, 2014

SKF Korea Interview 2014b, AD Truck QEM/VSM Sales Engineer Manager, [Interview by: Ip, Y. K. and Chumchai, S.], Shanghai, April 2, 2014

Supplier A Interview 2014, Asian Business Development manager, [Interview by: Ip, Y. K. and Chumchai, S.], Shanghai, China, March 27, 2014.

Supplier B Interview 2014, General Manager, [Interview by: Ip, Y. K. and Chumchai, S.], Shanghai, China, March 27, 2014

Supplier C Interview 2014, Quality Manager of the Technology Center, [Interview by: Ip, Y. K. and Chumchai, S.], Shanghai, March 28, 2014

Supplier D Interview 2014, Director, [Interview by: Ip, Y. K. and Chumchai, S.], Busan, Korea, April 1, 2014.

Supplier E Interview 2014, Overseas Sales and Team Leader, [Interview by: Ip, Y. K. and Chumchai, S.], Busan, Korea, April 1, 2014.

Swedish Chamber of Commerce Interview 2014, Director, [Interview by: Chumchai, S.], Bangkok, Thailand,

UNESCAP Interview 2014, [Interview by: Ip, Y. K. and Chumchai, S.], Hong Kong, China, March 20, 2014.

Volvo Group Truck Operation Interview 2014a, Holm, M., Managing Director, [Interview by: Chumchai, S.], Bangkok, Thailand, March 17, 2014.

Volvo Group Truck Operation Interview 2014b, Managing Director, [Interview by: Chumchai, S.], Bangkok, Thailand, April 4, 2014

Wah Tech Industrial Interview 2014, Managing Director, South East Asia, [Interview by: Ip, Y. K. and Chumchai, S.], Bangkok, Thailand, March 12, 2014.

10. Appendix

10.1. List of Respondents and Interviews

Company	Respondents (23)	Nationality	Interview method	Date(s)	Location	Duration
SKF	Commodity Manager, Semi-Finished Components	French	Face-to-face English Recorder used	February 25, 2014	Gothenburg, Sweden	40 min
SKF	Purchasing Director, Components	Swedish	Face-to-face English Recorder used	February 25, 2014	Gothenburg, Sweden	40 min
SKF	Global Purchasing Manager, Renewable energy BU	Swedish	Face-to-face English Recorder used	February 25, 2014	Gothenburg, Sweden	25 min
SKF	Global Supply Market Development Manager	German	Face-to-face English Recorder used	February 25, 2014	Gothenburg, Sweden	45 min
SKF	Supplier Market Development Manager	Korean	Face-to-face English Recorder used	February 26, 2014	Gothenburg, Sweden	50 min
SKF	Supplier Market Development Manager	Japanese	Face-to-face English Recorder used	February 26, 2014	Gothenburg, Sweden	50 min
SKF	Purchasing Director, China	Chinese	Face-to-face English Recorder used	February 28, 2014	Gothenburg, Sweden	80 min
SKF	Group Purchasing, Business Excellence Manager	Indian	Face-to-face English Recorder used	March 28, 2014	Shanghai, China	40 min
SKF	Six Sigma Development Manager	Chinese	Face-to-face English Recorder used	March 28, 2014	Shanghai, China	60 min
SKF	AD Truch	Korean	Face-to-	April 1,	Busan,	60 min

	OEM/VSM Sales Engineer		face English Recorder used	2014	Korea	
Barco	Business development manager	Irish	Face-to-face English Recorder used	March 11, 2014	Bangkok, Thailand	40 min
Wah Tech Industrial	Managing Director, South East Asia	Taiwanese	Face-to-face English Recorder used	March 12, 2014	Bangkok, Thailand	80 min
Swedish Chamber of Commerce (Thailand)	Director	Swedish	Face-to-face English Recorder used	April 5, 2014	Bangkok, Thailand	45 min
Volvo Group (Thailand) Co.,Ltd	Managing Director	Swedish	Face-to-face English Recorder used	March 17, 2014	Bangkok, Thailand	50 min
UNESCAP	Chairman of Task Force on Green Businesses and Director of the Pacific Basin Economic Council.	Hong Kongnese	Face-to-face English Recorder used	March 20, 2014	Hong Kong, China	50 min
Volvo Group (Thailand) Co.,Ltd	Managing Director	Swedish	Face-to-face English Recorder used	April 4, 2014	Bangkok, Thailand	65 min
Supplier A	Asian Business Development Manager	Chinese	Face-to-face English Recorder used	March 27, 2014	Shanghai, China	30 min
Supplier B	General Manager	American	Face-to-face English Recorder used	March 27, 2014	Shanghai, China	90 min
Supplier C	Quality Manager of the Technology Center	Chinese	Face-to-face English & Chinese Recorder used	March 27, 2014	Shaghai, China	35 min
Potential	Director	Korean	Face-to-	April 1,	Busan,	40 min

Supplier D			face English Interpreter Recorder used	2014	Korea	
Supplier E	Overseas Sales and Team Leader	Korean	Face-to-face English Recorder used	April 1, 2014	Busan, Korea	85 min
Customer A	Procurement Reform, Team 1, Assistant Manager	Korean	Face-to-face English Recorder used	April 1, 2014	Busan, Korea	20 min
Customer B	Sales Manager	Korean	Face-to-face English Interpreter Recorder used	April 1, 2014	Busan, Korea	20 min

10.2. Interview Questions to External actors

- Introduction, presentation
  - Company activities in Asia and around the world
  - Company structure
- Asian business climate
  - Government policies
  - Competition
  - Ease of doing business
  - Differences between countries
  - Trends
- Asian culture
  - Differences between countries
- Western firms in Asia
- Innovation
- Productivity in the value chain
- Development of clusters
- Supplier relations

10.3. Interview Questions to SKF Headquarter

- Introduction, presentation
  - SKF Business ideas
  - SKF structure
  - SKF employees
- SKF position in the market
- Supplier relations
  - Trust
  - Common goal and meaning

    - Collaboration
    - Sharing knowledge
    - Reward system
    - Innovation

10.4. Interview Questions to Suppliers

- Introduction, presentation
    - Company activities
    - Company customers
    - Company structure
- Suppliers view of SKF
- Relationship with SKF
    - SKF requirements
    - Important factors affecting the relationship
        - Trust
        - Collaboration
        - Culture barriers
- Knowledge sharing with SKF
- Productivity
- Innovation

10.5. Follow up Questions to Suppliers

- Internal innovative climate
    - Cutting edge technology
    - Product innovation strategy
    - Facilitation of innovative ideas
- External influence on the innovative climate
    - SKF influence
    - Consumer influence
    - Government influence