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Reverse Knowledge Transfer
from Subsidiaries to Multinational Corporations:
Evidence from Korea

KUM-SIK OH

A thesis submitted to the University of Huddersfield
in partial fulfilment of the requirements for
the degree of Doctor of Philosophy

The University of Huddersfield

December 2016

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Abstract

Kum-Sik Oh

Reverse Knowledge Transfer from Subsidiaries to Multinational Corporations: Evidence from Korea

Keywords: Multinational Corporations, Local Market Information, Reverse Knowledge Transfer, Knowledge Transfer Capacity, Relational Capital

Knowledge is a source of competitive advantage which strengthens multinational corporations' (MNCs) market position, and thus they set up overseas subsidiaries partly to access other firms' knowledge which resides in local markets. From the MNC viewpoint, overseas subsidiaries have a chance to access local market information (LMI), develop new competences themselves and share this information with their headquarters; thereby contributing to the formation of MNCs' competitive advantage.

This study posits that the extent to which overseas subsidiaries reversely transfer local information is influenced by their knowledge transfer capacity and relational capital, both of which enhance the learning environment which facilitates the knowledge exchange process. In this context, the research objective is to identify the effects of factors encompassing knowledge transfer capacity and relational capital on the reverse transfer of LMI from subsidiaries within MNC networks. In addition, this study also tries to examine the different influences of those determinants on different sizes of organisation. Although study on reverse knowledge transfer (RKT) from subsidiaries to its headquarters is becoming increasingly prominent, the debate discussing the key determinants which affect it has not reached an academic consensus. By integrating both knowledge transfer capacity and relational capital as overarching theoretical lenses and exploring cause-and-effect relationships, this study fills certain extant research gaps.

A conceptual framework is developed and then it is investigated empirically, using a sample of 432 subsidiaries operating in the Korean market. OLS regression and Spearman rank order correlation coefficients are used to interrogate the data. The OLS regressions find that knowledge development capability, subsidiary willingness and autonomy are critical factors affecting RKT within MNC networks. Both socialisation mechanisms and trust are the primary facilitators of relational capital between subsidiaries and MNCs and extend RKT from the former to the latter. In addition, the key drivers for RKT for large-sized subsidiaries are knowledge development capability, subsidiary autonomy and trust. For medium-sized subsidiaries, the key drivers are subsidiary willingness, trust and organisational distance. For small-sized subsidiaries, the key drivers of RKT are knowledge development capability, subsidiary autonomy and socialisation mechanisms.

Based on the results, the contributions of this study are three-folds. First, the research identifies what determines RKT from subsidiaries to MNCs in the Korean context. Second, in doing so, it incorporates both the relational capital and knowledge transfer capacity perspectives. Thus, it theoretically contributes to those perspectives. Third, it also elucidates the effect of organisational size on RKT.

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Acknowledgements

First of all, I would like to sincerely express thanks to Professor John Anchor, who has given me wonderful guidance as a supervisor. He has constantly provided constructive comments and warm support to me. I believe that without his support, it would have been impossible to complete this journey.

I would also like to thank all friends, other research students, and professors who have provided invaluable comments in the process of reviewing the questionnaire of this PhD thesis. Although they were extremely busy, they spent much time to make this thesis more understandable and fluent.

Lastly and most importantly, I would like to appreciate my husband and my lovely daughter, Hannah, for their understanding, patience and support during my studies.

List of Abbreviations

RKT	Reverse Knowledge Transfer
IJV	International Joint Venture
WOS	Wholly Owned Subsidiaries
M&As	Mergers and Acquisitions
MNC	Multinational Corporation
LMI	Local Market Information
OLS	Ordinary Least Squares
PB	Property-based
KB	Knowledge-based
TCT	Transaction Cost Theory
MOTIE	Korean Ministry of Trade, Industry and Energy
CMV	Common Method Variance
VIF	Variance Inflation Factor
CR	Composite Reliability
AVE	Average Variance
UNCTAD	United Nations Conference on Trade and Development
R&D	Research and development
FDI	Foreign Direct Investment
SMBA	Korean Small and Medium Business Administration

Chapter 1. Introduction

1.1 Introduction

As globalisation and subsequent corporate rivalry have intensified, knowledge is often referred to as one of the key strategic resources for multinational corporations (MNCs), to achieve organisational goals and to overcome global competition (Lyles and Salk, 1996; Park, 2011a). The possession of invaluable knowledge, which is not imitable and geographically specific, does not only help to develop the foundation of sustainable competitive advantage, but also functions as a vehicle to facilitate long-term innovation (Inkpen and Dinur, 1998). Knowledge can be categorised into two different types: explicit vs. tacit. Explicit knowledge is information that is relatively uncomplicated to learn in that it is easy to articulate verbally and is codifiable, whereas tacit knowledge has a unique characteristic in that it is commonly absorbed through personally embedded experience, and thus it is difficult to acquire from external sources (Nonaka and von Krogh, 2009). However, although a firm may currently enjoy a competitive advantage based on tacit knowledge and the mobilisation of tacit information from one firm to another is difficult, it does not guarantee that the preservation of such a capability is automatic.

The possible reasons are 1) knowledge constantly evolves, 2) other firms try to develop in-house new technology and skills which can offset competing knowledge, and 3) organisations can learn new external information (e.g. local market information) through establishing subsidiaries in foreign markets. In spite of the relative importance of the third issue, empirical examinations of the topic are still in their infancy. MNCs also

need to attempt to learn new external information while they try to retain internal knowledge. In addition, from the perspective of MNCs entering foreign markets, the absorption of local market information (LMI) is not only one of the short-cuts to overcome the liabilities of foreignness in foreign markets, but it is also a catalyst to improve organisational competitiveness to defeat rivals in the global arena as well as locally residing organisations. In this vein, the main domain that this study wants to examine is subsidiaries' reverse transfer of tacit knowledge. It focuses specifically on LMI among the various types of tacit information.

1.2 Research Gap

This section highlights research gaps that need to be filled in the discussions of reverse knowledge transfer (RKT). Most importantly, the gaps can be diagnosed in terms of theoretical background (i.e., knowledge transfer capacity and relational capital) and research context (i.e., research location, which is South Korea).

In terms of theoretical lenses, learning capacity (e.g., absorptive capacity) has received great attention (Chang and Lee, 2008; Minbaeva, Pedersen, Bjorkman, Fey and Park, 2003; Piscitello and Rabbiosi, 2006; Schlegelmilch, Ambos and Chini, 2003; Simonin, 2004) from researchers who have scrutinised knowledge exchange between headquarters and subsidiaries, but the extant literature tends to neglect the importance of teaching capacity (i.e., knowledge transfer capacity) in the discussions on knowledge transfer and/or RKT (Park, 2011a; Tang, 2011). For instance, the importance of knowledge relevance between headquarters and subsidiaries was investigated to explore

knowledge flow from the former to the latter and *vice versa* (Yang, Mudambi and Meyer, 2008), but the impact of the factor has not been explored in order to elucidate its contribution to teaching ability.

In a similar vein, previous studies shed light on relational capital as an essential component influencing a conventional learning environment (Boh, Nguyen and Xu, 2013) from the perspective of headquarters. However, these studies seem to overlook the possibility that such relational capital (e.g., socialisation mechanisms, trust between knowledge exchanging entities, and cultural congruency which help to mutually understand cognitive structures) can also be a facilitator enhancing unconventional knowledge transfer (i.e., RKT) from the perspective of subsidiaries (although Borini, Oliveira, Silveira and Concer (2012) and Rabbiosi and Santangelo (2013) exceptionally included some factors relevant to relational capital to explore RKT they did not theoretically examine relational capital *per se*). For instance, Takahashi (2010) and Park, Oh and Choi (2012) argue that the consideration of relational capital is very important to discuss successful knowledge transfer, especially in the case of culturally-bound data, such as market knowledge (local market knowledge is typical information that MNCs want to learn). In this vein, this study will examine the role of such elements in RKT from the perspective of subsidiaries.

The efficient absorption of LMI is decisive for MNCs to achieve organisational competitiveness since it will be a crucial factor determining the success of direct investment in foreign markets (Park et al., 2012a). Michailova and Zhan (2015) emphasise that foreign subsidiaries play a critical role in knowledge development within

MNC networks. According to them, MNCs gradually establish overseas subsidiaries in order to acquire foreign valuable and unique knowledge which has not been available within MNCs. Such foreign knowledge of subsidiaries contributes in developing new ideas of MNCs for innovation. In other words, foreign subsidiaries help MNCs to develop new products in that local knowledge absorbed by the former through accessing, monitoring, exploiting and integrating successfully local resources is transmitted to the latter; thus, subsidiaries enlarge subsequently MNCs' knowledge reservoir through their global operations (Manolopoulos, Papanastassiou and Pearce, 2005). However, despite the importance of RKT from subsidiaries to MNC headquarters, this topic has received scant scholarly attention, which implies the presence of another research gap and indicates that the investigations of the effect of knowledge transfer on LMI are few in number.

The organisational size of subsidiaries matters for RKT in that larger size offers some advantages in terms of gaining support from MNCs, as size often represents its strategic position. Simonin (1997) documents in his empirical study that subsidiary size considerably influences the collaborative sharing of experience with headquarters. Large subsidiaries should have more affinity with the knowledge possessed by their MNCs than small ones (Shenkar and Li, 1999). According to Minbaeva et al. (2003), firm size stands for the level of strategic position within MNC networks, and thus better supports, aids and other resources owned by the MNCs are offered to a firm in a stronger strategic position. However, previous studies seem to have neglected to observe the subsidiary size issue: so this study deems it to be important to investigate it empirically in the RKT context.

With respect to the research context, international business scholars have recognised that MNCs are increasingly establishing their subsidiaries in countries which are rapidly growing or which have recently approached advanced economies. South Korea (hereafter, Korea) can be regarded as such an economy. Korea, Hong Kong, Taiwan and Singapore are emerging markets, but their economies are now approaching developed countries (Kim and Park, 2015), and Korea has achieved more rapid economic growth than other Asian countries (Park and Choi, 2014). Despite the increases in inward foreign direct investment (FDI) in the countries considered as dynamic rising powers in global markets, empirical studies dealing with the identification of the main factors influencing knowledge transfer between subsidiaries and MNC headquarters have been carried out primarily in transition economies, such as China, Vietnam and east and central European countries (e.g. Hungary) and have neglected advanced emerging economies. Moreover, in recent studies of MNCs, a number of studies have found that subsidiaries play a critical role in providing various sources of new knowledge for MNC headquarters to absorb (Ambos, Ambos and Schlegelmilch, 2006; McGuinness, Demirbag and Bandara, 2013; Rabbiosi, 2011; Rabbiosi and Santangelo, 2013), but to this researcher's best knowledge, no one has tried to discover the key determinants affecting the reverse transfer of LMI from overseas subsidiaries to their headquarters in the Korean context.

The RKT from Korean subsidiaries may be different from that of other countries, such as India, China and Vietnam for the following reasons: First, in terms of the value of Korean local market information. Korea has functioned as a representative market for MNCs to target other Asian markets, and thus MNCs learn new know-how which can be applied to attract other customers in other Asian economies through the RKT from Korean

subsidiaries (Lee et al., 2014a). For instance, local market information formed through cooperative partnerships between local Korean firms and MNCs' subsidiaries located in Korea can provide MNCs with a crucial input to their Asian market strategies (Giroud, Ha and Yamin, 2014). Second, Korea is perhaps one of the most dynamic economies in the world and has developed sophisticated knowledge and advanced technologies, and thus LMI in the country can be very useful for many MNCs. This indicates clearly that compared to other Asian countries, LMI residing in Korea may strongly motivate MNC headquarters to absorb it from subsidiaries established in the economy in order to utilise the information in other foreign markets and strengthen their market positions abroad. Third, Korea is appropriate as a research context as the country attracted inward FDI at a remarkable speed after the Asian crisis in 1997, and MNCs are eager to seek international knowledge, particularly the country-specific knowledge of Korea, which is one of the main motivations of FDI to Korea (Lee and Rugman, 2009). Finally, Korea is one of the most favourable economies in Asia as western and Japanese MNCs regard the country as a preferred location for FDI, particularly from the perspective of knowledge transfer via FDI (Park, Vertinsky and Lee, 2012). These explanations indicate that examining RKT in the Korean context rather than in other Asian economies is potentially of value.

To sum up, many extant empirical studies have stressed the crucial role played by overseas subsidiaries in providing opportunities for MNC headquarters to learn LMI (Ambos et al., 2006; Bjorkman, Barner-Rasmussen and Li, 2004; Dobrai, Farkas, Karoliny and Poor, 2012; Iwasa and Odagiri, 2004; Noorderhaven and Harzing, 2009; Oddou, Osland and Blakeney, 2009; Park et al., 2012a; Rabbiosi and Santangelo, 2013; Roth, Jayachandran, Dakhli and Colton, 2009; Yang et al., 2008). However, there is no

empirical study which attempts to identify theoretically the components associated with knowledge transfer capacity and relational capital as the key determinants affecting the transfer of LMI, particularly in advanced emerging economies (fast growing emerging economies as well as approaching advanced economies), such as Korea. Moreover, although empirical papers dealing with knowledge transfer and acquisition are numerous, they have focused on the examination of technological knowledge, rather than LMI, which is one of the central elements of the tacit information contributing to corporate competitiveness. Additionally, organisation size can influence subsidiaries' authority and thus help them to make independent decisions to acquire and develop LMI which can be applied to the knowledge currently possessed by the MNCs. In particular, large subsidiaries can make independent decisions based on accumulated experience, as well as various tangible and intangible assets, which, in turn, enables them to enhance knowledge development for achieving company-wide innovation. Despite the importance of the size issue, no one has tried to investigate its impact via empirical investigation.

1.3 Research Objectives

Zhan, Chen, Erramilli and Nguyen (2009) point out that MNCs operating in the global market usually possess managerial know-how and advanced technology that are not easily obtainable to other firms and emphasise that the acquisition of such information is crucial in enhancing organisational competitiveness. The same researchers also indicate that the level of technological cultivation determines long-term corporate destiny, whereas the presence of managerial know-how plays a key role in enabling effective adaptation to rapidly changing business circumstances, thereby subsequently increasing

organisational performance. The researchers have a parallel opinion that sufficient internal accumulation of technological knowledge and managerial know-how are vital for any organisation. However, a problem is that most previous studies have generally attempted to explore factors affecting acquisition of technology (e.g., Mowery, Oxley and Silverman, 1996; Rebentisch and Ferretti, 1995). The primary reason why empirical examinations have focused on a certain type of knowledge is because it is relatively easier to measure the extent to which subsidiaries learn technology from other firms than for example, LMI, due to their differences in tacitness (Park et al., 2012a). In this vein, except for a few exceptions (e.g., Park et al., 2012b; Rowley, Chae, Jung and Park, 2013), it is hard to find empirical experiments dealing with skills for the management of local market characteristics, which is one of the essential parts of managerial know-how. Unlike technology, LMI plays a boundary spanning role connecting firms and customers (Fan and Ku, 2010), which causes difficulties in measuring the effects of the absorption of that knowledge and in conducting empirical experiments (Park et al., 2012b).

To reiterate, although researchers have overlooked an exploration of how subsidiaries acquire LMI from a subsidiary perspective and then reversely transfer it to MNCs, there is, in fact, a general consensus that LMI functions as a spur to strengthen customer relationships and increase sales and growth rates (Park et al., 2012b). Moreover, subsidiary knowledge accumulated in a local market offers business opportunities in other overseas markets and the possible development of market knowledge by MNCs (Miao, Choe and Song, 2011). Due to changes in the business environment, foreign subsidiaries have become the primary means of dispersing and scattering LMI within MNC networks. In this vein, Roth et al. (2009) point out that the acquisition of LMI is one of the central

motives for MNCs to set up subsidiaries in overseas markets and emphasise LMI as tacit knowledge containing important business information on the preference of foreign customers, foreign competitors for the development of new products and the means of obtaining legitimacy in new markets. However, despite the importance of the LMI described, our understanding of the transfer of subsidiary knowledge to headquarters and its connection with both knowledge transfer capacity and relational capital is not complete.

Based on these discussions, the key objective of this research is to uncover the primary determinants comprising knowledge transfer capacity and relational capital and their influence on the transfer of LMI from subsidiaries to MNC headquarters in the Korean context. An extensive literature review identified four factors comprising knowledge transfer capacity (i.e., knowledge development capability, prior-related knowledge, subsidiary willingness and subsidiary autonomy) and three components making up relational capital (i.e., socialisation mechanisms, trust and organisational distance). In the context of the research objective indicated above, the following research questions were developed.

1. What are the key elements of knowledge transfer capacity which affect RKT?
2. What are the key factors of relational capital which affect RKT?

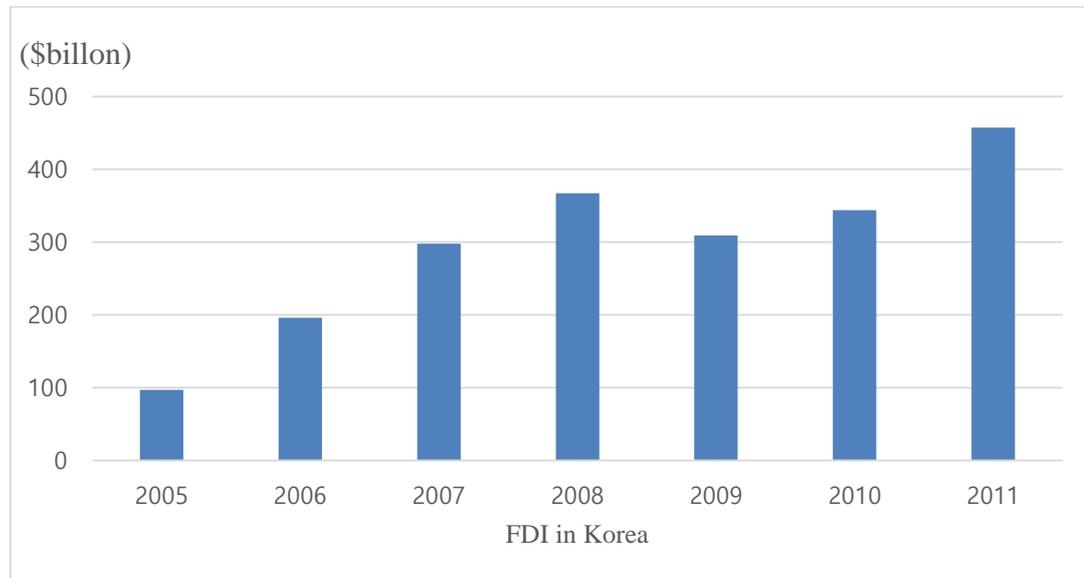
1.4 Research Context: why Korea?

As briefly explained in section 1.2, one of the main research gaps resides in the fact that with the exception of China, researchers have a propensity to overlook the necessity

to put their efforts into empirical investigations located in rapidly developing markets. This study is different from other previous empirics in that it investigates Korea by focusing on foreign subsidiaries in Korea, and also endeavours to identify the determinants of RKT. Korea is one of the Asian countries which has achieved rapid economic growth over the past 30 years by implementing an economic strategy based on both exports and high rates of domestic investment (Liu and Hsu, 2006). After it suffered from a financial crisis in 1997, the Korean economy recovered its economic power with GDP growth rising from 5.8 percent in 1998 to about 10 percent in 1999 (Lee, 2001) and achieved more than 4 percent of GDP growth each year over the last 10 years (Park, Vertinsky and Becerra, 2015), and a large increase in FDI occurred in Korea (Froese, Pak and Chong, 2008). Indeed, the success of the Korean economy is often attributed to FDI.

FDI generally occurs when MNCs can find places for saving production costs as well as having a large local market. Although Korea neither has a large local market such as the USA, China, and the EU, nor provides lower production costs compared to other developing countries like Vietnam, inward FDI has increased rapidly since 2000 as the Korean government introduced policies to promote inward FDI (Lee and Hwang, 2014). According to a report by the Ministry of Strategy and Finance in 2012, a large number of MNCs have invested in Korea as shown in Figure 1.1.

Figure 1.1 FDI in Korea



Source: Ministry of Strategy and Finance (2012)

Several factors also contributed to the stable level of foreign investment in the market. Korean governments offered explicit and implicit incentives for MNCs to build subsidiaries (Cho and Lee, 2004) and the implementation of MNC friendly policies to attract more FDI in Korea and enhance the locational attractiveness of the country (Saxer, 2012). The strategy of FDI promotion was selected for national economic development as the Korean government believed that large FDI inflows offered various benefits to the economy (Filippov, 2014). The potential benefits stemming from inward FDI may include the ‘transfer of foreign technological and management skills’, ‘improvements in the balance of current account’, and ‘increases in local firms’ production efficiency and employment’ (Saxer, 2012). According to Lee, Kwak and Kim’s (2014) empirical research in Korea, the foreign subsidiaries of MNCs learn and upgrade knowledge based on host markets in order to continue to operate and compete successfully in foreign markets, and those activities contribute to the diversification of market and product

domains of the MNCs, and consequently lead to MNCs' strategic development (Ha and Giroud, 2015). In this vein, MNCs intend to acquire valuable knowledge which is available in Korea via FDI (Lee et al., 2014a). In other words, through FDI, MNCs intend to learn and access knowledge or information about local customers and competitors, as well as new ideas that consequently can be exploited in other markets (Cho and Lee, 2004); thus, FDI in Korea is a way of upgrading the country-specific resources within MNCs (Lee and Rugman, 2009).

The acquisition of LMI in the Korean economy may be important for MNCs to achieve organisational success in global markets and the reverse transfer of LMI is worth investigating for the following reasons: First, Korea achieved economic development at a remarkable speed and Korean local firms became key global competitors (Hemmert, 2012) and thus LMI gained in the country may indirectly let the MNCs know how to overcome competition from Korean MNCs (e.g., Samsung, LG, Hyundai and SK among others). As Korean companies have managed to exceed western competitors in terms of quality and cost of products, MNCs try to learn management practices from them (Jain, Malik and Cruickshank, 2006). It is also expected that such information helps MNCs to sustain and enrich their own knowledge reservoir as well as improve the quality of their products (Lee et al., 2014a). In addition to the value of local information *per se*, Korea has functioned as a representative market for MNCs to target other neighbouring markets, such as Hong Kong, Taiwan and Singapore, and thus MNCs learn new know-how which can be applied to attract other customers in Asian economies through RKT by overseas subsidiaries established in Korea (Lee et al., 2014a). For instance, through cooperative partnerships between local Korean firms and foreign subsidiaries located in Korea, MNC

subsidiaries are a crucial source of MNCs' knowledge to develop corporate strategy (Giroud, Ha and Yamin, 2014). Third, the introduction of new (technological) product development in MNCs is inevitable in a competitive environment, and understanding customer needs in a high-technology market like Korea is regarded as one of the most important determinants guaranteeing the success of the development (Lee, Garrett, Self and Musgrove, 2012).

Korea is a dynamic country in terms of innovation, as Korean MNCs have been driving technological development through large investment in R&D (Giroud et al., 2014). Thus, when MNCs (particularly in developing and emerging countries) monitor market relevant technology rooted in a rapidly evolving market and catch up with the skills through demonstration effects, they are able to find new opportunities and apply them to other markets, which leads to the enhancement of MNCs' competitiveness. Additionally, this empirical study may offer good guidelines for MNCs in other countries that desire to achieve rapid economic growth like Korea through the transfer of LMI. For these reasons, Korea is selected as the research context to address the research questions (stated in Section 1.3).

1.5 Research Methodology

In order to find the answers to the research questions, “what are the key elements of knowledge transfer capacity which affect RKT?”, and “what are the key factors of relational capital which affect RKT?” a questionnaire survey as a data collection method is adopted. The use of secondary data analysis cannot be adequate for this research since

secondary data does not provide complete or available information for the research questions. In addition, an interview is likely to be ineffective in the Korean context. Korean society forces people not to express clearly private opinions; therefore Koreans tend to be too passive and silent in order to use the interview technique (De Mente, 2004). After reviewing previous empirical studies (Choi and Johanson, 2012; Pak and Park, 2004; Park et al., 2012b) on knowledge transfer and RKT, a mailed questionnaire survey was chosen as the best research method in order to cover all geographical areas of Korea and to save 'time and cost' for a self-funded student. A total number of 1,343 firms were compiled for the research sample. Top managers were targeted because they better identify and notice the changes in the information within organisations than middle or functional managers.

1.6 Significance of study

The contributions of this study are three-fold. First, building on the aforementioned observations and employing both knowledge transfer capacity and relational capital perspectives as overarching theoretical lenses, the study contributes to the extant literature by expanding theoretically and empirically the areas of our understanding of RKT (i.e., knowledge transfer from subsidiaries to MNCs). The study argues in particular that the use of a single fragmentary theoretical concept (e.g. mere relational capital alone) in conducting empirical examinations may not be sufficient to grasp precisely the phenomenon in the overall picture. Second, previous studies have generally focused on FDI from conventionally advanced to developing economies, but the rise of direct investment from less developed to advanced countries is a new trend in the international

business domain. One of the main reasons for this is because MNCs based in comparatively less developed economies often use FDI to strengthen customer relationships and contribute to the adjustment of services and products, so that MNCs can better adapt to the local environments which they target and catch up with other global firms (Tsai, 2001). This means that the absorption of LMI is no less important than improving knowledge of technology and that the reverse transfer of former knowledge from subsidiaries to MNCs is critical to examine. Third, this study empirically investigates the Korean context, because the country has often been overlooked in RKT. Thus, to reiterate, the aim of this study is to identify the key determinants affecting subsidiaries' transfer of LMI to their headquarters by observing the MNC subsidiaries operating in Korea.

1.7 Outline of Thesis

This study consists of seven chapters, and each chapter starts with an introduction and finishes with a conclusion. Chapter 1 identifies the research gap, research objectives, the reason for studying in the Korean context, the research methodology and the significance of the research.

Chapter 2 serves as a literature review and illustrates 'various international entry modes and their characteristics', 'theories explaining the formation of subsidiaries in foreign markets', 'a summary of previous literature on knowledge, knowledge acquisition, international knowledge transfer', and 'theoretical arguments and insights on RKT'. Finally, the chapter ends with a theoretical framework and a conclusion.

Chapter 3 identifies the research framework. It develops hypotheses about the determinants affecting RKT based on knowledge transfer capacity and relational capital perspectives. The chapter also includes a description of control variables and a conclusion.

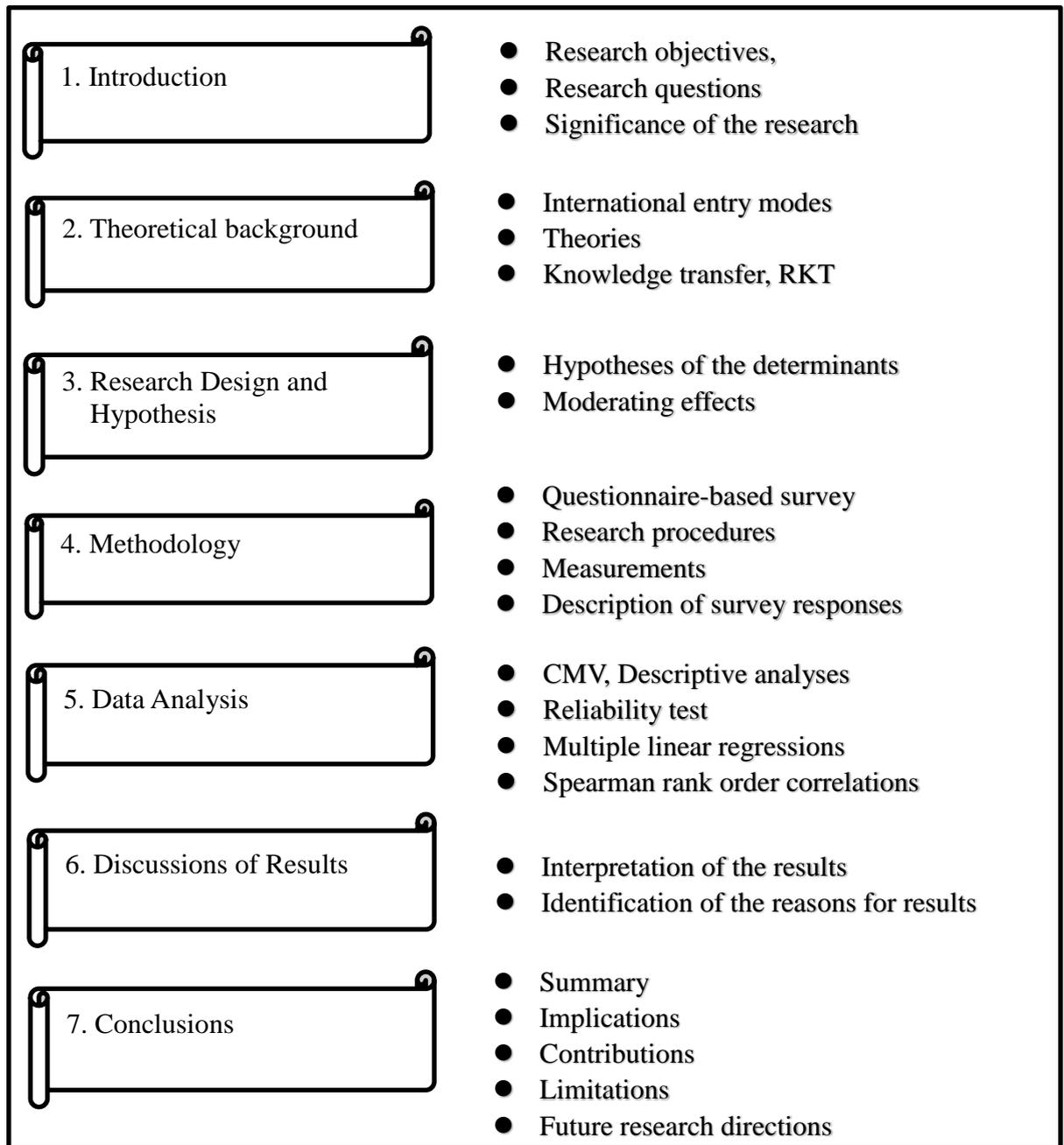
Chapter 4 outlines the research methodology employed in order to collect data to test the hypotheses. It also contains a discussion on data collection methods, research procedures, sampling, and the design of the research questionnaire. It culminates with a description of the survey responses and a conclusion.

Chapter 5 describes evidence confirming the minimum presence of common method variance, the statistical analyses, and results from collected data by using descriptive analyses, a reliability test, confirmatory factor analysis, multiple linear regressions and Spearman rank order correlations.

Chapter 6 discusses the research findings in the context of extant literature. The chapter illustrates whether specific statistical outcomes are in line with previous studies and identifies primary reasons why some other results are not congruent to current empirics.

Chapter 7 serves as a conclusion which relates to the summary of the key findings, implications, and contributions of this study. The limitations of the study and future directions for research are also suggested. In brief, the outline of this study is shown in Figure 1.2.

Figure 1.2 Research Outline



Chapter 2. Theoretical background

2.1 Introduction

This chapter reviews previous literature concerning the motivations of MNCs to establish overseas subsidiaries in foreign markets. Based on extant empirics, particularly in international business domains, the primary objective of this chapter is to provide appropriate explanations about relevant international business theories and present arguments about why RKT is worth examining. In this vein, this chapter subsequently examines the different characteristics of each entry mode and international business theories which account for the reasons why MNCs try to enter international markets despite the presence of liabilities of foreignness and identifies that RKT is a crucial prerequisite not only in guaranteeing the operational success of overseas subsidiaries but also in enhancing the competitiveness of MNCs operating in the global arena. In particular, the primary rationale for the latter argument is that RKT is the transfer of locally specific tacit or explicit knowledge from MNC subsidiaries to their headquarters (Millar and Choi, 2009). The knowledge absorbed by subsidiaries helps them to win business competitions against local firms as well as other subsidiaries established by multinational rivalries and aids MNC headquarters in overcoming their organisational weaknesses.

This chapter is divided into six sections. After the introduction, the next section attempts to define foreign subsidiaries by observing various international entry modes and their characteristics. In this process, international joint ventures (IJVs), wholly owned subsidiaries (WOSs) and mergers and acquisitions (M&As) will be reviewed. In addition,

the section also identifies favourable environments facilitating subsidiary formations of MNCs. The third section discusses theories related to overseas subsidiaries and knowledge transfer within MNC networks (i.e. internalisation theory, eclectic paradigm resource-dependence theory, organisational learning theory, absorptive capacity, knowledge transfer capacity perspective and relational capital theory). The fourth section summarises knowledge, knowledge acquisition and RKT in order to identify research gaps. The subsequent fifth section attempts to indirectly suggest valuable insights on RKT determinants that are appropriate to answer an enquiry about what plausibly influences RKT phenomenon through an extensive literature review and provide the basic foundations of a theoretical framework. That is, this section combines and blends both theoretical arguments and insights on RKT and creates a theoretical framework. Then, finally this chapter draws conclusions.

2.2 Exploration into Overseas Subsidiaries

This section offers a compressive review of international market entry mode strategies that can be adopted by MNCs and identifies favourable environments stimulating the formation of subsidiaries. This section is critical as it allows us to understand precisely the network ties between MNCs and subsidiaries. Through knowledge transfer from foreign subsidiaries to their headquarters, foreign subsidiaries can contribute to the product development of parent companies, the coordination of a global strategy and the creation of MNC competitive advantage (Rabbiosi, 2011).

The entry mode choices are often mentioned as a by-product of compromise among

four elements: risk, return, control and investment (resource commitment). According to Agarwal and Ramaswami (1992), the four most widespread entry modes are exporting, licensing, IJV and WOS, although mergers and acquisitions (M&As) are also increasingly popular and seem to have taken over some strategic options, such as arm's length contracts (i.e., licensing). First, exporting encompasses low levels of investment, low risks and low operational control, but offers the lowest probability of organisational profits. Second, licensing is commonly referred to as the best substitute for FDI. However, it is popular merely as a substitute and is suitable in the case where local governments are antagonistic toward FDI or local markets experience serious economic volatility, resulting in anticipated profits which cannot justify the risks associated with FDI in any context. Third, IJVs are a useful path for MNCs to select because the option contains relatively low levels of investment through sharing initial investments with local firms and offers a valuable means of learning LMI from local firms. Fourth, MNCs prefer to establish WOSs giving the highest return on capital and control, though MNCs will bear a high investment risk.

It may be difficult for MNCs to choose the best entry types. This is because the choice of entry modes is influenced by various factors, such as degrees of market attractiveness, resource engagement, competitive advantage, control and risk disclosure (Kaynak, Demirbag and Tatoglu, 2007). Moreover, each entry mode has a different implication for the level of control over the foreign operation, resource commitment, and risk accompanying expansion into foreign countries (Hill, Hwang and Kim, 1990). Yiu and Makino (2002) further emphasise that the choice of entry-mode is founded on firms' intentional, premeditated efforts to progress their efficiency, competitiveness, and control

over crucial resources. Over a wide range of interest and various objectives, the principal goals of MNCs are to maximise organisational outputs and add value to the MNCs (possibly through the acquisition of external knowledge) (Kyaw and Theingi, 2009). In this vein, the entry mode selection is a very crucial decision since it implies a significant loss of time and money, and the choice of options among FDI strategies particularly influences future directions for corporate success (Agndal and Chetty, 2007).

In order to understand the market dynamics impacting on subsidiary formation, this section compares strategic approaches to market entry modes. As the selection of entry mode is a critical strategic decision when MNCs choose foreign markets to enter, more investigation of entry modes needs to be undertaken in order to expand our understanding of why and how MNCs expand internationally (Agndal and Chetty, 2007). FDI (e.g., IJVs, M&As and WOSs) is often referred to as the most popular market entry strategy into foreign countries. It maximises MNC profits and helps international firms to sustain and develop organisational fortes through absorbing locally residing information (Lee, 2003)¹. Similarly, Kyaw and Theingi (2009) argue that although international business can be undertaken by various options, such as international trade (exporting and importing), licensing, franchising and management contract (according to the degree of control required and the degree of resource commitment), FDI is a more popular device when MNCs possess some ownership-specific advantages.

Chen and Messner (2009) define ten standard entry modes that can be taken into, for

¹ As previously said, compared to FDI, an exporting strategy has a crucial drawback and offers minimum profits for MNCs. In addition, a licensing can be considered as a substitute for FDI, but its potential profits do not outweigh direct investments.

example, international construction markets: local agent, strategic alliances, joint venture company, licensing, representative office, sole venture company, branch office, equity project, sole venture project, and joint venture project, but propose FDI (among those options) as a short-cut to improve market share in foreign markets. Kaynak et al. (2007) classify entry modes as non-equity based and equity-based. Contractual agreements, such as franchising, licensing, and exporting belong to non-equity modes. Equity-based modes selected by MNCs engaged in cross-border FDI are WOS (full ownership), IJV (shared ownership), M&A (majority ownership), or greenfield investments (start-up of new operations with 100 percent ownership). They also understand FDI as the modes which yield the higher extent of financial returns, controls by MNCs and better means to obtain external knowledge repositories than non-equity modes. Three strategic options (i.e., IJVs, M&As and WOSs) associated with FDI will be reviewed in the next section² as they can be simultaneously used as viable choices for MNCs which intend to enlarge profits and growth, as well as useful devices to access external knowledge sources.

2.2.1 International Joint Ventures (IJVs)

An IJV is one of the key strategies in international business when MNCs consider market expansion toward foreign countries (Park, 2011b). An IJV is formed when two or more parent firms join together into one entity to create a newly incorporated company; thus, each firm has an equity position (Glaister and Buckley, 1998). Geringer and Hebert (1989) indicate that it can be regarded as an IJV when the head office of at least one

² For reference, this study will generally illustrate only entry characteristics *per se* in the next section, and then move to relevant theories and key concepts that will be employed for empirical examinations. As explained in section 2.1, these discussions will link to the theoretical framework.

partner is located in a foreign country where the joint venture does not run or the venture mainly operates in more than one country. According to Nemeth and Nippa (2013), an IJV is an entity in which two or more partners are involved in operation and development by creating synergies from combining resources in a competitive global market. Taken together, an IJV can be defined as a cooperative formation in which two or more companies are involved in the operation of a newly incorporated firm and have an equity position.

When MNCs enter foreign markets, they may consider cooperative relationships with local firms as a feasible option, mainly perhaps to overcome the various presence of foreignness in the markets. In this vein, IJVs are established due to various motivations to surmount such foreignness: examples may include knowledge transfer between partners (Griffith et al., 2001), access to foreign markets and the gaining of competitive advantage (Barkema, Bell and Pennings, 1996) and the sharing cost and risk to achieve high-cost projects (Hodl and Puck, 2013). In the process of relationship formation, a complex issue may emerge, such as minimising cost, sharing risk, and learning rather than revealing their own precious knowledge (Barringer and Harrison, 2000). An IJV can be the best option for a firm's investments particularly as it wants to minimise resource commitments (Miller and Folta, 2002), but at the same time, cooperate with local firms within IJV management (Buckley, Glaister and Husan, 2002).

To reiterate, although there may be different motivations for the prominence of IJVs as a market entry strategy, knowledge acquisition is one of the main reasons (Park, 2011b). Previous IJV studies assert that knowledge acquisition and learning are important

motivations for the formation of IJVs (e.g., Lyles and Salk, 1996; Inkepn and Beamish, 1997; Zhan et al., 2009). In transition countries, such as China and Vietnam, which are moving from centrally planned economies to free markets, local firms tend to suffer from a lack of marketing, managerial, and technological capabilities that are required to face increasing competitions appropriately. Thus, the primary motivation for local firms to form IJVs is often to obtain advanced organisational knowledge from foreign parents (Zhan et al., 2009). By contrast, foreign firms use IJVs to learn about local market characteristics, labour resources and government issues which significantly influence business environments (Si and Bruton, 1999). According to Barringer and Harrison (2000), due to these complementary motivations, local firms generally provide local market and relevant industry information to MNCs, whereas the latter divulge sophisticated technological and management know-how to the former. Therefore, the formation of IJVs is regarded as a win-win strategy that allows access to foreign knowledge for local firms and provides MNCs with an opportunity to absorb LMI.

Based on resource sharing motivations, scholars have emphasized the importance of resources that can be shared within IJVs. According to Sirmon, Hitt and Ireland (2007), a firm's resources allow it to carry out more efficient and effective strategies, and often function as a key component determining whether the firm loses organisational power to other rivals, sustains its market position or is able to even develop competitive advantage. Obviously, resources should have some value to generate profits and help organisations to cut losses and their innate characteristics are hard to create, purchase, replace or imitate (Miller and Shamsie, 1996). In this vein, organisations should be involved in exchanges with their circumstances to acquire resources and combine interactively complementary

resources (Mutinelli and Piscitello, 1998), and knowledge sharing in IJVs (not only between foreign and local firms but also between MNCs and overseas subsidiaries) is regarded as a crucial process determining corporate success (Lee, Chen, Kim and Johnson, 2008). Zhan et al. (2009) point out that an IJV is frequently selected as an entry mode for accessing local market resources such as, property-based (PB) resources and knowledge-based (KB) resources (e.g., market-based resources). PB resources can be regarded as precious resources that can lead to an increase in corporates' successful output generation. By contrast, KB resources are generally harder to imitate and replicate as they are often formed through complicated social interactions within firms. This implies that KB resources are to be a more substantial source of competitive advantage. In particular, as a part of KB resources, market-based resources can be generated from the interactions or relationships with external organisations including customers, partners, government agencies, etc. In this vein, learning and gaining access to such resources are the most important reason for IJV formation, if all possible partners do not have equally valuable resources (Stuart, 2000).

In the discussions of IJV formation, national institutional environments signify factors relating to political, economic and cultural/social conditions; thus, the environment in a host country influences greatly the MNC's choice of entry mode (Chiao et al., 2010). The sub-national institutional environment is critical, as it both constricts and facilitates the strategies initiated by foreign affiliates and local firms (Chan, Makino and Isobe, 2010). Local governments often enforce resource sharing entities to undertake corporate activities by means of a legal contract and tend to bind MNCs' rights and obligations with it (Chalos and O'Connor, 2004). That is, many local governments try to restrict foreign

influences and increase the extent to which local firms enjoy an opportunity to learn foreign technology so that they win a learning race against MNCs and eventually facilitate knowledge transfer to the local economy (Blomstrom and Sjöholm, 1999). From the perspective of MNCs, partner selection is especially important to promote a balanced mutual sharing of knowledge between local and foreign firms in this situation. Wright, Filatotchev, Hoskisson and Peng (2005) argue that it is not difficult to observe such situations when MNCs attempt to invest in emerging or developing economies where the presence of undeveloped institutional regimes is prevalent. For instance, the Chinese government has erected various hurdles which inhibit FDI, such as the establishment of IJVs and imposes many difficulties for MNCs in operating their business within the Chinese system; thus, MNCs' control of IJVs can be more difficult in China than in other developed markets (Burger and Padgett, 2009). Incentives for cooperative relationships with local partners and restrictive regulations in the host country against WOSs also affect the selection of cooperative modes of entry (Morschett, Schramm-Klein and Swoboda, 2010). In this vein, in order to share more resources between (foreign and local) partners, a host government restriction regarding foreign entrants and the existence of adequate local partners may be considered carefully when MNCs go for an IJV strategy and select IJV partners.

Although host country governments regulate MNCs' activities, MNCs have a propensity to choose entry modes according to their interests and their own criteria (Chiao, Lo and Yu, 2010). According to Shi, Sun and Peng (2012), when a foreign firm chooses an IJV partner in emerging countries, considerations may include a local firm's network positions, along with the institutional environment of the host country. The local firm's

network positions and structures stand for an alternative channel that allows crucial resources and knowledge to flow between foreign and local firms, giving a chance for MNCs to ultimately acquire and then share LMI within MNC networks and influencing by the institutional environments in local markets. However, knowledge sharing between MNCs and local firms (and eventual transfer of LMI from subsidiaries to MNCs) is definitely an advantage of a cooperative equity partnership (Choi and Beamish, 2013).

2.2.2 Mergers and Acquisitions (M&As)

M&As have become increasingly common as a way of international expansion for MNCs pursuing global reach (Teerikangas and Very, 2006). A merger is formed when two firms agree to become a single new firm rather than remain separately operated and owned over (Chen and Ha, 2010). In other words, mergers can be viewed as the amalgamation of two firms into a single firm. By contrast, unlike mergers, acquisitions can be characterised as the obtaining of one firm from another where the acquiring firm obtains control, but may or may not guarantee the autonomy of the acquired firm (Mike and Dennis, 2003). However, scholars have tended to use the words interchangeably (Chen and Ha, 2010), and an M&A is premised on the assumption that the value of the combined company will be greater than the value of the two companies alone (Faelten, Gietzmann and Vitkova, 2015). An M&A is a preferred entry mode for MNCs particularly when they desire complete operational and managerial control to maintain critical resources and services by way of removal of competitors in local markets and expansion into new and emerging markets, with the hope of penetrating those target markets (Paik, 2005). Due to this, cross-border M&As have considerably changed the business

landscape in global markets (Ghauri and Park, 2012) and have become one of the dominant modes of global expansion (UNCTAD, 2007).

One of the main reasons for pursuing M&A strategies is to attain access to new knowledge residing in local markets; thus, international firms are more likely to choose M&A strategies rather than Greenfield investments (i.e., IJVs and WOSs) in order to expand into foreign markets if there is little overlap with existing organisational know-how between MNCs and local firms (Ahammad and Glaister, 2011). RKT from the newly acquired firm to headquarters and to other subsidiaries within MNC networks is an important motivation for MNCs to choose the strategy (Ahammad and Glaister, 2011). Bresman, Birknshaw and Nobel (1999) similarly suggest that a primary reason for an M&A is to access knowledge of the acquired firm, and to transfer that knowledge to other organisations/divisions of MNCs. An M&A provides access to a local intelligence base and core competence without bearing the burden of building up a subsidiary from zero (Teerikangas and Very, 2006).

To reiterate, when MNCs intend to obtain an advantage, including knowledge, which has not been accumulated internally but which is available in local markets, they may consider cross-border acquisitions and mergers to be a viable option (Chen and Young, 2010). In particular, the main motivation behind cross border M&As is not only to shut out threats of increased protectionism, but also to achieve the potential synergies of accessing innovative practices and modern technologies (Liu and Woywode, 2013). When firms fall behind the level of technology necessary to survive in the target and/or global markets, and cannot develop the required technology by themselves, MNCs may

try to acquire other firms which own more advanced technology or technology that they need (Chen and Young, 2010). Thus, potential benefits of M&As are various and include market risk reduction through global market diversification, lower costs and instant market access with an established sales volume (Datta and Puia, 1995).

Some other benefits also include helping MNCs to react more quickly to changing market conditions as MNCs tend to select well-developed firms which currently are operating in local markets and are potential targets for M&As (Georgopoulos and Preusse, 2009). In addition, cross-border M&As may reduce competition in foreign (i.e., host) markets through the purchase of local competitors and decrease the implicit or explicit trade barriers to entry (Vasconcellos and Kish, 1996), particularly when the existing firms have already obtained a strong background for a customer base and knowledge advantages which are unlikely to be easily traded (Mihai Yiannaki, 2013). However, among others, the most significant factor of cross border M&As is to acquire complementary resources and knowledge which is embedded in target firms.

While an M&A is an attractive option, companies must also accept all risks related to the acquired firm (Paik, 2005). As cross border M&As are more likely to include people with dissimilar beliefs and values compared to internal M&As, they (i.e., cross-border M&As) will be accompanied by larger national as well as organisational cultural differences (Ahammad and Glaister, 2011). As linguistic-cultural differences make cross-border M&As more difficult (Lees and Mauer, 2003), firms need to give greater attention to cultural compatibility in the process of overall M&A evaluation (Mike and Dennis, 2003). Cultural differences between the acquired and acquiring firms can lead to an

insufficient understanding of a foreign market, and this leads to acquiring firms overpaying for an acquisition as well as an increase in consolidation problems and administration post-acquisition (Datta and Puia, 1995). While an M&A represents one of the main forms of cooperation between foreign and local firms, it is also accompanied by the disruption of a company's human resources due to uncertainty regarding the organisational changes (Amin, Hagen and Sterrett, 1995). Mirvis and Marks (1992) also identify the human and logistics difficulties, engendered in local acquired firms, of cross-border M&A as follows:

1. Turnover of key local employees
2. Refusal of employee assignment
3. Cost of relocation and downtime
4. Performance decline of post-merger
5. Loss of synergies, capacity, and customers
6. Moral hazards

Despite those problems, foreign firms often consider M&As as a strategy for international expansion in circumstances where they do not own sufficient resources to develop in a new market (Park, 2012). By utilising complementary resources, such as country-specific capabilities from local firms, MNCs can save costs and enhance synergies through M&As (Bauer and Matzler, 2014). Thus, potential merger and acquisition partners are generally identified according to organisational strategies in order to acquire potential strategic synergy (Mike and Dennis, 2003). A government may never allow full acquisition if a target company is involved in a critical industry in a host country;

thus, firms (i.e., MNCs) will need to construct a detailed and comprehensive assessment of the environment (Paik, 2005).

2.2.3 Wholly Owned Subsidiaries (WOSs)

FDI innately accompanies investment risks in that MNCs need to either purchase local firms or establish new organisations in alien environments (Ekeledo and Sivakumar, 2004). In this regard, Yiu and Makino (2002) argue that the choice of market entry mode is mainly affected both by isomorphic pressures stuck in local environments and by their perceptive limits relating to the choices. They also explain that the entry mode strategy chosen by MNCs needs to adapt to the local environments to acquire legitimacy, particularly under conditions of environmental uncertainty. Within this paradigm, MNCs attempt to enter foreign markets generally with corporate confidence stemming from adequate possession of ownership-specific advantages and the motivation of utilising capabilities and exploiting their own resources. In such a situation, the common way of expanding through FDI is the creation of WOSs: MNCs establish a new firm in the host country using their own resources, while retaining 100 percent of the equity (López-Duarte and García-Canal, 2002).

Although there are various benefits offered by a WOS strategy, one of them is to allow MNCs to improve the efficiency of resource allocation and utilisation of their transfer in-company (Chiao et al., 2010). A WOS makes this explanation come true because through the use of the strategy, MNCs are eligible to maintain their own precious knowledge internally and do not need to worry about disclosures of important organisational

information to other firms. In addition, foreign firms have a motivation to select a WOS over an IJV in the situation of behavioural uncertainties that involve opportunistic behaviour by IJV partners³ (Yiu and Makino, 2002).

In spite of these circumstances, another critical element affecting decision-making about market entry strategy is concerned with the extent of cost and control which MNCs are likely to bear. According to Hill et al. (1990), MNCs establishing WOSs have to cover all costs of starting up and operating businesses in foreign markets, and thus they hold the entire income generating assets and bear high resource commitment accordingly. They also suggest that control over daily operations and specific strategic decisions may be entrusted to foreign subsidiaries, but ultimate control is always located in the MNCs' corporate office. Kyaw and Theingi (2009) further point out the two factors affecting the choice between IJV and WOS. From the perspective of operational cost, an IJV mode requires additional resources and costs in order to search for adequate local partners as well as to integrate the assets jointly invested by IJV partners. In terms of control, a WOS provides firms with absolute control, which requires the highest resource commitment, compared to shared control in an IJV.

When MNCs choose WOSs as entry modes in order to expand into foreign markets, they can either establish new ventures (i.e. Greenfield investment) or acquire existing firms (some scholars view the acquisition of firms as a part of WOS strategy) (Chen and Zeng, 2004). In terms of brand reputation barriers, Chen and Zeng (2004) also propose

³ In such a situation, IJV partners acquire precious assets and know-how possessed by foreign firms without providing foreign firms with useful information.

that starting up new ventures can allow MNCs to exploit brand recognition. By contrast, acquiring existing firms may provide MNCs with a way of overcoming reputation barriers in foreign countries, by which, in turn, the transfer of well-reputed brands from local firms to MNCs can occur. By doing so, the foreign firm secures some control rights over the entire package of assets of the acquired company (López-Duarte and García-Canal, 2002). In the case of Greenfield investment, in order to overcome a lack of knowledge about local information, MNCs should hold some distinctive firm-specific assets, such as peculiar technological knowledge and management know-how that can be utilised in foreign markets at a small cost (Park, 2012).

On average, the Greenfield type of WOSs tends to perform better than full acquisitions (i.e., the Brownfield type of WOSs) in terms of costs and risks. Since acquirers need to implant their own dissimilar organisational cultures to acquired firms, the latter undergoes a difficult organisational integration processes and MNCs suffer employees' resists and turnovers in the restructuring procedures (Nitsch, Beamish and Makino, 1996). In terms of knowledge transfer, as LMI tends to be tacit (particularly since most proprietary knowledge is uncodified), it is difficult to transfer it without a close and long-term relationship between firms; therefore, WOSs are appropriate to obtain high levels of intangible and tacit knowledge (e.g., LMI) transfer in that the strategy enables MNCs to tightly control overseas subsidiaries (Chang, Chung and Moon, 2013). According to Buckley, Clegg and Tan's (2003) empirical study in China, WOSs implement RKT better than IJVs as full ownership can provide a strong ground for the RKT by diminishing conflicts and constraints on RKT, as well as enhancing management control.

2.3 Theories explaining FDI and knowledge by-product

This section outlines a range of current theories related to MNCs' overseas subsidiaries and knowledge transfer within MNC networks. It starts with internalisation theory as the point of departure. Internalisation theory has long been considered as one of the mainstream international business theories in that it provides central reasons why MNCs go for overseas markets despite the presence of the liabilities of foreignness. In addition, it explains that the exploitation of organisations' knowledge-based assets across national boundaries is possible when firms achieve the internalisation of markets (Buckley and Strange, 2011). In other words, internalisation theory suggests that the transmission costs of knowledge are normally low within firms and firms should try to internalise external markets in order to overcome market imperfection in intermediate products. By contrast, it also posits that knowledge has a public good attribute, and thus it sheds light on FDI rather than arm's length contracts (e.g., licensing) as a means to control and prevent knowledge flow from one firm to another. A theory, which develops further internalisation theory, is the eclectic paradigm. This theory argues that firms become MNCs when they simultaneously own three advantages (ownership-specific advantage, location-specific advantage, and internalisation advantage) (Dunning, 1981). The eclectic paradigm suggests that, for instance, ownership of firm-specific knowledge allows firms to go for overseas markets, whereas the presence of precious knowledge in local markets functions as a location-specific advantage, attracting investments from MNCs. Moreover, internalisation advantage through a reduction in transaction costs is one of the key motivations for MNCs to create and internalise an external market.

Meanwhile, although knowledge plays a critical role for MNCs to increase their organisational competitiveness, a problem is that no one firm has sufficient resources to survive in competitive business environments, and thus they should sometimes rely on other firms to complement and remedy their own organisational weaknesses (Pfeffer and Salancik, 1978), possibly through FDI. The main point of the resource-dependence theory illustrates these perspectives. Organisational learning theory takes a step further and suggests that firms should exploit information processing experience accumulated in corporate memory and attempt to develop absorptive capabilities in order to successfully share knowledge across national boundaries. In addition, according to the theory, firms should also try to cultivate the skills of switching and interpreting strategic signals specific to foreign environments (Barkema, Shenkar, Vermeulen and Bell, 1997).

In order for learning (including conventional learning that is subsidiaries' learning from MNC headquarters and unconventional learning that is vice versa) to occur, absorptive capacity does not only explain the ability to recognise new knowledge and then assimilate it, but also illustrates an ability to commercially apply it to accomplish organisational aims (Cohen and Levinthal, 1990). Applying new external knowledge to commercial purposes includes the ability to distribute the knowledge within MNC networks, spread it to other subsidiaries by MNC headquarters and to develop it further and create new knowledge from it (Lane, Salk and Lyles, 2001). That is, through the application process, MNCs not only learn valuable knowledge which has not been available internally, but also innovate to compete with other rivals efficiently (Anh, Baughn, Hang and Neupert, 2006). As globalisation has intensified, absorption alone from other firms' knowledge or external sources does not seem to be enough to win the

learning race. It has become critical for MNCs to teach and distribute knowledge, which has been acquired from other firms, to overseas subsidiaries within MNC networks and share their competitive advantages outside the firms' boundaries (Perez-Nordtvedt, Kedia, Datta and Rasheed, 2008). In this vein, knowledge transfer capacity theory sheds light on a firm's possession of adequate capacity to enable it to effectively instruct overseas subsidiaries (Tsai, 2001). From the viewpoint of relational capital theory, knowledge transfer and sharing is a process that involves multiple counterparts; and the relationship between headquarters and subsidiaries is critical to overcome geographical distance and boost learning environments within MNC networks (Martins, 2012).

This section considers each of these seven theories (namely internalisation theory, the eclectic paradigm, resource-dependence theory, organisational learning theory, absorptive capacity, knowledge transfer capacity perspective and relational capital theory) to find out how each explain factors related to RKT.

2.3.1 Internalisation theory

Internalisation theory asserts that MNCs exist with the aim of internally exploiting firm-specific knowledge by extending their organisational boundaries into overseas markets through tight ownership (Cannice, Chen and Daniels, 2003). By doing so, firms have a motivation to maintain their own knowledge or technology within their subsidiaries. In this regard, from the internalisation perspective, firms prefer to establish WOSs rather than contracts like licensing. As a written contract cannot fully protect the firm from post-contractual opportunism by the licensee, it commonly hesitates to reveal

it to potential competitors (i.e., licensees) when a firm has important knowledge (Norman, 2000). Thus, internalisation theory clearly provides an account of the development of MNCs and explains the reasons for their FDI (Kalfadellis and Gray, 2002). The theory suggests why firms would possess and manage production facilities in place of utilising licensing or supply agreements with local firms in foreign markets (Ekeledo and Sivakumar, 2004). The theory also illuminates different contractual arrangements and explains the selection of the arrangements made to coordinate various types of economic activity (Buckley and Casson, 2011).

Internalisation theory lays out the scope for internalisation and argues that internalisation should proceed continuously until the benefits of internal coordination are offset by the costs of replacing external markets (Casson, Dark and Gulamhussen, 2009). The costs of internalisation are often ignored, but markets will not be internalised and external licensing or outsourcing will be selected when costs exceed advantages (Buckley, 2009). In this vein, internalisation theory and transaction cost theory (TCT) may overlap to some extent (Madhok, 1997) in that MNCs should choose entry modes to minimise transaction costs (Dunning, 2003).

In terms of RKT and organisational capacity for knowledge transfer, internalisation theory proposes that the costs of knowledge transmission are often minimised through internalisation strategy in that knowledge has a public good characteristic. MNCs commonly own sophisticated knowledge, advanced technology and better R&D know-how and managerial skills than local firms operating in overseas markets. Due to this, it is not difficult to expect that those knowledge factors possessed by MNCs generate

positive benefits through establishing subsidiaries which are geographically diversified. As knowledge has a public good attribute in the domain of internalisation theory, MNCs should directly invest in foreign economies and pursue a bundled FDI approach in order to protect their precious internal knowledge which can be easily transferred to other firms. In this vein, given the negative perception of internalisation theory concerning knowledge transfer / acquisition, this framework is appropriate to study how firms can retard unwanted knowledge transfer and knowledge leakage to local firms rather than to examine how MNCs learn LMI via the direct control of production and service. In addition, the additional drawback of internalisation theory⁴ is that although it accounts for why firms may select FDI as an entry mode, it explains only part of FDI flows (Denisia, 2010) and it does not cover the role of location advantages, which has contributed to the birth of the eclectic paradigm (Ekeledo and Sivakumar, 2004).

2.3.2 Eclectic paradigm

The gist of the eclectic paradigm of FDI, initially propounded by Dunning (1981), is that the level, type and pattern of international production are decided by three sets of advantages: ownership-specific advantages, location-specific advantages and internalisation advantages (OLI) (thus, the main difference between the eclectic paradigm and internalisation theory is that the former adds both ownership and location-specific advantages to theoretical discussions). Ownership-specific advantages refer to the possession of valuable intangible assets that are unique or monopolistic, at least for a period of time. In other words, ownership-specific advantages mean competitive or

⁴ This theory generally focuses on FDI flows from developed to developing economies.

exclusive advantages that assist an MNC to surmount disadvantages against local firms (Ekeledo and Sivakumar, 2004). The advantages should be enough to make up for the costs of international production and be more beneficial than internalising production. The advantage can be tangible, such as proprietary technology, patents on particular products or processes, or domestic firm size, which create transferable economies of scale and scope (Norman, 2000). By contrast, it can be intangible, such as embodied in a brand name, trademark or other identification of product quality, or deriving from a firm's preferred access to certain customers. Thus, firms possessing ownership advantages must be more profitable when they internalise its advantages by their own activities rather than externalising the advantages such as via licensing and contracts with other firms.

Ownership-specific advantage is a push factor, which pushes MNCs to go for overseas markets. Location-specific advantage is a pull factor, which attracts direct investments from MNCs. For instance, cheap labour costs in labour abundant countries and high technology and advanced R&D skills in advanced economies can be regarded as typical location-specific advantages. That is, location-specific advantages mean market and country potential that make business profitable in foreign markets (Ekeledo and Sivakumar, 2004). Foreign markets can show location advantages when the benefits of local production in foreign markets outperform exporting (Norman, 2000). The advantages include market volume, natural resources, characteristics of infrastructure, governance structure, the education system, and other features of political and government action (Rugman, 2010).

The third component is the internalisation advantages associated with explanations

given by internalisation theory (Agarwal and Ramaswami, 1992). Norman (2000) argues further that the internalisation advantages are based on a firm's belief that its ownership advantages are best exploited internally rather than sold directly; for example, through contracts or management contacts. According to Dunning (1993), the advantages may include minimising production and transaction costs, assuring proper quality control and preventing the risk associated with resource commitments. While the advantages indicate the motivations which decide a firm to internalise its operations in overseas markets, the firm needs to maintain an adequate balance between the location-specific advantages and its ability to internalise operations in the markets (Kaynak et al., 2007).

However, Rugman (2010) says that the paradigm is too eclectic and the three advantages for FDI are over-stated in many respects. First, some country factors, such as the legal, cultural and organisational environment, are included in ownership-specific advantages, and a very broad interpretation of the advantage is applied in explaining the ability of MNCs to form an alliance. Second, the location-specific advantage is broadly defined and it is difficult to distinguish between O (i.e., ownership) advantages and L (i.e., location) advantages. As MNCs can obtain O advantages by lobbying the governments of host countries, the L advantage of a host country can be converted into an O advantage. Finally, O and I (i.e., internalisation) advantages are linked to each other as O advantages might not exist on their own without being internalised by the firm. Moreover, the model disregards the influence of extensive product characteristics (services versus goods), characteristics of a home country, and other variables (e.g., costs of transport and distribution, foreign exchange rates between home and host countries, and weight to value ratio of the goods) on the selection of entry mode (Ekeledo and Sivakumar, 2004). Moosa

(2015:301) also criticises the drawbacks of empirical testing of the theory by arguing “It recognises that advantages due to ownership, internalisation and location may change over time and accepts that if country-specific characteristics are important determinants of FDI it may be invalid to generalise from one country’s experience to another”

In particular, when this study applies L advantage to the topic that it experiments, the drawback of this theory is clearer. One of the key location advantages which generates FDI from MNCs is local knowledge residing in foreign markets. Like the internalisation perspective, the eclectic paradigm sheds light on the integration of external markets through internalisation. In addition, it suggests that knowledge including marketing, technology and R&D has a public good attribute, and thus MNCs can utilise such knowledge characteristics through employing adequate location strategies and by doing this, they may be able to gain LMI from local markets. However, a problem is that it does not provide necessary explanations of how firms can actually learn local knowledge and maximise benefits through the location strategy associated with RKT from subsidiaries (and organisation capacity for knowledge transfer). In this vein, the eclectic paradigm is relevant to this study, but is not appropriate as a main theoretical lens to achieve the research objectives.

2.3.3 The Resource-dependence perspective

The Resource-dependence perspective states that firms attempt to manage their dependencies against uncertainties which they encounter in the business process and search for closer relationships to improve information exchanges (Fink, Edelman, Hatten

and James, 2006). The key point of the resource-dependence perspective can be summarised as follows. Firms do not possess sufficient resources to cope with uncertainty and to compete with other firms; thus, they should manage external dependencies for reducing environmental uncertainty (Pfeffer and Salancik, 1978). Rivas (2012) also argues that uncertainty is detrimental since it prevents firms from controlling resources and selecting strategies for their business and thus, organisations need to cope with uncertainty in order to survive. Moreover, organisational interdependence with the environment can lead to an uncertain future for the organisation.

Pfeffer and Salancik (1978: 3) argue, “Environments can change, new organisations enter and exit, and the supply of resources becomes more or less scarce”. In this violent and unsure environment, one of the possible alternatives for MNCs to cope with such resource insufficiency and environmental changes is entering foreign markets via various entry modes. This is because stable exchange relations and resources among participating organisations may secure competitive resources in response to these violent environments. Thus, for instance, the establishment of an international collaboration is selected by firms in order to lessen risk and build joint bonds which help to enhance their capabilities through utilising complementary resources most of all. Gaffney, Kedia and Clampit (2013) explain the reasons why regarding a firm engage in M&As from the perspective of resource dependence theory: (1) in order to reduce its competition by absorbing key rivals, (2) to diversify its operations to lessen reliance on its current organisational network, and (3) to deal with interdependence on buyers or suppliers. By doing so, it can also enhance its own competitive position in varying environments.

According to resource dependence theory, firms should respond to the external environments through inter-organisational relations in order to maintain and acquire tangible and intangible resources to survive in the global competition (Gaffney et al., 2013). The key concepts of the theory⁵ are: (1) the significance of a firm's ability to obtain and sustain resources to survive its competition, (2) firms exist within organisational networks that affect access to necessary resources, and (3) firms try to make other organisations more reliant on them and to lessen their reliance on other firms at the same time (Pfeffer and Salancik, 1978). Subsequent studies have extended the core concept of the resource-dependence theory in various ways, including 1) the role and impact of the resource-dependence perspective on strategic decision making (Nemati, Bhatti, Maqsal, Mansoor and Naveed, 2010), 2) the link between customers and suppliers via the concept of the resource-dependence perspective (Fink et al., 2006), and 3) how to cope with the uncertain environment through the lens of resource-dependence theory (Rivas, 2012).

To sum up, the increase in MNCs' expansion into foreign markets is driven in part by the realization of MNCs that foreign subsidiaries can be important sources of innovation and that this then requires RKT (Chung, 2014). However, the resource-dependence perspective shows that the degree of RKT can be affected by the intention of maintaining a dependent relationship between foreign subsidiaries and MNCs (Chen, Chen and Ku, 2012). In other words, critical knowledge transfer can be restricted between subsidiaries

⁵ Barringer and Harrison (2000) propose that although both the resource-based view and the resource-dependence perspective shed light on the importance of resources that firms possess, they are innately different in the following essentials. The resource-based view focuses more on internal resources despite the fact that there is some perception that critical internal resources can be acquired from external sources. However, the resource-dependence perspective focuses solely on resources that must be acquired from external sources for a firm to flourish and survive.

and parent firms in order to sustain a dependent relationship. As foreign subsidiaries are embedded in local markets, they are likely to leverage local knowledge and the knowledge will become a critical factor in acquiring organisational power against MNCs (Chen et al., 2012).

Although resource-dependence theory shows clearly why firms want to enter foreign markets and explains that one of the motivations for FDI is associated with the fact that very few firms own self-sufficient critical resources, this theory also has limitations with regard to illustrating the determinants of RKT and organisational capacity for knowledge transfer. Since firms do not have adequate resources to compete efficiently against other firms, some firms may have to look for another foreign organisation which has adequate power to incapacitate competitors and abundant resources to help them to strengthen their market position. In addition, local knowledge can be an important resource, which motivates MNCs to co-operate and collaborate with local firms through FDI. For instance, when MNCs do not possess relevant LMI, they may seek out potential collaborative partners that can complement their weaknesses and try to establish an IJV with local firms to make use of the latter's (i.e., local firms) capability. In this case, it can be assumed that MNCs may attempt to gain LMI from the subsidiary (i.e., IJVs). However, it does not elucidate specific mechanisms for such RKT. Moreover, although the theory agrees that the inter-organisational relationships promote organisational learning and opportunities for local knowledge acquisition may happen through these strategic co-operations, it does not make clear how subsidiaries can improve organization capacity for the transfer of knowledge to MNCs. Thus, it can be concluded that the theory is relevant to this study to some extent, but it is hard to argue that the resource-dependence perspective is concerned

primarily with mechanisms for knowledge exchange between MNCs and subsidiaries.

2.3.4 Organisational learning theory

The main objective of organisational learning is both the efficient and effective acquisition of external new knowledge and continuous development of in-house know-how (Pemberton and Stonehouse, 2000). Thus, successful learning organisations are commonly able to respond rapidly to changes in organisational environments and combine internally accumulated knowledge with organisational assets acquired from external sources. While organisational learning is related to the continuous development of new knowledge to add value to current assets, knowledge management mainly handles the formalisation, custody, sharing and coordination of current knowledge assets throughout organisations to create and exploit core competences that induce outstanding performance (Pemberton and Stonehouse, 2000). The organisational learning approach suggests that firms have a propensity to establish IJVs mainly to learn critical knowledge which they are lacking or to rent such knowledge to other firms (Shenkar and Li, 1999). Powell, Koput and Smith-Doerr (1996) further argue that inter-organisational collaborations are not only to supplement insufficient internal skills, but also to develop and strengthen internal competencies.

When a firm based in a developed country forms a strategic alliance with organisations in developing countries, the existence of a large gap of technical competency between these two firms is common (Tsang, 1999). For example, while local partners (i.e., organisations in developing countries) desire to learn management and

technological skills from foreign partners (firms have their headquarters in developed economies), foreign partners seek business experience and LMI from local partners (Tsang, 2002). Tsang, Nguyen and Krishna (2004) argue that IJVs offer the best environment for inter-partner learning. As local firms often lack the technological, managerial, and marketing capabilities to compete against other key local competitors and MNCs, IJVs can be an alternative way for local firms to acquire such capabilities from foreign partners. Moreover, IJVs are also used as a vehicle for foreign firms to enter transition economies (i.e. economies which are transferring from previously planned economic systems to open-market capitalistic structures) and to acquire LMI. Moreover, subsidiaries, such as IJVs and international WOSs, provide MNCs with an opportunity to learn valuable know-how which allows MNCs to efficiently manage and operate business in alien foreign environments gradually, and to enlarge effective learning experience for their success.

Based on an organisational learning perspective, learning, especially in IJVs, is recognised as a method of acquiring knowledge, collaborative know-how and experience (Hau and Evangelista, 2007), and alliances are also regarded as a way to learn or acquire critical capabilities and skills from partners (alliances include IJVs and thus the former is a broader concept than the latter) (Kale, Singh and Perlmutter, 2000). Taken together, organisational learning is facilitated through certain processes, which help organisational members to acquire knowledge (Lane et al., 2001).

Organisational learning theory is very useful to help to understand the process of knowledge exchange between MNCs and subsidiaries, in that it indicates that

organisational learning is an important motivation for FDI. For instance, Moon and Roehl (2001) find that a key reason why LG shows a more enthusiastic attitude toward FDI than Samsung is that the former has tried to learn a foreign knowledge and by doing this, it tries to catch up with the latter. Moreover, the organisational learning perspective is a good theoretical lens when researchers want to have a general idea about learning *per se*. This statement points out that it is suitable to cognise a general phenomenon on knowledge flow (e.g., the process of different knowledge conversions between tacit and explicit knowledge within MNC networks). In other words, organisational learning theory suggests that foreign subsidiaries with LMI can be an important source for MNCs and the subsidiaries' accumulation of LMI is a prerequisite for RKT. However, LMI is often tacit and sticky which makes it difficult to implement RKT. Thus, to overcome these difficulties and effectively fulfill RKT, the development of effective knowledge transfer mechanisms between subsidiaries and MNCs is required (Miao et al., 2011). Thus, this study selected relational capital theory in order to investigate the relationship between socialisation mechanisms and RKT, as organisational theory does not clearly explain the effects of the mechanisms and of subsidiary capacity on RKT.

2.3.5 Absorptive capacity

In order to acquire external knowledge, firms should recognise where or how to find, assimilate, and distribute the external knowledge (Muscio, 2007). Cohen and Levinthal (1990) define these capabilities as a firm's absorptive capacity. According to them, absorptive capacity includes three principal dimensions. These are: the capacity to understand different knowledge, the capacity to assimilate the knowledge into the firm

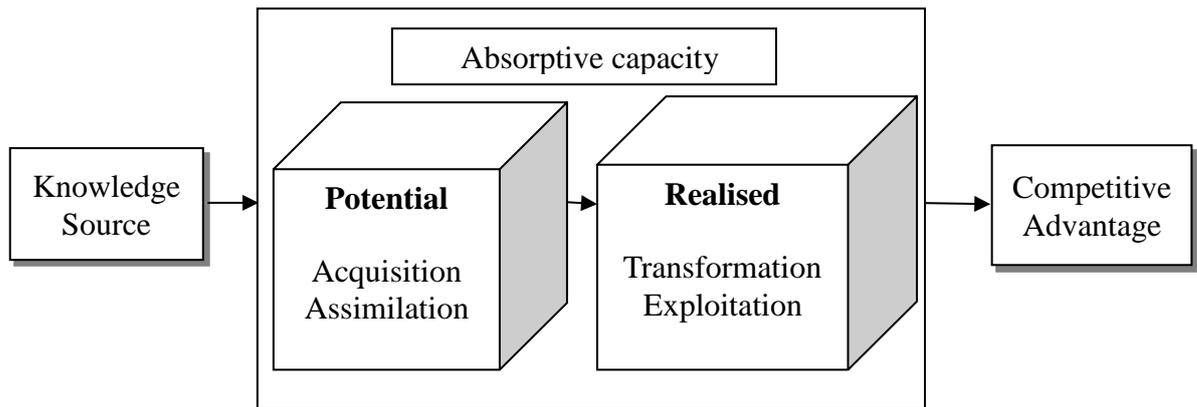
and the capacity to commercially apply it. Daghfous (2004) argues that absorptive capacity is acquired by developing (1) the firm's ability to approach new knowledge, and (2) the firm's capability to convert and use external knowledge within the organisation to improve its fundamental competencies.

A firm's absorptive capacity is a critical determinant of its growth, survival, and economic performance (Li, Poppo and Zhou, 2010). It is generally accepted that absorptive capacity indicates an organisation's energetic capability and is composed with different dimensions; and each dimension performs a different but complementary role in interpreting how absorptive capacity affects knowledge acquisition and business performance (Deng, 2010). Deng (2010) further argues that firms with lower absorptive capacity may have difficulty building, assimilating and interpreting new knowledge. This makes the firm less effective in progressing and applying explicit and tacit knowledge to commercial ends. The reasons why absorptive capacity may be different across organisations are the level of previous related knowledge and the level of similarity between the sending and receiving units (Gupta and Govindarajan, 2000).

Zahra and George (2002) reconceptualise absorptive capacity by suggesting that it includes four key dimensions pertaining to knowledge acquisition in order to achieve and sustain a competitive advantage. They view absorptive capacity as a dynamic organisational capability, which is embedded in an organisation's routines and processes and affects the firm's capability to generate and organise other organisational capabilities (e.g., production, distribution, and marketing). According to Zahra and George (2002), the four dimensions are: the ability to acquire new knowledge, the ability to adapt it, the

ability to modify it, and the ability to utilise it in a commercially viable sense. While the first two components build potential absorptive capacity, the other two parts form realised absorptive capacity. This process is visually explained in Figure 2.1.

Figure 2.1. A model of Absorptive Capacity



Source: Adapted from Zahra and George (2002: 192)

A focus of the first dimension is the recognition and identification of the value of new knowledge, and it explains how intense efforts affect absorptive capacity. The intensity of efforts indicates the amount of energy spent by employees to resolve problems; thus, such an effort deepens interactions among organisational members and facilitates knowledge conversion (Kim, 1998). Zahra and George (2002) also argue that the concentration and rapidity of a firm's learning efforts to recognise and collect knowledge can decide the value of a firm's knowledge acquisition. Moreover, the intensity of these efforts determines a firm's ability to understand new knowledge (Ghauri and Park, 2012).

The quality of the first stage learning (i.e., acquisition of new knowledge) can be affected by three dimensions: retention of prior-related knowledge, intention to learn, and level of human capital (Ghauri and Park, 2012). According to them, similarity of

preceding associated knowledge between knowledge transfers and receivers builds the basis of an essential capacity to acquire new knowledge. This previous knowledge consists of fundamental common knowledge or skills, which shares a similar operating structure and standards to those of the knowledge transferor, and thus the preceding related knowledge affects positively a firm's absorptive capacity (Park, 2011a). Kim and Inkpen (2005) also argue that the firm's degree of previous related knowledge is regarded as a main factor affecting absorptive capacity. The extent to which firms possess the willingness to learn from external sources is another facet of organisational learning. Domestic human capital may be an important element in understanding overseas high technologies embodied in imports and absorbing them for the domestic market economy (Kwark and Shyn, 2006).

If a firm owns the related prior knowledge needed to recognise critical external knowledge, the next challenge it encounters is how to internalise it (Lane and Lubatkin, 1998). Absorptive capacity is considerably determined by an ability to assimilate new information. Assimilation can be defined as the firm's procedures and systems that allow it to process, analyse, digest and figure out obtained knowledge from external sources (Zahra and George, 2002), and it stands for a firm's capability to absorb new knowledge (Daghfous, 2004). For instance, in IJVs, assimilation of foreign firm knowledge is a sense-making process in which IJVs connect own skills to new knowledge. In this vein, Lane et al. (2001) propose that organisational adaptability and flexibility are vital in order to facilitate the procedure.

The primary elements which influence a firm's assimilation capacity may be related

to experience intensity (Ghauri and Park, 2012). Intensity of experience provides organisations with comprehending knowledge, and comprehension encourages knowledge assimilation that enables firms to internalise and process externally produced information (Zahra and George, 2002). Another prominent factor, which is considered as an important component influencing the assimilation of new knowledge and predicting the extent of knowledge acquisition, is employees' ability to learn *per se* (e.g. human capital) (Anh et al., 2006). For instance, an IJV's knowledge acquisition from foreign firms depends significantly on the available stock of human capital, and the IJV will experience difficulties in digesting external knowledge in the absence of appropriate human capital (Park and Glaister, 2009). The organisational culture between transferring and acquiring firms is also an important part, which is considered as a decisive factor influencing the assimilation of new knowledge.

Transformation represents the firm's capacity to build practices that enhance linking newly acquired and assimilated knowledge and previous knowledge; thus, transformation can be simultaneously fulfilled by interpreting existing knowledge, eliminating redundant information, and replacing it with new knowledge in a diverse way (Daghfous, 2004). This is developed by restructuring or changing the knowledge reservoir through rotating new information, or by adjusting the existing knowledge stock through allocating new skills within firms (Ghauri and Park, 2012).

Exploitation refers to organisational ability based on the routines that allow firms to organise, enlarge and leverage current capabilities and/or to develop new ones by integrating acquired and transformed knowledge into its operations (Zahra and George,

2002). The number of new product statements or a firm's patents can indicate the level of exploitation capability (Daghfous, 2004). In order to efficiently obtain and incorporate information and knowledge into a firm's operations, it requires structural and systematic mechanisms that offer it to continue exploiting new information so that it enhances organisational performance (Ghauri and Park, 2012). For instance, Anh et al. (2006) highlight the role of investment in training and joint participation in business activities which facilitate knowledge sharing between partners and ultimately enhance the commercial uses of the new information shared.

To sum up, all dimensions of absorptive capacity play crucial roles in the process of knowledge acquisition in subsidiaries, and each dimension performs a unique role in helping subsidiaries to be major knowledge acquirers in local markets (Anh et al., 2006). Subsidiary learning is a continuous process encompassing knowledge acquisition, assimilation of existing knowledge, transformation of the knowledge to explicit information and the utilisation of the skills to create new know-how, which subsequently leads to RKT. However, subsidiaries' absorptive capacity *per se* is a prerequisite and foundation for RKT to take place. This study tries to identify key factors affecting the reverse transfer of LMI from subsidiaries to MNCs by looking at subsidiaries' capacity for RKT. In other words, the primary objective of this study is not an answer to the question, "what are fundamental foundations for RKT" and does not narrow down the scope of the research to such a basic prerequisite. Additionally, this study looks at foreign subsidiaries as knowledge transferring organisations rather than knowledge receiving organisations. Although previous studies on knowledge transfer propose that the absorptive capacity of receiving organisations is the most important determinant of MNCs

knowledge transfer (Minbaeva et al., 2003), this study focuses on the subsidiary's knowledge transfer capacity and views a foreign subsidiary as a knowledge transferor in RKT.

2.3.6 Knowledge Transfer capacity

MNCs often implement international expansion in order to acquire knowledge-based advantages, but the possession of such advantages does not guarantee that they can exploit them without an ability to transfer knowledge within their MNC networks (Martin and Salomon, 2003). In the same vein, an overseas subsidiary also requires organisational capabilities to effectively transfer its local knowledge to MNCs (i.e., knowledge transfer capacity). Martin and Salomon (2003: 363) define knowledge transfer capacity as “the ability of a firm (or the relevant business unit within it) to articulate uses of its own knowledge, assess the needs and capabilities of the potential recipient thereof, and transmit knowledge so that it can be put to use in another location”. This definition emphasises three related conditions that contribute to a firm's knowledge transfer capacity. First, a firm needs to be able to recognise potential applications and terms for effective knowledge utilisation. Second, a firm needs to be able to decide how ready a receiver is to use and assimilate the knowledge. Third, a firm needs to be able to transmit the knowledge to targeted recipients in an appropriate way.

Previous research about MNCs' knowledge transfer has emphasised that absorptive capacity is critical for learning organisations and the relationship between knowledge senders and acquirers, but it seems to overlook another critical element - the teaching

capability of knowledge transferors that promotes double learning effects (Park, 2011a). However, according to Minbaeva et al. (2003), the competitive advantages of MNCs are considerably determined by the knowledge transfer capacity owned by MNCs and overseas subsidiaries. In other words, although a knowledge sending firm may have the capability to absorb new knowledge that can be accessed, both initially intended and subsequent knowledge transfer between MNCs and subsidiaries may not happen without the presence of sufficient knowledge transfer capacity, which allows the knowledge senders to spread the information to other firms within their networks (Tang, Mu and MacLachlan, 2010).

Some empirical studies relating to knowledge transfer in MNCs highlight the significance of the knowledge transfer capacity of knowledge holders. The knowledge transferor needs capacity to identify the potential value of knowledge for transferring to the recipient and requires intra-organisational transfer capability if the knowledge transferor intends to make the information available to the recipient in an efficient way (Easterby-Smith, Lyles and Tsang, 2008). That clearly indicates that the extent of learning is considerably affected by a teacher's capability to transfer knowledge (i.e., knowledge transfer capacity) which signifies an ability to adequately transfer and teach new knowledge (Park, 2011a). In this study, the definition of knowledge transfer capacity follows that of Tang, Mu and MacLachlan (2010: 1587): "the ability of knowledge holders to efficiently, effectively, and convincingly frame knowledge in a way that other people can understand accurately and put their learning into practice".

For more details on the ability, firms are required to retain specific internal capacities

so as to be involved in knowledge transfer processes (Tsai, 2001). Knowledge transfer is determined by the capacity of the sender to communicate the knowledge in the way that the receiver can understand; and the decision to transfer knowledge is affected mainly by the sender's willingness to transfer knowledge (Minbaeva and Michailova, 2004). Park (2011a) also suggests that intent to share as an element of the MNCs' knowledge transfer capacity significantly affects the IJV's knowledge acquisition. In other words, if foreign parents do not possess a proper willingness to share, knowledge cannot be sent effectively to recipients. In short, the intent to share by knowledge transferors is a pre-requisite for efficient knowledge acquisition by knowledge acquirers.

Along with intent to share, two additional elements are essential prerequisites for effective knowledge transfer (Tang, 2011). First, knowledge senders have to be qualified to transfer knowledge. The second factor is the knowledge sender's strong transfer capacity (i.e., dissemination capacity). With respect to the first condition, Wang, Tong and Koh (2004) argue that the transfer capacity to transmit the knowledge in a type that can be assimilated by the receiver is mainly decided by (1) the level of knowledge foundation of the knowledge sender, and (2) the abilities of the employees (i.e., human capital). Human capital can play a pivotal role in deciding the ability of a firm to connect new information to other organisations within its networks and access the sources of external knowledge (Muscio, 2007). In other words, the richness and sophistication of the knowledge sender's existing knowledge stock and competent employees who own higher managerial and technical skills have a positive influence on the extent of knowledge transfer. Miao et al. (2011) also support that expatriates, who are likely to be more involved in the entire MNC organisation's performance, can sometimes be more effective

and supportive in enhancing knowledge transfer between headquarters and its subsidiaries than locally employed managers. Thus, existing internal capabilities affect knowledge transfer (Park, 2011a).

With respect to the second condition for effective knowledge transfer (i.e., transfer capacity), the way to interpret and communicate the knowledge of the knowledge sender impacts significantly on the knowledge recipient's learning processes (Tang, 2011). In other words, the ability of knowledge transmitters to spread and diffuse knowledge has a substantial impact on the extent of knowledge transfer (Minbaeva and Michailova, 2004). As valuable knowledge is often tacit, knowledge transmitters need to have well-formed capabilities to formulate the knowledge and communicate with knowledge recipients. These capacities could be developed through training, instruction and well-equipped manuals (Minbaeva, 2007). This approach is valuable because it sheds light on an organisation's capacity for knowledge transfer and suggests potential mechanisms for facilitating knowledge transmittance and this study also focuses on identifying the main determinants for RKT. Through a review of this perspective, it is anticipated that RKT from subsidiaries to MNCs will be dependent on the former's capacity to transfer local knowledge to its headquarters. To sum up, the extent of knowledge transfer can be considerably affected by a transferor's knowledge transfer capacity.

2.3.7 Relational Capital Theory

In general, previous studies have provided support for the proposition that knowledge characteristics affect the process of knowledge transfer in some way or other (Michailova

and Mustaffa, 2012). Relational capital theory⁶ argues that studies need to move beyond investigating the effect of knowledge characteristics alone on knowledge transfer, but should also investigate the associations between knowledge senders and receivers. Firms can gain access to knowledge, resources, markets or technologies through networks, but social capital (as a part of relational capital) plays a pivotal role in knowledge transfer between networks. Similarly, Inkpen and Tsang (2005) define relational capital as the collective of resources created from the relationships with networks held by an individual or organisation; thus, the relationships between networks are a critical resource for knowledge sharing to occur.

Tacit knowledge is transferred not simply by observation but through active involvement between knowledge exchanging parties; thus strong relational capital is evidently an essential element for knowledge transfer to come true (Park et al., 2012b). For example, local market information tends to be tacit as a salesperson's knowledge and customer-relationship knowledge is subjective and personal; thus transferring the knowledge requires coordination between transmitters and recipients (Schlegelmilch and Chini, 2003). Stronger relationships provoke effective communication and facilitate more rapid knowledge sharing, particularly in the case of tacit knowledge (Perez-Nordtvedt et al., 2008). Kale et al. (2000) also argue that strong relational capital generally provokes

⁶ Based on previous studies (e.g., Liu, Ghauri and Sinkovics, 2010; Park 2011), this research employs a relational capital, instead of social capital perspective. In addition, the social capital encompasses three different dimensions, which are structural, cognitive and relational capitals (Al-Tabbaa and Ankras, 2016), but the other two dimensions are beyond the scope of the research, focusing on the relationship between knowledge transferors and acquirers. The relationship between firms can be decided by the extent of social ties, sharing values, and trust between them, and relational capital can affect the degree of knowledge transfer between the firms (Liu et al., 2010). Additionally, Park (2011) argues that knowledge exchange is determined by three elements: absorptive capacity, favourable learning environment and knowledge transfer capacity; and favourable learning environment is significantly influenced by relational capital between the knowledge exchanging parties (see pp.77-78).

close interactions between firms; thus, it enhances exchange and transfer of knowledge, especially tacit and sticky knowledge.

The relational capital view suggests that the competitive advantage of firms derives not only from their difficult-to-imitate resources or capabilities, but also from network relationships (Yli-Renko, Autio and Sapienza, 2001). Relational capital, such as interactions and trust, plays a significant role in facilitating knowledge transfer since relational capital acts as a coordination mechanism and determines the quality of the relationship between the organisations concerned (Chen and Wu, 2007). Yli-Renko et al. (2001) further argue that inter-organisational relationships enhance not only knowledge exchange, but subsequent exploitation. Relational capital strengthens knowledge senders' confidence in routine activities and integrity to transfer knowledge more freely. The obtained confidence often promotes transparency and interactions between knowledge exchanging parties, and the degree of transparency and interactions determines the extent of knowledge transfer between them (Liu et al., 2010). The interactions of knowledge transfer participants and other socialisation mechanisms (e.g. frequent personal contacts) may be required for successful knowledge transfer including RKT (Chung, 2014; Yang et al., 2008). In this situation, the key concept investigated by extant empirical studies is relational capital, such as socialisation mechanisms, trust, and organisational distance.

As continuous discussions on paths for knowledge transfer, communication and close interactions between firms are useful to learn or transfer important knowledge (Kale et al., 2000). Active social interactions facilitate knowledge exchange by enhancing both parties' coordination capabilities (Li, Barner-Rasmussen, Bjorkman, 2007). Socialisation

is related to the capability to enhance the sense of closeness and intimacy between units, which logically facilitates their knowledge sharing (Borini et al., 2012). In particular, knowledge acquiring firms may learn more easily and move quickly in the case of explicit knowledge learning, but the acquisition of tacit information, such as LMI, involves complicated processes, and thus for efficient knowledge transfer, social ties are essential.

Trust between firms is also a constituent of relational capital and plays a critical role in knowledge exchange between firms by diminishing the effort to protect their knowledge and provides firms with benefits, such as preferential knowledge access (Inkpen and Tsang, 2005). Moreover, trust-based relational capital can facilitate freer and greater exchange of knowledge between knowledge exchange actors, as they feel free from opportunistic behaviour (Kale et al., 2000). In other words, it functions as a vehicle to share knowledge between transferring and acquiring entities, because once a knowledge sender does not trust their business partners (i.e., knowledge recipients), the former may be unwilling to share their knowledge any more (Chung, 2014). For more details on the role of trust, it builds a background of intimacy, reliability, and predictability, which promotes learning organisations to be more receptive toward inflowing knowledge (Li et al., 2010). Additionally, trust provokes transferors' readiness to make extra efforts to overcome difficulties and concerns that knowledge will be shared with competitors (McEvily and Marcus, 2005). Moreover, Lane et al. (2001) suggest that inter-organisational trust encourages transferring firms to dynamically assist receiving firms to understand the transferred knowledge, and consequently it results in an increase in the extent of knowledge transfer and the effectiveness of the transfer between firms (Park, 2011a).

Conversely, when a subsidiary works toward a shared goal, such as increasing sales revenue, the subsidiary will try to fulfil the goal regardless of having conflicting interests (Park et al., 2012b). With shared goals as a part of organisational congruence, knowledge transfer is unlikely to be misdirected as the goals help to build a shared understanding and to achieve the collaborative objectives by solving conflicts of interest (Li et al., 2010). Moreover, shared goals stand for the degree of sharing a common understanding and the realisation of network business (Inkpen and Tsang, 2005). Shared value is another element affecting both trust and relationship commitment between firms, and it is a measure of the extent of having beliefs in common about policies, behaviours, and organisational objectives between firms (Morgan and Hunt, 1994). Taken together, organisational distance, for instance, on shared goals, values and vision can minimise inter-firm knowledge transfer (Park, 2011a).

Lyles and Salk (1996) indicate that misunderstandings stemming from cultural differences can retard flows of information and erect barriers causing considerable psychic distance, which functions as a hindrance negatively influencing successful learning (also see Liu, 2012). As a typical example, cultural distance between IJV parents (i.e., foreign and local parents) often triggers extra problems in that (1) the cultural distance inhibits managers from working together effectively and from developing common values (Park, 2011a) and (2) it impedes the harmonisation of business objectives and appropriate managerial and operational decisions (Berrell, Gloet and Wright, 2002). Ultimately, all these problems will negatively affect knowledge exchange between concerned parties and their learning context (Lane et al., 2001).

In MNC-subsidary relationships, foreign subsidiaries commonly provide important knowledge to headquarters and *vice versa*. The level of social ties, trust, and shared values and systems may affect the degree of knowledge transfer between them for the following reasons (Dhanaraj, Lyles, Steensma and Tihanyi, 2004). Firstly, the level of interaction and communication indicates the strength of social ties between the two firms, and relational embeddedness facilitates learning by building a common identity which encourages free knowledge sharing. Secondly, trust allows access to resources and shared understanding between headquarters and subsidiaries by preventing them from taking advantage of the other party's weakness; thus, trust enhances knowledge exchange by ensuring that the knowledge will not be used beyond what is intended. Lastly, shared values and systems between headquarters and subsidiaries help to build common identity and mutual understanding; thus, shared systems help to form a shared communication protocol that promotes knowledge exchange.

In conclusion, the relational capital view seeks to explain how relational capital influences knowledge transfer between subsidiaries and headquarters. A relationship between headquarters and their subsidiaries can be characterised in terms of the intensity of social ties, the degree of trust, and the degree of shared common values and processes between them (Dhanaraj et al., 2004). Relational capital in MNC networks refers to firm-specific relationships that MNCs build with other subsidiaries through a process of interactions and plays a critical role in intra-organisational learning (Evangelista and Hau, 2009). Similarly, Lee et al. (2008) argue that the effect of knowledge sharing between subsidiaries and MNCs depends greatly on relational capital. In this vein, relational capital can be applied to the research framework of this study as an overarching

theoretical lens promoting an organisation's capacity for knowledge transfer and eventually enlarging the extent of RKT.

To sum up, the discussions introduced in Section 2.3, both the internalisation and eclectic theories, explain primarily what the motivations for firms to become MNCs are and why MNCs directly invest in foreign markets despite the presence of liabilities of foreignness. They also explain some of the knowledge issues associated with the objectives of this study (thus, they are generally related to section 2.2) (i.e., a public good attribute of knowledge and knowledge's contribution to location-specific advantages). By contrast, a theory playing an intermediate role, which links FDI and knowledge issues, is the resource-dependence perspective in that it suggests that MNCs use internationalisation (i.e. FDI) in order to maintain and acquire resources to survive and it implies that knowledge is one of the key resources to become globally competitive (Gaffney et al., 2013). Organisational learning theory takes steps further to knowledge issues and argues why knowledge is important to improve organisational competitiveness. Three theoretical lenses - namely absorptive capacity, knowledge transfer capacity and relational capital- identify which components facilitate learning and make knowledge flows possible within MNC networks. In this sense, the three perspectives are, at least in part, background overarching theories that can be used for framing this study whose objective is to identify factors affecting reverse transfer of LMI from subsidiaries to MNCs in which absorptive capacity functions as a foundation for RKT (this will be further explained in section 2.5: 'theoretical framework').

2.4 Reverse Knowledge Transfer

The objective of this study is to identify factors affecting reverse transfer of LMI from overseas subsidiaries to MNCs. In order for MNCs to simultaneously pursue globalisation and localisation strategies and in compliance with the need to maintain balance the pressures of international market integration and local responsiveness, overseas subsidiaries play a pivotal role in absorbing locally residing invaluable information, further creating new knowledge with the information and reversely transferring the knowledge to MNCs for headquarter competitiveness (Rabbiosi, 2011). MNCs are able to sustain and improve their competitive advantage by combining and integrating various sources of knowledge which have not been available internally, but are generated within their global network by learning from the external environment (Lane et al., 2001). In addition, knowledge transfer does not occur as one-way flow but has a bi-lateral characteristic (that is, MNCs acquire LMI through their networks, whereas local firms also learn advanced knowledge and know-how from foreign subsidiaries, which refers to knowledge spillovers in local markets). In this context, Singh (2007a) points out that many FDI-friendly governments expect that local firms acquire recent technology and know-how, such as technology of product and process, distribution, administration and marketing skills from foreign firms (however, this (i.e., knowledge spillovers to local markets) is not the focus of this study). This section is organised in three parts: knowledge, knowledge acquisition, and RKT.

2.4.1 Knowledge

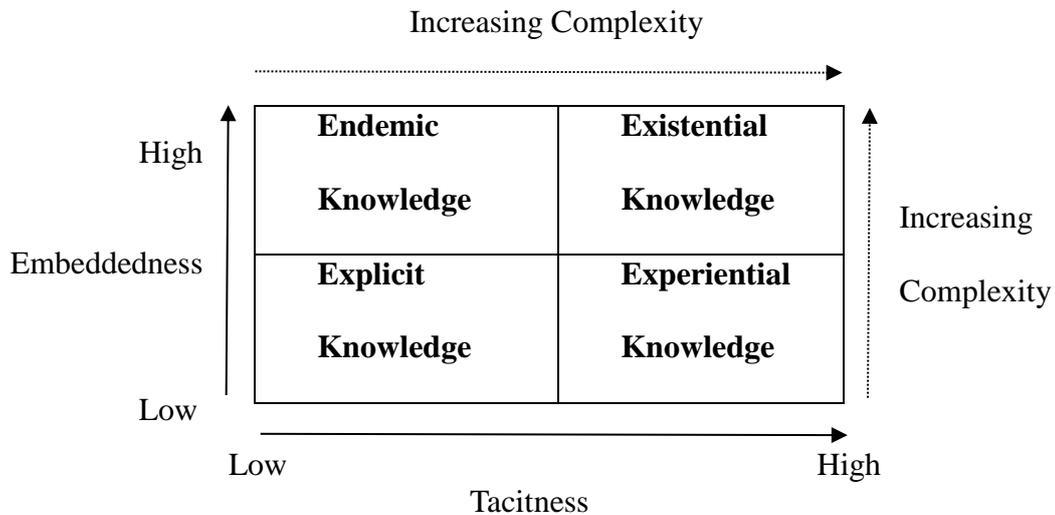
Knowledge is often regarded as a source of competitive advantage for MNCs, particularly in the situation where the competition between firms in the global market is increasingly intense and severe (Roth et al., 2009). In addition, as globalisation intensifies, MNCs may further search access to other firms' knowledge, which includes explicit knowledge embodied in certain products and routines as well as tacit knowledge embodied in organisational routines (Inkpen and Dinur, 1998).

Meanwhile, researchers have variously classified the knowledge into different categories according to its characteristics, such as transferability, tacitness or embeddedness. For example, according to explanations given by Byosiere and Luethge (2008), knowledge can be categorised into two major types: explicit and tacit. Explicit knowledge stands for knowledge that can be converted into systematic language as it is moderately easy to transfer and to recognise. Tacit knowledge is difficult to formalise as it is intensely rooted in an organisational commitment as the knowledge is acquired by internal individual processes, such as experience and reflection (Hau and Evangelista, 2007). Thus, the transfer of tacit knowledge from one firm to another is difficult in that learning organisations need to organise suitable platforms that provide them with appropriate chances to access other firms' know-how and capabilities (Park et al., 2012b). Tacit knowledge can be grouped into three different types according to the levels of knowledge tacitness: human knowledge, social knowledge, and structured knowledge (Bhagat, Kedia, Harveston and Triandis, 2002). First, human knowledge usually embraces both explicit and tacit knowledge to some extent, and comprises an individual's

knowledge, which is manifested in critical skills. Second, social knowledge is largely tacit and consists of cultural norms that exist as a result of the relationships between individuals or groups. Lastly, structured knowledge is relatively embedded in organisational schemes, practices, rules, and routines.

By contrast, Doz and Santos (1997) classify four different types of knowledge according to tacitness and embeddedness: explicit, experiential, endemic and existential knowledge (see Figure 2.2). First, explicit knowledge is mostly articulable, context-free and objective. It is acquired by study and observation, and thus requires patience, time and other resources for codification and articulation. Second, experiential knowledge, such as personal skills, uncomplicated organisational routines and some uncodified industry standards, has high tacitness and low context-dependency. It is acquired by experience and is easily recognisable and explicable. Third, endemic knowledge is mostly articulable, but understanding of the knowledge relies on studying and living in-context. It includes knowledge about markets, business, management and operations, such as customer behaviour, company-government relations, incentive systems and operating procedures. Finally, existential knowledge characterised by high tacitness and embeddedness can be learned by experience, practice, feeling and living. It includes cultural manifestations and sophisticated organisational routines, such as uncodified procedures (Doz and Santos, 1997).

Figure 2.2. Knowledge Complexity



Source: Source: Adapted from Doz and Santos (1997: 18)

Foss and Pedersen (2002) suggest that knowledge is basically transferable and categorise it into three different sets:

1. Knowledge that is created primarily through participating in internal production (e.g. much R&D) or from learning by doing or utilising, etc.
2. Knowledge that is largely produced by involvements from network relationships to external parties (suppliers, customers, etc.).
3. Knowledge that mostly is produced by involvements from a local group (e.g., well-educated workforces and excellent research organisations).

Park (2010) classifies managerial knowledge (as a crucial part of knowledge) into six categories: R&D/product development skills, marketing knowledge, strategic planning skills, HRM skills and financial skills. According to Park (2010), marketing knowledge concentrates on meeting customer needs by providing values, and strategic planning skills

which embrace plans to achieve organisational objectives. Strategic marketing activities encompass planning, product innovation, pricing, logistics, personal selling, promotion and other value creating activities for the customer; thus, marketing is directly associated with organisational performance (Ramayah and Mohamad, 2010).

Hong and Nguyen (2009) classify knowledge according to various degrees of complexity, tacitness, stickiness, ambiguity and hierarchical levels and group it into three types: technical knowledge, systemic knowledge and strategic knowledge. Technical knowledge is related to techniques for quality measurement and organised market research. Knowledge of new organisational systems and processes is systemic knowledge. Finally, strategic knowledge is related to the mental changes of senior managers for organisational success.

Basically, the transfer of knowledge can be divided into the transfer of technology and know-how, and thus it comprises ‘information of product and technology’, or ‘skills for managerial and marketing know-how’ (Giroud, 2000). Giroud (2000) further argues that the most common source of knowledge transfer performed by overseas subsidiaries is related to the technical support of the product and the production process. Current research on inter-organisational knowledge transfer focuses largely on technology transfer, and empirical studies dealing with the transfer of marketing know-how or LMI are still in their infancy (Park et al., 2012b). Meanwhile, Gupta and Govindarajan (1994) classify marketing knowledge as follows: (1) Market data about customers; (2) Market data about competitors; (3) Marketing know-how; (4) Distribution know-how; (5) Technology know-how; (6) Purchasing know-how. The knowledge types discussed by

previous studies are summarised in Table 2.1.

Table 2.1 Knowledge types in MNCs

Study	Knowledge types
Gupta & Govindarajan (1994)	Market data on customers Market data on competitors Marketing know-how Distribution know-how Technology know-how Purchasing know-how
Bhagat et al (2002)	Human knowledge Social knowledge Structured knowledge
Foss & Pedersen (2002)	Knowledge created through investing in internal production Knowledge produced from network relationships Knowledge produced from a local cluster
Schulz (2003)	Knowledge about technologies Knowledge related to sales and marketing Knowledge pertaining to government agencies, competitors, and suppliers
Yang et al (2008)	Knowledge about technological know-how Knowledge about sales and marketing Knowledge about financial resources Knowledge about management.
Hong & Nguyen (2009)	Technical knowledge Systemic knowledge Strategic knowledge
Park (2010)	R&D/product development skills Marketing knowledge Strategic planning skills HRM skills Financial skills

2.4.2 Knowledge Acquisition

The importance of local firms learning from MNCs is regarded as a determinant enhancing the success of knowledge recipients (Anh et al., 2006). Among the various entry modes, many authors suggest that IJV is an effective vehicle for knowledge acquisition (an IJV is often referred to as a useful means for knowledge acquisition not

only for local firms but also for MNCs) (Hau and Evangelista, 2007; Lane et al., 2001; Park and Glaister, 2009; Park, 2011b). Knowledge acquisition occurs via two-way directions, which means that local firms absorb advanced technological skills and know-how, whereas foreign firms also learn locally-specific information through FDI; thus, the outcome of knowledge acquisition (the extent of learning) relies on the efforts of both sides (Hau and Evangelista, 2007). As one mode of entry strategies, foreign parent firms (i.e., MNCs) in IJVs acquire knowledge through participating in joint venture management and supervising its operation by dispatching expatriates; thus, the amount of time and effort paid by parent firms to understand the venture operation is one of the main determinants of knowledge acquisition (Tsang, 2002).

Contrary to foreign firms, local firms' knowledge acquisition from foreign partners is a continuing activity from defining knowledge to contributing it to organisational knowledge structure; thus, several factors, such as absorptive capacity, shared ownership, and active involvement of foreign firms, influence the amount of knowledge acquisition by IJVs (or local firms) from foreign firms (Lyles and Salk, 2007). Anh et al. (2006) also argue that absorptive capacity plays an important role in the knowledge acquisition of IJVs. According to Park (2011b), technology acquisition in Korean IJVs by Western and Japanese parent firms is affected by an intense effort, active assistance of parent firms and related knowledge possession. Shared goals, trust and formal contracts enhance communication for knowledge exchange and support intimate connections and therefore have a positive impact on knowledge acquisition (Li et al., 2010). Intense effort and similarity in the business background between acquired and acquiring firms are also important elements for knowledge acquisition (Kim, 1998; Park and Ghauri, 2011). These

enumerations imply that there is no general agreement about the critical determinants of knowledge acquisition. These previous research findings are summarised in Table 2.2

Table 2.2 shows the trends of local firms' knowledge acquisition from foreign parent firms from 1995 to 2016. This research stream needs to be developed in order to show the differences and research gaps between knowledge acquisition and RKT by investigating the extant literature on knowledge acquisition in terms of theoretical lenses, research area, research questions and key findings. The majority of previous studies used organisational learning theory (Barkema et al., 1996; Barkema & Vermeulen, 1998; Berrell et al., 2002; Doz, 1996; Gulati et al., 2009; Håkanson, 1995; Hayward, 2002; Kale et al., 2000; Lane & Lubatkin, 1998; Norman, 2004; Shenkar & Li, 1999; Stuart, 2000; Tsang, 2002); the knowledge or resource based view (Anand et al., 2005; Barkema et al., 1997; Lee et al., 2014b; Mowery et al., 1996; Nielsen & Nielsen, 2009; Pak & Park, 2004; Park et al., 2009; Park et al., 2015; Rebentisch & Ferretti, 1995; Schleimer et al., 2014; Simonin, 1997; Simonin, 1999a; Simonin, 1999b; Zhan et al., 2009); and absorptive capacity (Anh et al., 2006; Chang et al., 2012; Ghauri & Park, 2012; Junni & Sarala, 2013; Lane et al., 2001; Lyles & Salk, 1996; Park et al., 2008; Park & Glaister, 2009; Park et al., 2009a; Park et al., 2009b; Park, 2011a; Park, 2011b; Park & Ghauri, 2011; Park, 2012; Park et al., 2012a; Tsai, 2001) as the main theoretical lenses. The research on knowledge acquisition is focused on the perspective of learning organisations; thus, the majority of studies on knowledge acquisition tend to use those theories.

However, recent research on knowledge acquisition has been based on different theories, such as the Co-evolutionary view (Ho & Wang, 2015), Internalisation theory

(Berry, 2015), and Contingency theory (Jiang et al., 2016). In terms of research questions, the previous studies tried to find out the key factors affecting the degree of knowledge acquisition in terms of absorptive capacity, knowledge characteristics, cultural factors and trust. Previous studies on knowledge acquisition found that absorptive capacity, partner compatibility in culture and goals and trust and interaction are positively related with knowledge acquisition. Although many scholars have investigated the factors affecting knowledge acquisition in MNCs, the results are still stimulating debate and generating further research studies.

Table 2.2 Summary of prior research on knowledge acquisition via the international market entry modes of MNCs

Research	Theoretical lens	Research area	Research Question(s)	Key findings
Håkanson, 1995	Organisational learning	Learning R&D capabilities	Discovers factors affecting transferring, sharing, and utilising synergistic technical capabilities.	Efficient R&D integration is closely associated with three processes: integration of managerial and sociocultural, technical, and procedural.
McGee et al., 1995	Transaction cost & strategic behaviour	Knowledge gaining, performance and experience	Examines relationship between knowledge gaining and experience.	When management teams possess sufficient experience, new ventures acquire most benefits from international collaboration.
Rebentisch & Ferretti, 1995	Knowledge-based	Technology transfer process	Suggests combined framework of technology transfer process.	Four categories (i.e. transfer scope, method, architecture, and organisational ability to adapt) are critical factors of transfer process.
Mowery et al., 1996	Knowledge-based	Transfer of Technological capabilities between firms	Explores interfirm knowledge transfer in strategic alliances.	Equity arrangements promoting absorptive capacity and greater knowledge transfer are critical factors in some alliances to some extent.
Lyles & Salk, 1996	Absorptive capacity	Knowledge acquisition and absorptive capacity	Identifies the critical factors influencing knowledge acquisition.	Adaptation mechanisms (i.e. capability to learn, verbalised goals) and structural instruments (i.e. training, foreign parent support) are positively related to IJVs' knowledge acquisition.
Barkema et al., 1996	Organisational learning	Learning and culture	Examines relationship between cultural distance and learning.	Presence of cultural barriers significantly retards organisational learning.
Doz, 1996	Organisational learning	Learning process	Examines how learning takes place in strategic alliances.	Successful projects in alliances are highly evolutionary and go through a series of interactive rotations of learning, re-evaluation and readjustment.

(Continued).

Table 2.2 (continued)

Research	Theoretical Lens	Research Area	Research Question(s)	Key findings
Barkema et al., 1997	Organisational learning	Learning, experience, and longevity	Examines organisational learning to handle IJVs, and its impacts on longevity.	IJV longevity is positively influenced by experience with local JV and international WOSs.
Simonin, 1997	Resource-based	Relationship between experience and learning	Examines firms' learning from their strategic alliances.	Experience alone is not sufficient to satisfy advantages by doing collaborations. Once experience is internalised, the development of collaborative know-how is required for the experience in order to realise future advantages.
Barkema & Vermeulen, 1998	Organisational learning	Learning from diversity	Confirms that diverse national settings lead to the establishment of new ventures rather than acquisitions.	Multinational diversity results in foreign start-ups rather than acquisitions. Product diversity leads to curvilinear effect on the tendency to use start-ups.
Lane & Lubatkin, 1998	Organisational learning & absorptive capacity	Learning and relative absorptive capacity	Determines key factors influencing learning in IJVs.	Partner compatibility (e.g. knowledge base, organisational structure and compensation procedures) is positively related to IJVs' learning.
Nagarajan & Mitchell, 1998	Evolutionary	Technology acquisition	Explores the relationship between forms of technological changes and ways that firms use to obtain technology.	Firms use equity-based arrangements to obtain know-how for encompassing changes, non-equity arrangements for complementary changes, and internal R&D for increasing changes.
Powell, 1998	Network	Learning network	Discovers how knowledge is generated, translated and acted upon in technologically intensive areas.	A broad range of inter-firm networks' effects on learning, knowledge transfer, and technology development.

(Continued).

Table 2.2 (continued)

Research	Theoretical Lens	Research Area	Research Question(s)	Key Findings
Bresman et al., 1999	Knowledge management	Knowledge transfer	Identifies factors facilitating knowledge transfer and patterns of knowledge transfer.	Technology transfer is promoted by communication, visits & meetings and age. Transfer of patent is enhanced by articulation of knowledge, size and recentness of acquisition. Immediate post-acquisition period is attributed by imposed one-direction knowledge transfer from acquirer to acquired, but this provokes high-quality mutual knowledge transfer as time goes by.
Shenkar & Li, 1999	Organisational learning	Knowledge search and absorptive capacity	Questions whether IJV is a way for the transfer of embedded and tacit knowledge.	Ownership of complementary know-how is a prerequisite for knowledge search. Transfer of tacit and embedded knowledge is realised through IJV.
Simonin, 1999a	Knowledge-based	Process of knowledge transfer	Examines the role of knowledge ambiguity in the process of knowledge transfer between partners.	Knowledge ambiguity plays a critical role as a facilitator of knowledge tacitness, previous experience, and organisational/ cultural distance on knowledge transfer.
Simonin, 1999b	Knowledge-based	Transfer of marketing know-how	Examines the antecedents of knowledge ambiguity and various theoretical constructs.	Tacitness is a critical determinant of knowledge transfer. Period of alliance, extent of collaborative experience and firm size influence on cultural distance, previous experience, and unique characteristics of asset.
Dussauge et al., 2000	Evolutionary	Outcomes and durations as indicators of learning	Explores outcomes and durations of strategic alliances by observing learning behaviour of partner firms.	Link alliances are ways to acquire complementary capabilities, whereas scale alliances are means of learning similar competencies. Learning and acquiring capabilities between partner firms are better able to be realised in alliances than scale alliances.

(Continued).

Table 2.2 (continued)

Research	Theoretical Lens	Research Area	Research Question(s)	Key Findings
Kale et al., 2000	Organisational learning & transaction cost	Role of relational capital for learning and protection of know-how	Confirms whether relational capital functions as means of learning partner know-how and protect core proprietary assets.	Relational capital (e.g. trust and interaction) creates learning opportunities and prevents leakage of critical know-how by curbing opportunistic behaviour.
Stuart, 2000	Organisational learning & network	Acquisition of technological knowledge & performance	Investigates association between interfirm technology alliances and firm performance.	Organisations with innovative partners fulfil better than other organisations. Strategic alliances with such partners are more advantageous to small and young than large and old.
Griffith et al., 2001	Relationship development	Knowledge transfer, commitment & satisfaction	Examines impacts of knowledge transfer on commitment & satisfaction.	Uncovers close relationship between level of knowledge transfer and IJV partners' satisfaction and commitment in terms of their relationships.
Lane et al., 2001	Absorptive capacity	Elements influencing knowledge acquisition	Tests IJV learning and performance on the basis of three dimensions of absorptive capacity.	Finds positive influence of knowledge understanding and application predictions on knowledge acquisition and partial support for knowledge assimilation prediction.
Tsai, 2001	Network & Absorptive capacity	Network position & Absorptive capacity	Examines the influences of network position and absorptive capacity on learning effectiveness.	Finds significant and positive influence of interaction between absorptive capacity on performance and innovation.
Vermeulen & Barkema, 2001	Own theory (theory name was not provided)	Internal knowledge base	Tests idea that IAs enhance the viability of a firm's later expansions.	IAs increase firm's knowledge base and promote the development of new knowledge by combining existing knowledge.

(Continued).

Table 2.2 (continued)

Research	Theoretical Lens	Research Area	Research Question(s)	Key Findings
Berrell et al., 2002	Organisational learning	National culture & learning	Investigates influence of national culture on learning.	Lack of shared cultural compatibility effects negatively on learning in IJVs.
Finkelstein & Halebian, 2002	Transfer	Transfer effects & performance	Explores positive and negative effects of transfer in acquisition performance.	Acquisitions in similar industries are positively associated with performance in acquisitions. Second acquisitions do not perform better than first acquisitions when first and second targets are from dissimilar industries.
Hayward, 2002	Organisational learning	Learning & experience	Investigates how performance and period of acquisition experience supports firm to learn how to select adequate and right acquisition.	The performance of firm's focal acquisition is positively associated with preceding acquisitions.
Ivarsson & Vahlne, 2002	Eclectic	Technology integration	Examines extent to which MNCs coordinate and integrate technology through IAs.	While technology integration in MNCs is positively related to the period of time which affiliates have been part of parent corporation, dynamic technology integration is positively related to affiliates operating in competitive industry clusters. Cross-border learning allows firm to develop technology integration combining with internally achieved experience.
Tsang, 2002	Organisational learning	Acquisition of local knowledge	Examines how firms acquire local knowledge from IJV experience.	Overseeing effort and management involvement are two key elements for knowledge acquisition.

(Continued).

Table 2.2 (continued)

Research	Theoretical Lens	Research Area	Research Question(s)	Key Findings
Norman, 2004	Organisational learning & Transaction cost	Knowledge acquisition, knowledge loss & satisfaction	Explores the impacts of intent to learn, opportunities to learn, and ability to learn on alliance outcomes.	Partner's intent to learn and capability have positive associations with the extent to which firm protects own knowledge, but only have significant effects on knowledge loss. With more trusted partners, firms are more likely to share knowledge, tend to obtain more knowledge and achieve greater satisfaction.
Pak & Park, 2004	Knowledge based & absorptive capacity	Transfer of knowledge (product development & manufacturing process)	Explores the effects of relation- & knowledge-specific variables on knowledge transfer.	Social interaction between partners determines the extent of knowledge transfer. In addition, results also confirm that knowledge attributes and absorptive capacity are critical for effective knowledge transfer.
Anand et al., 2005	Resource based & evolutionary	Resource (including knowledge) transfer	Examines whether multinational geographic scope of target firm is important for resource transfer.	Acquirers likely to redeploy resources from targets and improve capabilities when acquisition has multinational scope.
Zhao et al., 2005	Network	Transfer of R&D capabilities	Investigates the influence of networks in IJV partners on knowledge transfer and dissemination.	Finds both positive and negative effects of recipient and source networks on knowledge inflow to and outflow from IJVs.
Anh et al., 2006	Absorptive capacity	Knowledge acquisition	Determines key factors which influence on knowledge acquisition.	Investment in training, employees' ability to learn, and joint participation are significant factors affecting knowledge acquisition.

(Continued).

Table 2.2 (continued)

Research	Theoretical Lens	Research Area	Research Question(s)	Key Findings
Park et al., 2008	Absorptive capacity	Acquisition of foreign parents' management skill and collaborative support	Explores critical elements influencing the acquisition of management skill from IJVs' foreign parents.	The critical factor affecting IJVs' learning of tacit information is foreign parents' collaborative supports.
Zou & Ghauri, 2008	Process	Process of Knowledge acquisition	Examines process learning & impacts on successful IAs.	Process involves three stages: assessment, sharing and assimilation. Obtained knowledge types as well as the process of learning contribute to successful IAs.
Gulati et al., 2009	Organisational learning	Gains from partnering experience in alliances	Explores the conditions under which the past partnering experience of firms enhances creating value in new alliances.	Specific partner experience provides greater contributions to value creation than common experience of partnership.
Nielsen & Nielsen, 2009	Knowledge based, organisational learning & social capital	The influence of trust and tacitness in international strategic alliances	Investigates the influence of knowledge tacitness and trust in outcomes of acquiring knowledge and innovation.	Tacitness and trust play a different role in obtaining knowledge and realising alliance outputs.
Pak et al., 2009	Knowledge-based	Cross-border learning and performance	Examines determinants for IJV performance in learning.	Similar strategic goal and compatible culture have positive effects on learning and indirect influences on performance of IJVs through learning.
Park & Glaister, 2009	Absorptive capacity	Knowledge acquisition	Intends to compare the main determinants of knowledge acquisition in IJVs founded both pre- and post the Asian crisis.	Factors influencing knowledge acquisition in IJVs are conditional on the context in which they are examined.

(Continued).

Table 2.2 (continued)

Research	Theoretical Lens	Research Area	Research Question(s)	Key Findings
Park et al., 2009a	Absorptive capacity	Acquisition of managerial knowledge	Identify the factors influencing knowledge acquisition from foreign parents.	Finds that intent to learn, international experience, trust, and active managerial engagement are critical factors affecting knowledge acquisition in IJVs.
Park et al., 2009b	Absorptive capacity	Acquisition of marketing knowledge	Investigates the influence of compatible characteristics between parent firms on acquisition of marketing knowledge in IJVs.	Knowledge acquisition is significantly influenced by compatible organisational culture rather than firm size.
Zhan et al., 2009	Resource-based view	Acquisition of organisational resources and competitive advantage of IJVs	Examines how the competitive advantage of IJVs is influenced by resources acquisition.	The sustainable competitive advantage of IJVs comes from acquisition of property/knowledge-based resources from foreign partners, and market-based resources from the local environment.
Park, 2011a	Absorptive capacity	Acquisition of technology in IJVs	Explores the impacts of the knowledge transfer capacity of MNCs on technology acquisition.	IJVs' learning is closely related to the key factors regarding foreign firms' capabilities.
Park, 2011b	Absorptive capacity	Knowledge acquisition	Explores whether learning mechanisms in IJVs with Western vs Japanese parents are dissimilar.	Foreign origins do not significantly affect learning mechanisms facilitating technology acquisition.
Park & Ghauri, 2011	Absorptive capacity	Acquisition of technological capabilities	Identify the significant factors influencing acquisition of technological capabilities from foreign acquiring firms.	An intense effort, similar business background and collaborative support are critical elements of the extent of learning.

(Continued).

Table 2.2 (continued)

Research	Theoretical Lens	Research Area	Research Question(s)	Key Findings
Park, 2012	Absorptive capacity	Knowledge acquisition in WOSs	Investigates the key factors influencing knowledge acquisition.	Learning of a subsidiary relies on absorptive capacity, relational capital and parent firms' behaviour. Additionally, investment mode and direction are also affecting factors.
Ghauri & Park, 2012	Absorptive capacity	Knowledge acquisition	Investigates critical factors affecting knowledge acquisition in cross border acquisitions.	Prior-related knowledge and compatible organisational culture affect knowledge acquisition in pre-crisis. Intent to learn and efficient internal communication influence knowledge acquisition after crisis. Integration and involvement of foreign expatriates are critical factors in pre and after crisis.
Park et al., 2012a	Absorptive capacity	Acquisition of LMI.	Examines the key factors influencing the acquisition of LMI.	Intent to learn, international experience and prior-related knowledge affect knowledge acquisition.
Park et al., 2012b	A model suggested by Robson et al.	The transfer of tacit marketing knowledge	How exchange climate attributes and contextual factors between parent firms in IJVs influence tacit marketing knowledge transfer.	Key factors positively affecting tacit marketing knowledge transfer between parent firms in IJVs are conflict resolution and cooperation, whereas communication does not impact on it.
Chang et al., 2012	Ability-motivation-opportunity framework and absorptive capacity	Performance enhancement by Subsidiaries' knowledge acquisition from expatriates	Expatriate competencies in knowledge transfer affect a subsidiary's, but it is particularly stronger in the case where subsidiary absorptive capacity is greater.	Expatriate competencies in knowledge transfer determine the extent to which a subsidiary improves its performance. This indirect effect is increased when a subsidiary's absorptive capacity is greater.

(Continued).

Table 2.2 (continued)

Research	Theoretical Lens	Research Area	Research Question(s)	Key Findings
Fang et al., 2013	Dynamic capability	The transfer of technological and marketing knowledge	What is the influence on subsidiary performance of 1) the interface between multiple parent knowledge assets, 2) between parent and subsidiary knowledge assets, and 3) between multiple subsidiary knowledge assets?	Findings are 1) subsidiary performance is considerably influenced by the interaction effect of the extent to which a parent possesses technological and marketing knowledge, 2) subsidiary's market/technological relevance moderates the impact of the parent's knowledge assets on subsidiary performance, and 3) different forms of relevance can interact with yield synergistic benefits to the subsidiary.
Junni & Sarala, 2013	Absorptive capacity	Knowledge acquisition through international acquisitions by Finnish firms	Identifies antecedents of absorptive capacity in international acquisitions.	Confirms a positive association between the absorptive capacity of a receiving firm and knowledge transfer, in terms of both mutual knowledge transfer between the acquirer and the target.
Verbeke et al., 2013	Procedural justice	The transfer of information and communications technology (ICT)	Does procedural justice matters for ICT transfers more than absorptive capacity?	Procedural justice, rather than absorptive capacity, determines effectiveness, particularly in the case where MNCs transfer ICT.
Asmussen et al., 2013	Accommodation effect	The relationship between knowledge transfer and accommodation effect	Suggests that accumulation of externally obtained information in a subsidiary reduces the value of transferring that knowledge within MNC networks.	A high level of externally obtained information in a subsidiary brings about a high level of knowledge transfer from that subsidiary only when a specific tipping point of internally obtained knowledge has been exceeded.
Schomaker & Zaheer, 2014	Linguistic theory	The role of language and knowledge transfer in manufacturing sector	Examines the role of the structural aspects of language in increasing MNC knowledge transfer to manufacturing subsidiaries.	Linguistic relatedness eases knowledge communication and normative integration, whereas it is negatively associated with knowledge understanding.

(Continued).

Table 2.2 (continued)

Research	Theoretical Lens	Research Area	Research Question(s)	Key Findings
Schleimer et al., 2014	Knowledge based view	Knowledge transfer influences on marketing strategy implementation	Investigates the associations between MNC headquarters and marketing units in Australian subsidiaries.	Finds a moderated-mediation route where the mediating route of the subsidiary marketing unit's processing capability is dependent upon the extent of headquarters' inputs.
Lee et al., 2014b	Organisational learning & resource-based	The impact of knowledge transfer patterns of group affiliated emerging market MNCs on subsidiary performance	Explores whether differences exist in the styles of innovative knowledge transfer strategies of globalised group affiliated companies and whether these differences affect subsidiary performance.	The outcome of foreign subsidiaries is influenced by patterns of innovative knowledge transfer strategies.
Lunnan & Zhao, 2014	Not specified	The role of regional headquarters in MNC knowledge transfer	Explores the role of regional headquarters in MNC knowledge flows.	Regional headquarters contribute to MNE knowledge transfer, but the design of the headquarters affect the type of knowledge generated and transferred, as well as the efficiency of transfer.
Park et al., 2015	Knowledge based	Comparisons between tacit and explicit knowledge transfers in IJVs	Examines the association between IJV age and tacit vs. explicit knowledge transfer and also explores their comparative influences on IJV performance for young versus older IJVs.	IJV age influences the transfer of tacit knowledge, but does not affect that of explicit knowledge. The transfer of tacit knowledge plays a pivotal role in impacting on the outcome of both young and mature IJVs, whereas the transfer of explicit knowledge only has a critical influence on the outcome of mature IJVs

(Continued).

Table 2.2 (continued)

Research	Theoretical Lens	Research Area	Research Question(s)	Key Findings
Ho & Wang, 2015	Co-evolutionary view	The effects of institutional distance, absorptive capacity and relational capital	Tests whether active interactions, mutual trust and reciprocal commitment between alliance partners positively lessen the effect of knowledge protection on absorptive capacity and subsequently affect performance.	Institutional distance between partners deters knowledge protection. The decreased absorptive capacity deteriorates alliance performance. However, the presence of relational capital between partners alleviates such negative effects of country- and firm-specific characteristics.
Berry, 2015	Internalisation	The influence of MNC knowledge transfer on subsidiary performance	Investigates whether transfers of MNC knowledge always brings about advantages to subsidiaries.	Transfers of MNC technological knowledge positively affect the subsidiary performance in the cases where home country innovation is prominent. Subsidiaries situated in technologically lagging countries also enjoy benefits when foreign innovation is prominent.
Jiang et al., 2016	Contingency	Partner knowledge acquisition in international alliances	Explores the influences of knowledge exchange on MNC competitiveness.	Basically, mutual trust between alliance partners promotes knowledge acquisition. It lessens a negative influence on knowledge leakage in non-competitive alliance, but complies with a U-shaped pattern in competitive alliances.

2.4.3 Reverse Knowledge Transfer

As previously mentioned in Section 2.4.1, the importance of organisational knowledge (tacit or explicit) has been emphasised as a source for sustaining MNCs' competitive advantage. This sentence clearly demonstrates that critical knowledge which has not been available within MNC networks may exist in international markets, and thus MNCs perceive local information as being valuable for sustaining their advantage and are more likely to commence actions that facilitate reverse transfer of such knowledge by using overseas subsidiaries (Pérez-Nordtvedt et al., 2008). In addition, MNCs are complex, multi-dimensional entities, which indicates that RKT within MNC networks arise from multiple directions (Gupta and Govindarajan, 2000).

According to previous studies exploring knowledge transfer (and RKT), there are various definitions of the concept. Knowledge transfer is not a process of merely moving knowledge from one organisation to another, but it is rather an adaptation and modification process of knowledge, which has been generated in different organisational and socio-cultural contexts (Choi and Johanson, 2012). Moreover, Wang et al. (2004: 173) define knowledge transfer as “a process of systematically organised exchange of information and skills between entities”. According to Yang et al. (2008: 884), “knowledge transfer is a process in which an organisational unit re-creates a complex, causally ambiguous set of routines in a new setting and keeps the routines functioning. These routines appear in the form of know-how, R&D capabilities, managerial techniques, and so on”. Scholars classify knowledge transfer in accordance with these criteria.

Pérez-Nordtvedt et al. (2008) suggest four dimensions of knowledge transfer/RKT: comprehension, usefulness, speed and economy. First, comprehension of transferred knowledge stands for the extent to which the knowledge is fully understood by the receivers. Second, usefulness of transferred knowledge means the extent to which the knowledge was relevant and significant to organisational success. Third, speed of knowledge transfer reflects how quickly the recipient acquires new knowledge. Lastly, economy of knowledge transfer is associated with effectiveness and efficiency of knowledge transfer in terms of costs and resources.

With respect to directions of knowledge transfer, Eden (2009) argues that most MNCs now have vertically and horizontally integrated networks where RKT occurs via all directions within the network. RKT is a process that both parties (i.e., knowledge transferors and acquirers) make efforts to achieve regarding effective knowledge transfer, and embed new knowledge within their organisations (Lucas, 2006). Knowledge flows within MNCs embrace both the vertical knowledge transfer from head offices to subsidiaries and knowledge flows from subsidiaries to headquarters (RKT) (Dobrai et al., 2012). In this study, the RKT is defined as the extent to which a subsidiary transfers LMI to MNCs (i.e., headquarters/parent firms).

A prerequisite for RKT taking place is that an overseas subsidiary accumulates a sufficient stock of information, which is critical for MNCs. Such subsidiaries' knowledge, primarily represented by LMI (e.g. marketing, purchasing and market-specific technological knowledge), can help MNCs to coordinate and modify a global strategy, enhance their own operational skills and develop new products (Ambos et al., 2006). LMI

covers information and know-how about the local culture, economy, politics, business practices, customer demands and preferences, and information about suppliers, customers, governments and production (Murray, 2001). Foss and Pedersen (2002) classify the sources of subsidiary knowledge available to headquarters through RKT as follows;

1. Internal and tacit knowledge that is formed mostly through investment in R&D and learning by doing.
2. Network-based knowledge is produced from network relations to external parties, such as suppliers and customers.
3. Cluster-based knowledge is created from long-lasting interaction with a local cluster, such as highly educated employees and high quality research organisations.

Previous studies on knowledge transfer are based on the home-centric view of knowledge flows (i.e. from the headquarters to the subsidiary), but more recent literature emphasises the critical importance of leveraging knowledge from strategically located subsidiaries and reverse knowledge transfers (i.e. from the subsidiaries to the headquarters) (Mudambi, Piscitello and Rabbiosi, 2014; Ambos et al., 2006). RKT is more complicated than conventional knowledge transfer and knowledge characteristics in the RKT play a more critical role than in traditional vertical transfer (i.e., knowledge flow from MNCs to subsidiaries) (Dobrai et al., 2012). In particular, Ambos et al. (2006) highlight that RKT contributes extensively to the development of MNCs' competitive advantage and the enhancement of headquarter efficiency and effectiveness (also see Najafi-Tavani, Giroud and Sinkovics, 2012). In this vein, subsidiaries of MNCs can be

regarded as important contributors to the value-creating activities of the parents (Holtbrugge and Berg, 2004). As the absorption of LMI clearly helps headquarters to modify and coordinate a global strategy, upgrade processes in their own or other network units, or give clues to develop new products, LMI transferred from subsidiaries to MNCs functions as a vehicle to strengthen the latter's competitiveness (Ambos et al., 2006).

In particular, the reasons why many scholars emphasise the importance of RKT are as follows. First, the overseas subsidiaries of MNCs contribute to the traditional task of adapting headquarters' technology to local market needs, and the former facilitates global learning by easing access to external knowledge resources residing in their environments (Håkanson and Nobel, 2001). Second, overseas subsidiaries have access to external knowledge, and develop new capabilities themselves; thus, sharing this knowledge with headquarters may contribute to the sustainment of MNCs' competitive advantages (Najafi-Tavani et al., 2012). Finally, when operating in foreign markets, international subsidiaries attempt to concentrate on changes in local business environments in that their operational success is determined considerably by obtaining necessary resources or knowledge deeply embedded in local market conditions, commercial practices and cultures (Li et al., 2010). They also try to adapt to the local atmosphere because frequent interactions with local organisations are crucial for survival; thus, subsidiaries are likely to have an advantageous situation to absorb and combine new market information in innovative ways (Håkanson and Nobel, 2001). Given the importance of the topic, scholars have been exploring different perspectives on factors affecting RKT (see the Table 2.3).

This subsection 2.4 has examined the literature on knowledge transfer/acquisition and

RKT, and Table 2.3 shows the key essentials of previous studies on RKT from 2000 to 2016. The key findings of Table 2.3 can be summarized as follows. First, the general focus of extant empirics has moved from knowledge acquisition to RKT (for reference, knowledge acquisition refers to conventional knowledge flow from MNCs to overseas subsidiaries. By contrast, RKT is related to knowledge flows from subsidiaries to MNCs). This means that it is the right time to investigate minutely the RKT phenomenon, which is the emerging focus of current empirics. Second, generally speaking, three theories, namely the knowledge-based view, organisational learning theory, and the absorptive capacity paradigm have been used as overarching theoretical lenses in previous studies (they conclude that factors comprising these theories play a pivotal role in encouraging knowledge exchange). However, this researcher argues that if absorptive capacity is important to identify key determinants affecting knowledge flows between MNCs and their subsidiaries, knowledge transfer capacity and their relationships based on relational capital should be equally treated as crucial theoretical backgrounds for organisational learning. In this vein, Table 2.3 highlights the necessity of focusing on teaching firms' capability to transmit information (i.e., knowledge transfer capacity) and the role of teaching and student firms' relationships promoting learning environments (i.e., relational capital). Third, as can be seen clearly in Table 2.3, there are inconsistencies in the results of extant research on the factors impacting RKT, which confirms that scholarly attention needs to be paid to this research area. Thus, the facilitators and inhibitors affecting RKT will be discussed in Chapter 3.

Table 2.3 Investigation of previous research regarding factors affecting the extent of RKT

Study	Theoretical lens	Research area	Key findings
Gupta & Govindarajan, 2000	Communication	Knowledge transfer & RKT within MNCs. (374 subsidiaries)	'Motivational disposition to share knowledge' and the presence & richness of transfer mechanisms (in case of informal socialisation mechanisms) have no association with knowledge outflows from subsidiaries to their parent corporations.
Foss & Pedersen, 2002	Knowledge based view	Subsidiary knowledge transfer in MNCs. (2107 subsidiaries)	The source of subsidiary knowledge has a positive association with the extent of knowledge transfer.
Minbaeva et al., 2003	Absorptive capacity	Knowledge transfer within MNCs. (169 subsidiaries)	Both subsidiary absorptive capacity and motivation are required to increase the transfer of knowledge within MNCs.
Ambos et al., 2006	Economic and capability-based theories	Knowledge transfer from subsidiaries. (66 overseas subsidiaries)	There is no negative effect of organisational distance on the parent's benefits from RKT.
Yang et al., 2008	Knowledge relevance	Conventional and RKT. (105 acquired subsidiaries)	Knowledge characteristics (subsidiary's knowledge relevant) are a decisive factor for RKT.
Noorderhaven & Harzing, 2009	Social learning	Knowledge sharing within MNCs. (169 MNC subsidiaries)	Subsidiary capabilities have a significant influence on knowledge transfer to their parent firms.
Schotter & Bontis, 2009	Not specified	Intra-organisational knowledge transfer: reverse capability transfer in MNCs. (6 subsidiaries)	Person-to-person communication is crucial for reverse capability transfer to occur.
Miao et al., 2011	Organisational learning theory	RKT. (81 foreign subsidiaries in South Korea)	Efficient formal mechanisms facilitate knowledge transfer from a subsidiary to its parent firm.

(Continued).

Table 2.3 (continued)

Study	Theoretical lens	Research area	Key findings
Rabbiosi, 2011	Coordination mechanisms	RKT. (358 Italian MNCs)	The combination of greater use of personal coordination mechanisms and a high extent of subsidiary autonomy positively affects the extent of RKT
Blomkvist, 2012	Evolutionary theory, Knowledge-based view	Subsidiary knowledge transfer in MNCs. (63 subsidiaries)	The increase in subsidiary willingness subsequently enhances the performance of the subsidiary's knowledge transfer.
Borini et al., 2012	Resource-based view	Reverse innovation transfer. (93 subsidiaries)	Subsidiary's strategic orientation and strong integration (communication) between a subsidiary and its parent affect the reverse innovation transfer.
Najafi-Tavani et al., 2012	Knowledge-based and network-based views	RKT. (178 subsidiaries)	Willingness and socialisation mechanisms have significant influence on the extent of RKT.
Kumar, 2013	Network-based view	RKT. (2 pilot studies)	The organisational distance between knowledge transfer actors needs to be carefully considered in order to achieve higher knowledge transfer from subsidiaries.
McGuinness et al., 2013	Received theory	RKT in MNCs. (Coats plc's case study)	Adequate consideration of cultural difference is important to facilitate and encourage RKT.
Rabbiosi & Santangelo, 2013	Ecology theory	RKT. (84 foreign subsidiaries)	There is a significant association between socialisation mechanisms and the parents' benefits from RKT.
Chung, 2014	Resource-based view	Reverse transfer. (503 Hong Kong MNCs)	Adequate international control for human resource management, frequent personal contacts, and active trust building determine the reverse transfer of practices.

(Continued).

Table 2.3 (continued)

Study	Theoretical lens	Research area	Key findings
Filippov, 2014	Not specified	RKT. (100 subsidiaries in Czech Republic, Poland and Hungary)	Factors facilitating subsidiaries' knowledge share with their peer subsidiaries and parent firms include subsidiary initiative, subsidiary autonomy, local dynamism, and corporate embeddedness.
Mudambi et al., 2014	Not specified	RKT. (358 MNEs)	The effect of subsidiary innovativeness on RKT shows an inverted-U shape, and the curvilinearity is greater in greenfield type of subsidiaries rather than subsidiaries based on international acquisitions.
Najafi-Tavani et al., 2014	Resource-based and network-based views	RKT. (184 subsidiaries in the UK)	The ownership of strategic resources, such as knowledge or embedded relations, enhances subsidiary effect on RKT. In addition, the level of RKT decides the influences of subsidiary-headquarters embeddedness, external embeddedness, and knowledge development within MNCs.
Nair et al., 2015	Not specified	RKT. (329 Indian MNCs)	Factors having positive influence on RKT are knowledge relevance and subsidiary capability.
Najafi-Tavani et al., 2015	Network and dependency theories	RKT. (183 subsidiaries in the UK)	The extent of RKT enlarges subsidiary power within MNC networks and subsequently increases its autonomy. In particular, the trend is (a) strengthened when the level of internal embeddedness is high and (b) lessened when the level of external embeddedness is high.
Peltokorpi, 2015	Media richness	RKT. (661 functional departments of foreign subsidiaries in Japan)	A mediation effect of sufficient communication media is found for the relationship between local employees' corporate language proficiency and RKT. Local employee commitment to headquarter also has a moderating influence between sufficient communication media and RKT.

(Continued).

Table 2.3 (continued)

Study	Theoretical lens	Research area	Key findings
Driffield et al., 2016	Agency theory	RKT. (1673 parent companies and 4196 overseas affiliates)	Inter-firm relationships and location of MNC affiliates affect the extent to which MNCs acquire knowledge from subsidiaries.
Nair et al., 2016	Springboard and LLL (i.e., linkage-leverage-learning) frameworks	RKT. (Indian multinationals with overseas acquisitions)	The level of RKT is considerably influenced by perceived subsidiary ability, knowledge relevance and absorptive capacity. In the discussions of RKT, knowledge relevance has a moderating effect, whereas absorptive capacity plays a mediating role.

2.5. Theoretical Framework

This chapter has explored theories associated with both MNCs and subsidiaries (possibly with learning) and relevant literature on knowledge, knowledge acquisition and RKT. The theories and relevant literature are blended in this section to produce a conceptual framework for subsequent empirical analysis. Although other theories are related to the topic (i.e., reverse transfer of LMI from overseas subsidiaries to MNCs) to some extent, subsidiaries' RKT to MNCs would not be plausible if they do not possess adequate absorptive capacity and subsidiaries' sufficient level of knowledge transfer capacity as well as build up appropriate relational capital promoting favourable learning environments. Thus, in order to draw an overall picture of RKT and completely understand the phenomenon, this researcher revisits both the knowledge transfer capacity perspective and relational capital theory and re-explains them in this section (absorptive capacity will be integrated into the knowledge transfer capacity in the explanations below and in the next chapter).

Subsidiaries, as parts of MNC networks, often have chances to access various local resources or to acquire diverse knowledge residing in different countries, which may mean that subsidiaries' innovative internal characteristics and ability to innovate can influence the extent to which they share knowledge with MNCs (Joao, Serralvo and Cardoso, 2011). Meanwhile, knowledge exchange between MNCs and overseas subsidiaries is critical for both in that MNC technology helps subsidiaries to improve the quality of new products for gaining competitive advantage (Lee et al., 2008), whereas subsidiaries' ability to cultivate and then transfer LMI may determine the new creation of

competitive advantages for MNCs (Minbaeva et al., 2003).

Even though important LMI is available, not every organisation successfully shares it mainly due to subsidiaries' different learning capabilities and their insufficient knowledge transfer capacity (Park, 2011a). When subsidiaries learn LMI, knowledge often needs to be modified in their digestion process, and thus RKT is significantly affected by the capacity to which the absorbing units are eligible to develop further and exploit it for their own organisation's purposes (Minbaeva et al., 2003). The extent of reverse transfer of LMI by subsidiaries is determined by the knowledge sender's capacity to transmit the knowledge, which eventually influences MNC competitiveness (Tang et al., 2010). For this reason, the ability to transfer and deploy LMI has become one of the main competitive priorities for many overseas subsidiaries (Subramaniam and Venkatraman, 2001). According to Park (2011a), this ability is frequently promoted by information senders' innate characteristics and capacity *per se*, such as *knowledge development capability, possession of prior related knowledge, willingness and autonomy* (emphasis added).

According to Martin and Salomon (2003), the knowledge transfer capacity of a firm can be classified in two dimensions: capacity to develop knowledge and capacity to access knowledge. In addition, they define knowledge transfer capacity as "the ability of a firm to articulate uses of its own knowledge, assess the needs and capabilities of the potential recipient thereof, and transmit knowledge so that it can be put to use in another location"(p. 363). This definition emphasises that knowledge transfer capacity is dependent upon a firm's ability to understand the value of new external knowledge, identify the potential use of the knowledge and assimilate it appropriately for effective

knowledge utilisation. This is often referred to as a knowledge development process within MNC networks. MNCs, in fact, implement international expansion, in part, in order to acquire locally specific knowledge (i.e., LMI) which has not been available to it. However, the acquisition of the knowledge would not be plausible if overseas subsidiaries do not own basic competences to teach the knowledge (Martin and Salomon, 2003). In other words, without the presence of knowledge transfer capacity by subsidiaries, MNCs would not obtain previous external information and use it for their commercial ends in that knowledge transfer capacity is a prerequisite for RKT and also helps to identify the value of knowledge which is one of the key elements boosting organisational performance.

Meanwhile, the basic competences to instruct are commonly promoted when subsidiaries possess a range of prior relevant organisational skills and capabilities, which also help the teacher firms to access locally residing know-how. However, although subsidiaries meet the prerequisite by accumulating a sufficient stock of prior internal knowledge, some firms sometimes show a propensity to be reluctant to open their knowledge reservoir for various reasons (e.g. to maintain strategic importance within a MNC network). This is a serious obstacle to enhancing knowledge transfer capacity and smoothing RKT, as such reluctance frequently triggers a result that subsidiaries lose their capability to be able to transmit knowledge to targeted recipients (i.e., MNCs) in an appropriate way (Park, 2011a). In this situation, a short-cut to uphold subsidiary motivation to be transparent is perhaps for MNCs to allow the subsidiary to enjoy organisational autonomy. This will also help subsidiaries to make a decision quickly in order to adapt to changes in local business environments and cultivate autonomously their own capability to decide how prepared a receiver is to use and assimilate LMI, which will

substantially increase subsidiary knowledge transfer capacity.

Another point which needs to be considered in the RKT discussions is relational capital between knowledge senders (i.e., subsidiaries) and recipients (i.e., MNCs). Relational capital means the bundle of organisational components greasing headquarter-subsubsidiary relationships within MNC networks, which enlarge logically the extent of their cooperation and their key knowledge sharing. Relational capital in the MNC networks refers particularly to firm-specific relationships that MNCs develop with other subsidiaries through a process of interactions and plays a critical role in creating intra-organisational learning (Evangelista and Hau, 2009). Similarly, Lee et al. (2008) argue that the degree of RKT between subsidiaries and MNCs depends highly on relational capital encompassing *socialisation mechanisms*, such as social interactions. Active social interactions facilitate knowledge exchange by enhancing both parties' coordination capabilities (Li et al., 2007). Socialisation is related to the capability to enhance the sense of closeness and intimacy between units, which facilitate their knowledge sharing (Borini et al., 2012). In particular, knowledge acquiring firms may learn more easily and move quickly in the case of explicit knowledge learning, but the acquisition of tacit information, such as LMI, is a frustrating and complicated process, and thus for efficient RKT, social ties influencing RKT from subsidiaries to MNCs are essential.

Trust plays a critical role in deterring opportunistic behaviour which suggests that mutual trust facilitates knowledge transfer from MNCs to subsidiaries and also their reverse transfer by saving transaction costs and time for screening and recognising the perceived value of transferred knowledge (Li et al., 2007). The presence of relational trust

signifies a capability to exchange a high degree of mutual understanding, which probably indicates that trust is a prerequisite for the exchange of knowledge and especially the transfer of tacit knowledge (e.g. LMI) (Roberts, 2000). These discussions highlight clearly that the achievement of MNCs' success in the global marketplace is dependent largely upon the effective management of relationships between MNCs and subsidiaries, but such relationships are influenced by the degree of their organisational heterogeneity (i.e., *organisational distance*). For instance, the behaviour and attitudes of employees in foreign subsidiaries are likely to differ from those of employees at the headquarters when their organisational cultures are not identical (Hewett and Bearden, 2001). In this vein, relational capital between subsidiaries and MNCs can be characterised by their level of sharing common processes and values representing organisational distance (Dhanaraj et al., 2004).

In short, strong relational capital provokes the effective upkeep of socialisation mechanisms encouraging interactions and communications within the networks, develops friendly relations and mutual trust, and helps to minimise various organisational distances such as cultural estrangement, psychic gap and goal heterogeneity. In other words, although subsidiaries are efficient platforms for RKT, allowing MNCs to access LMI and giving them an opportunity to learn the skills and competencies in local markets, the MNCs' absorption of LMI is not likely to happen without proper socialisation mechanisms (Najafi-Tavani et al., 2012), trust between know-how exchanging parties (Buckley and Park, 2013) and minimum organisational distance (Ghauri and Park, 2012). This is because the maximisation of the level of RKT from subsidiaries to MNCs is often accomplished by relational capital promoting a favourable learning environment within

an organisational context.

2.6. Conclusion

This chapter starts with defining the subsidiaries which are formed through various international market entry modes. It then reviews favourable environments and conditions for the establishment of subsidiaries. To observe those contingencies, different forms of market entry, such as IJV, M&A and WOS, are compared. It is found that when MNCs possess relatively low levels of assets, intend to minimise cost and risk, and face host government restrictions, they are likely to prefer joint venture establishment with local partners. The existence of an appropriate partner for IJVs in the local market is also important as the local partner should have complementary resources and knowledge and a network position. In addition, the institutional environment of the host country is another determinant influencing IJV formation. On the other hand, WOS is selected when MNCs possess sufficient assets for covering all costs, there is a high resource commitment from subsidiary operations, and they do not want to reveal their own previous knowledge and know-how to other local firms. By choosing the entry strategy, MNCs can maintain tight control against wholly foreign owned subsidiaries, so that they can retain all previous organisational assets. MNCs are likely to select M&As as a market entry strategy possibly when they do not possess sufficient assets to develop in a new market (i.e., the complementary assets possessed by target firms are expected to enhance synergy effects). However, MNCs need to consider carefully the presence of cultural incompatibility and a way to achieve an issue on organisational integration.

Although each market entry mode has advantages and disadvantages, one of the main reasons why MNCs establish overseas subsidiaries in alien environments is closely associated with motivations for RKT from subsidiaries. For example, full ownership such as WOS is set up for MNCs to enhance management control, remove potential conflicts with partners and obtain a strong ground for RKT. Compared to WOS, an IJV can implement successful RKT under the conditions of the complementary nature of partners' aptitude and abilities. Previous studies have paid scholarly attention to knowledge acquisition from MNCs by subsidiaries and conventional knowledge transfer from parent firms to their subsidiaries, but given the importance of the topic, this study attempts to identify the key factors affecting knowledge transfer from subsidiaries to parent firms (i.e. RKT).

From the perspective of MNCs, RKT is an important way to acquire unique knowledge from their subsidiaries for further innovation and the creation of competitive competence (Chung, 2014). When MNCs establish subsidiaries, they intend to acquire idiosyncratic resources from subsidiaries, such as local information on government, labour resources and markets. Mudambi et al. (2014) argue that Greenfield subsidiaries share more knowledge with their headquarters than acquired subsidiaries as shared cultures and routines have positive effects on knowledge flows. However, brown-field types of subsidiary also clearly contribute to the improvement of MNCs' global positions through the acquisition of complementary knowledge.

Theories which are often used in international business domains (i.e., internalisation theory, eclectic paradigm, resource-dependence theory, organisational learning theory,

absorptive capacity theory, knowledge transfer capacity perspective and the relational capital view) have long attempted to explain why MNCs attempt to enter foreign markets despite the presence of the liabilities of foreignness and illuminate the primary reason for their investment motivations. Moreover, all these theories have their own attributes and different perceptions on subsidiaries and knowledge transfer. It is concluded that both knowledge transfer capacity and relational capital view are useful to draw an overall picture on RKT and fully understand the phenomenon (note that absorptive capacity will also be incorporated into the part of knowledge transfer capacity in that RKT would not be plausible if subsidiaries do not have adequate absorptive capacity as an initial starting point for knowledge transfer). To reiterate, the objective of the study is to identify the main factors affecting RKT from overseas subsidiaries to MNCs and the two theoretical lenses are expected to help to investigate the RKT phenomenon.

Previous studies of organisational learning have tended to focus either on interfirm linkage between alliance partners (Inkpen and Pien, 2006; Tsang et al., 2004) or linkage between international subsidiaries and local business units (Liu et al., 2010; McEvily and Marcus, 2005). This study extends the scope of earlier works and investigates the cause-and-effect relationships on RKT from subsidiaries to their headquarters. In addition, the exploration will be based on the view that knowledge is a critical resource for MNCs to upgrade sustainable competitive advantage (Liu et al., 2010). By combining relevant theoretical perspectives (encompassing absorptive capacity), this study attempts to investigate whether knowledge senders' knowledge transfer capacity influences the extent to which learning organisations acquire precious information and what determines the extent. Moreover, this study also examines the effects of relational capital between

knowledge exchange parties on the extent of RKT. An explicit research framework will now be drawn up to undertake empirical investigation of these questions and from which hypotheses will be developed.

Chapter 3. Research Design and Hypotheses

3.1 Introduction

The previous chapter reviewed MNCs' international market entry modes, the formations of subsidiaries and the main theories explaining the decision making in these areas. In addition, it also reviewed previous research about knowledge acquisition and RKT. As national boundaries become more permeable, subsidiaries are increasingly and significantly involved in the reverse transfer of knowledge and generate the fundamental sources of competitiveness for MNCs (Lucas, 2006). Although headquarters traditionally play a critical role in providing knowledge and competencies within MNC networks, they increasingly become receivers of knowledge from their globally dispersed subsidiaries (Schlegelmilch et al., 2003). As MNCs seek subsidiaries which can turn into creative subsidiaries contributing to the improvement of their innovative competencies (Davis and Meyer, 2004; Yang and Jiang, 2007), knowledge, which is reversely transferred from overseas subsidiaries, is significantly considered as one of the key foundations of MNCs' competitive advantage (Feng-yang and Jing-chen, 2011). The term "knowledge" in this study is LMI and follows the classification by Gupta and Govindarajan (1994): (1) information on market data about customers; (2) information on market data about competitors; (3) Marketing know-how; (4) Distribution know-how; (5) Market-specific technological know-how; (6) Purchasing know-how.

The efficient absorption of LMI is important particularly for MNCs as it can be a crucial and decisive factor for the success of direct investment in foreign markets (Park

et al., 2012a). Knowledge transfer within a firm (i.e., MNC networks), especially among the various geographic locations of MNCs' subsidiaries, is subject to diverse determinants, and scholars have researched different perspectives regarding factors affecting RKT. Michailova and Mustaffa (2012) suggest three clusters (knowledge characteristics, characteristics of actors associated with the intra-MNC knowledge flows and characteristics of the relations between the actors concerned with the knowledge flows) of variables in order to explain the outcomes of knowledge flows. The previous studies dealing with determinants of RKT can be classified in three perspectives of relevant entities involved in the phenomenon: knowledge sender (a subsidiary), knowledge receiver (a parent firm) and the relationships between the two.

With regard to the perspective of subsidiaries, Rabbiosi and Santangelo (2013) argue that subsidiaries have different levels of local embeddedness and integration within MNCs; thus, these elements affect the degrees of subsidiaries' knowledge accumulation and RKT. For instance, subsidiary age is potentially a critical factor of a subsidiary's capacity to accumulate capabilities and knowledge and to add value to the MNCs via knowledge transfer (Rabbiosi and Santangelo, 2013). Iwasa and Odagiri (2004) suggest that the subsidiary needs to have sufficient absorptive capacity for RKT to make a contribution to the competitive advantage of parent firms.

In terms of the headquarters' perspective, Chen, Li and Shapiro (2012) argue that parent firms may implement various types of activities to facilitate RKT. First, they may execute personnel exchanges through regularly sending parent-firm researchers to subsidiaries or by transferring researchers in the subsidiaries to headquarters. Due to the

strategic significance of organisational learning in a global economy, the repatriating knowledge which is acquired through international assignments is important (Oddou et al., 2009); thus, personnel transfers are important conditions for successful RKT (Lazarova and Tarique, 2005). Second, headquarters can acquire relevant know-how of products through purchasing products developed by the subsidiaries. Iwasa and Odagiri (2004) suggest that the parent firms also need to have a sufficient absorptive capacity to make a contribution to the competitive advantage of them. However, this area is beyond the scope of this study in that it focuses on a subsidiary's capability.

From the perspective of relationships between a subsidiary and its parent firm, Borini et al. (2012) argue that RKT can be affected, for example, by subsidiaries' strategic orientation and strong communication between the parent firms and its subsidiaries. The use of socialisation mechanisms probably has a positive influence on the extent of RKT by increasing the frequency of subsidiary-headquarter interactions and communications (Najafi-Tavani et al., 2012). Rabbiosi (2011) also proposes that coordination through face-to-face meetings assists the enhancement of accumulating and transferring knowledge within MNC networks.

As mentioned in Sections 2.3 and 2.5, both knowledge transfer capacity and relational capital theories serve as the overarching theoretical lenses to develop testable hypotheses. The objective of this chapter is to outline a conceptual framework and propose the research hypotheses identifying the main determinants of RKT. The ability to transfer and deploy LMI has become one of the main competitive priorities for many overseas subsidiaries (Subramaniam and Venkatraman, 2001), and the two theoretical lenses are

appropriate to observe the phenomenon. In the context of knowledge transfer capacity and relational capital, and by intensively reviewing and investigating previous empirical studies exploring the determinants of knowledge transfer and RKT, this study identifies two categories of RKT determinants: the characteristics of knowledge senders associated with knowledge transfer capacity domains and the characteristics of the relationships between knowledge senders and receivers related to relational capital. Knowledge development capability, possession of relevant knowledge, willingness to share, and autonomy represent knowledge transfer capacity. With regard to relational capital, this study focuses on socialisation mechanisms, trust and organisational distance. Hypotheses are identified according to the impact of those determinants on the extent of RKT.

3.2 Subsidiary's knowledge transfer capacity

Subsidiaries, as parts of MNCs, gain opportunities to access various resources or acquire diverse knowledge residing in different countries; thus, subsidiaries' innovative internal characteristics and ability to innovate can affect knowledge sharing within MNCs (Joao et al., 2011). Knowledge sharing within MNC networks (as a result of subsidiary RKT) is critical to MNCs' new product developments for achieving competitive advantage (Lee et al., 2008) in that subsidiaries' development and transfer of knowledge may determine the creation of competitive advantages of MNCs (Minbaeva et al., 2003). However, although knowledge is present in local markets, not all subsidiaries successfully acquire the knowledge, due primarily to their different learning capacity and insufficient knowledge transfer capacity denoting knowledge senders' ability to spread the knowledge to other organisations needing it (Tang et al., 2010).

Thus, the flows of knowledge are dependent upon the knowledge sender's capacity that is able to help the knowledge recipients to understand and acquire the transferred knowledge (Tang et al., 2010). For this reason, the ability not only to deploy but also to transfer knowledge has become one of the main competitive priorities for many subsidiaries (Subramaniam and Venkatraman, 2001). Meanwhile, the decision to transfer knowledge is driven by the ability of knowledge transferors to share knowledge (Minbaeva and Michailova, 2004; Minbaeva, 2007). In addition, the intent to share enlarges a probability that knowledge is transferred in such a way that it can be assimilated by the receiving units (Martins, 2012). In this vein, knowledge transfer capacity is also often shaped by a firm's internal capability (Zhuang and Guo, 2013). This study suggests four elements of subsidiaries' transfer capabilities as a catalyst promoting RKT: subsidiary's knowledge development capability, possession of prior related knowledge, willingness, and autonomy.

3.2.1 Knowledge development capability

A subsidiary's ability to absorb and acquire external knowledge is a prerequisite to sustain and develop competitive advantage (Persson, 2006; Ramayah and Mohamad, 2010; Bierly III, Damanpour and Santoro, 2009), as well as transfer the knowledge to MNCs (i.e., RKT) (Minbaeva et al., 2003). With respect to the RKT, the reverse transfer of knowledge from subsidiaries to their headquarters can take place particularly when the former has a stock of knowledge that is firm-specifically developed but valuable for MNCs (Mudambi et al., 2014). Thus, this explanation clearly informs scholars that the starting point of RKT is subsidiaries' successful development of the knowledge learned

from local markets (Martins, 2012). It also implies that some subsidiaries are better able to improve the value of their possessed knowledge by acquiring new local knowledge and combining it with holding knowledge and then employing it for operations in their local markets. By doing so, compared to other subsidiaries within MNCs, they can achieve higher competitiveness and performance. In that situation, MNCs have a tendency to support such subsidiaries with the intention of having an opportunity to acquire critical LMI through RKT (Rugman and Verbeke, 2001).

In the same vein, many previous studies shed light on the role played by the knowledge development capability of subsidiaries for RKT. Davenport and Prusak (1998) argue that once MNCs regard specific subsidiaries as an attractive collaboration counterpart owning adequate capability to assimilate LMI and turn it into more invaluable information, the former commonly strongly tries to acquire and learn the subsidiary knowledge. In this circumstance, MNCs which actively involve RKT and MNCs tend to try to provide more education and training opportunities to subsidiaries (Gupta and Govindarajan, 2000) so that the latter will be able to develop non-duplicable and distinctive skills, such as specific market knowledge, for MNCs (Bjorkman et al., 2004). In addition, RKT becomes especially vivid when these efforts between subsidiaries and MNCs trigger the virtuous circles above for their knowledge exchange and MNCs endeavour to apply the reversely transferred knowledge within MNC networks.

Moreover, similar to given discussions, extant empirics have a propensity to argue that subsidiaries' knowledge development capabilities are the primary channels for identifying and attaining market-related knowledge or local information from their local

environments, and this knowledge functions as the foundation to carry out RKT (Najafi-Tavani et al., 2012; Strube and Berg, 2011). An overseas subsidiary is more likely to be involved intensively with local business partners by increasing interactions in order to access locally unique knowledge (Gammelgaard, McDonald, Stephan, Tüselmann and Dörrenbächer, 2012), and these activities facilitate the enlargement of subsidiaries' knowledge development capability (Piscitello and Rabbiosi, 2006). Meanwhile, such a subsidiary's ability to develop new knowledge from their external environments becomes a powerful spur promoting RKT to MNCs (Andersson, Forsgren and Holm, 2001), and the knowledge transfer from a subsidiary is to be expected when a subsidiary has valuable knowledge for MNCs (i.e., has strong capabilities) (Noorderhaven and Harzing, 2009). On the basis of these arguments, the following hypothesis is formed;

Hypothesis 1: Knowledge development capability by subsidiaries is positively related to their reverse knowledge transfer to MNCs.

3.2.2 Possession of prior related knowledge

Organisational knowledge is a crucial element for sustainable competitive advantage, and thus knowledge absorption from external sources often significantly influences organisational efficiency, quick adjustments to changing business environments and the long-term existence of firms (Dobrai et al., 2012; Inkpen and Tsang, 2005). The level of knowledge basis is critical for any organisation and often determines its destiny and the survival of the firm. Similarly, from the perspective of MNCs, RKT from subsidiaries ought to function as a vehicle not only to maintain their competitive-edge, but also to

further improve their market position in the global arena. These explanations imply that leveraging knowledge from geographically different subsidiaries is the primary source of competitive advantage for MNCs (Yang et al., 2008).

However, knowledge has sticky characteristics, which makes it hard to transfer from one firm to another (Park, 2011a); thus, to overcome such a difficulty, a subsidiary's existing knowledge base can be important in that it does not need to use an experimental way when it possesses prior related knowledge. In other words, for knowledge transferors (i.e., subsidiaries), an organisational knowledge base stemming from the possession of relevant knowledge stands for the level of familiarity in a certain area and offers organisational confidence in teaching, which helps knowledge recipients (i.e., MNCs) to successfully receive new information from knowledge senders (Park, 2011a). According to Cohen and Levinthal (1990), when organisations own prior related knowledge they are better able to achieve difficult organisational missions in that it provides a clue to solve problems which they encounter in the process of business operations.

Park (2011a) punctuates these discussions by pointing out that the possession of prior relevant knowledge is the key for knowledge transferors to support acquirers to effectively learn new knowledge from them. The same researcher also argues that stored relevant knowledge in subsidiaries' memory aids them to lessen operational uncertainties by increasing MNC attention through effectively transferring local information in foreign markets, which implies that subsidiaries' capability to transfer LMI based on the possession of relevant knowledge affects the learning of LMI by MNCs (also see Ghauri and Park, 2012). Hence, this leads to Hypothesis 2.

Hypothesis 2: The possession of prior related knowledge by subsidiaries is positively related to their reverse knowledge transfer to MNCs.

3.2.3 Willingness

Knowledge is deeply embedded in organisations, and therefore RKT is a time and resource consuming process. Due to this, a subsidiary is sometimes unwilling to contribute to the knowledge base of its parent firm (Najafi-Tavani et al., 2012). Szulanski (1996) contends that the major reasons behind the knowledge transferor's protectiveness are generally fear of losing ownership, a desire to be sustainable in a superior position, inadequate reward for sharing hard-won success, and unwillingness to dedicate time and resources for transferring knowledge.

Husted and Michailova (2002) also suggest that knowledge senders have hostility towards sharing knowledge for six reasons: 1) possible loss of market value and bargaining power and sustaining individual competitive advantage, 2) reluctance to spend time and resources on knowledge sharing, 3) unwillingness to share knowledge with the other party who put less or no effort into knowledge development, 4) protecting against external assessment of the quality of the knowledge possessed, 5) uncertainty of the knowledge recipients' interpretation and perception about the shared information, and 6) high respect for hierarchy and official power in the case of holding knowledge. Due to these reasons, the importance of motivating knowledge transferors' willingness to transfer and subsequently promoting knowledge transfer is highlighted by some scholars (Easterby-Smith et al., 2008; Lee et al., 2008; Osterloh and Frey, 2000)

These arguments indicate conversely that subsidiaries' willingness to share information can play a pivotal role in substantially undertaking RKT (Najafi-Tavani et al., 2012). Moreover, a subsidiary having a favorable tendency to share its LMI will achieve better knowledge transfer capacity. According to Park (2011a), knowledge transfer capacity is affected by a knowledge transferor's intent to share own knowledge with a knowledge acquirer, and the willingness determines the potential for learning by the knowledge acquirer (i.e., RKT). In other words, when the subsidiaries decide to be entirely open in sharing knowledge through various ways (e.g. codified documentations, facilities or systems), the subsidiaries can become a more effective vehicle for MNCs to learn LMI (Inkpen and Dinur, 1998).

To sum up, knowledge generated, for example, through continuous interactions with customers and local suppliers (i.e., LMI) is difficult for overseas subsidiaries to codify and is unlikely to be easily transferrable without open interactions between knowledge senders (i.e., subsidiaries) and receivers (MNCs); thus, overseas subsidiaries' intent to share and willingness to teach is decisive for the exploration, integration and acquisition of tacit information from the perspective of MNCs (Teigland and Wasko, 2009). Moreover, the knowledge transmitters may need to allocate a considerable amount of time and resources in the case where they want to successfully transfer their own knowledge, which clearly indicates that in the absence of subsidiaries' willingness, RKT would not be possible (Najafi-Tavani et al., 2012). In this regard, Hypothesis 3 is formulated.

Hypothesis 3: Subsidiaries' willingness to share own information is positively related to their reverse knowledge transfer to MNCs.

3.2.4 Autonomy

MNCs undertake country-specific strategies in order to compete against rivals. Due to this, many subsidiaries often obtain substantial strategic independence in various aspects of their operations, which subsequently results in them obtaining considerable intra-firm bargaining power which affects the distribution of the firm's resources and this power plays a critical role in the flow of organisational knowledge within MNC networks (Mudambi and Navarra, 2004).

When a position of strategic importance is enhanced, subsidiaries are likely to receive better support from headquarters and be able to quickly adapt to changes in business environments in local markets, which eventually enlarge the extent to which a subsidiary shares LMI with MNCs (Joao et al., 2011). By contrast, when connection of the subsidiary's destiny to the MNC network is tightly controlled and subsidiary autonomy is not guaranteed, the subsidiary probably has to subordinate its own decisions to those of the network. As a consequence it will often find itself locked into a trajectory shaped by the parent (i.e., MNC), which lessens the subsidiary's capacity to adapt to changes in the local business environment. Similarly, Berdrow and Lane (2003) claim that the enlarged control by the parent reduces the subsidiary's organisational flexibility, which again impedes the improvement of its own ability to adapt internal resources to local demands, and to develop new capabilities by itself. In a modern competitive environment, the key to any successful strategy seems to be organisational flexibility, in that it not only helps to adjust quickly to changing demand and resource requirements, but also facilitates absorption of new knowledge from external sources, which is the crucial foundation of

RKT (Mohr and Sengupta, 2002).

However, scholars define subsidiary autonomy in different ways. According to Harzing and Noorderhaven (2006), decentralisation/autonomy refers to the extent of a subsidiary's decision-making authority delegated by headquarters, and subsidiaries with a high degree of autonomy will have more freedom to make a decision on several activities and employ higher levels of decision-making power for the activities (Chiao and Ying, 2013). Gammelgaard et al. (2012) also define subsidiary autonomy as the decision-making rights that are granted by headquarters; thus, high autonomy arises when the subsidiary makes mainly operational and/or strategic decisions, while low autonomy occurs when headquarters primarily make such decisions. They further argue that the ranges related to strategic decision making rights are (1) areas of targeting market, (2) category of products, (3) product and R&D development, (4) production, and (5) financial and human resource management. Autonomy also provides subsidiaries with the opportunity to make decisions regarding the following areas (Ghoshal, Korine and Szulanski, 1994): (1) mainly reorganising subsidiary departments, (2) planning career development for subsidiary managers, and (3) changing product design, enabling subsidiaries to make decisions for product alteration in order to respond quickly to market and customer needs (Ambos and Birkinshaw, 2010).

Nowadays, headquarters often take charge of coordinating and integrating MNCs' business activities by providing the subsidiaries with resources for operations and encouraging subsidiaries to make profits for MNCs, but subsidiaries need to have a certain level of autonomy through decentralisation for contributing to MNCs'

development (Chiao and Ying, 2013). Autonomy of the subsidiary significantly and positively affects RKT, on the condition that (1) subsidiaries actually access and form local knowledge, (2) communication is built between knowledge holders and recipients, and (3) the related subsidiary knowledge is really accessible to other units of MNCs that need it (Foss and Pedersen, 2002). Thus, in order to ensure the enhancement of timely knowledge sharing between MNCs and subsidiaries (RKT), the headquarters need to meet these conditions by decentralising authority to their subsidiaries (Inkpen and Tsang, 2005). As foreign subsidiaries become valuable sources of competitive advantage for MNCs, MNCs often have a propensity to support the self-determination of subsidiaries about their business activities, which commonly triggers a substantial increase in effective knowledge outputs by subsidiaries (Mudambi, Mudambi and Navarra, 2007). This discussion leads to the following hypothesis:

Hypothesis 4: Subsidiaries' autonomy is positively related to their reverse knowledge transfer to MNCs.

3.3 Relational capital

This study considers relational capital between the headquarters and their subsidiaries as a useful theoretical view helping to identify effectual determinants of RKT from the latter. Lee et al. (2008) point out that both knowledge sharing and knowledge transfer between headquarters and its subsidiaries and subsequent RKT would not be possible without relational capital promoting learning environments. Evangelistra and Hau (2009) suggest that this is because relational capital refers to the sort of individual and/or organisational

relationships developed through a process of close and frequent interactions, and thus it facilitates mutual understanding and resolves unnecessary conflicts, which logically enlarges the probability of inter-organisational learning. In addition, a relationship between knowledge sharing entities can be characterised as the power of their social ties, the degree of trust, and their level of sharing common processes and values (the final element can be replaced by organisational congruence or distance) (Dhanaraj et al., 2004). This study proposes that there are three elements of relational capital, which significantly affect RKT: socialisation mechanisms, trust and organisational distance.

The first element of relational capital is its socialisation mechanisms, such as organisational interactions, frequent communications and efficient transmission channels. Intense organisational interactions facilitate knowledge exchange by enhancing both parties' coordination capabilities (Li et al., 2007). A strong relationship between a parent firm and its subsidiary is one of the main influences on RKT, and such strong relationships are a conduit for mutual socialisation between units, which promotes their relational capital (Borini et al., 2012). Relational capital is also related to their trust relationships (Borini et al., 2012). Trust plays a pivotal role in deterring opportunistic behaviour and boosts keeping an open mind, which indicates that it is one of the central components comprising relational capital. Therefore, trust accelerates RKT by saving transaction costs and time for screening and recognising the perceived value of transferred knowledge (Li et al., 2007). (This will be further discussed in the process of hypothesis development.)

In addition, heterogeneous characteristics in culture, business schemes and psychic distance increase retardation in enhancing relational capital between MNCs and subsidiaries (Lord and Ranft, 2000). The achievement of MNCs' success in the global

marketplace is largely dependent on the effective management of relationships between MNCs and subsidiaries, but the relationships and subsequent accumulation of relational capital are closely and significantly influenced by those factors discussed above (Hewett and Bearden, 2001). Based on these brief illustrations (and explanations of the theoretical framework outlined in section 2.5), this study considers these elements (i.e., socialisation mechanisms, trust and organisational distance) as the essential parts of relational capital.

3.3.1 Socialisation mechanisms

As knowledge transfer and RKT processes are enormously complex and hard to capture (due to complicated inter-personal and inter-organisational dimensions), the use of appropriate socialisation mechanisms are important, to reinforce knowledge exchange between subsidiaries and their parent corporations (Schlegelmilch and Chini, 2003). Socialisation is the level of interaction and communication between firms (Cousins, Handfield, Lawson and Petersen, 2006). Gupta and Govindarajan (2000) shed light on socialisation as the crucial part of such knowledge transmission mechanisms. They argue that socialisation mechanisms create interpersonal familiarity and personal intimacy between subsidiaries and other units. In a similar vein, Khan, Shenkar and Lew (2015) also highlight that socialisation mechanisms are socially interactive mechanisms at the inter-organisational level that enhance knowledge transfer between firms. They further suggest that such socialisation mechanisms can be divided into formal socialisation mechanisms (expressing the degree of structural interaction between knowledge exchange parties) and informal socialisation mechanisms (reflecting the level of informal social interactions between knowledge exchange parties). This study adopts Khan et al.'s

(2015) opinion and view that the socialisation mechanisms include both formal and informal socialisation mechanisms⁷.

According to Gupta and Govindarajan (2000), formal socialisation mechanisms, such as liaison personnel, task forces and permanent committees, play a critical role in mixing multiple units. Formal socialisation mechanisms have positive impacts on the density of communication interfaces and knowledge outflows from subsidiaries to headquarters. By contrast, Rabbiosi and Santangelo (2013) propose that informal socialisation mechanisms, such as teamwork involving people, meetings and visits between subsidiaries and parent firms (i.e., MNCs) function as ‘grease’ in the RKT process. This is because they guide managers in knowledge acquiring organisations to paths to initially recognise the characteristics of knowledge, effectively understand the value of new information, and apply it appropriately to business operations, which logically leads to the enhancement of knowledge sharing between them. These explanations clearly inform that socialisation mechanisms significantly enhance the extent to which subsidiaries reversely transfer locally specialised knowledge and the level of interactions between subsidiaries and headquarters (Najafi-Tavani et al., 2012).

Pedersen et al. (2003) suggest that the choice of mechanisms is strongly related to the

⁷ Rowley et al. (2013) suggest that structural collaborative connectors which are used for inter-units’ knowledge and information cooperation play a lubricant role in enhancing RKT from subsidiaries to headquarters, and term this factor as knowledge integration mechanisms. According to them, the factor includes ‘various structural interchanges adjusting relevant departments’ business activities between knowledge transferring and acquiring firms’ as well as ‘systematic instruments, which extend intimacy among individuals and escalate interactions among subsidiaries within MNC networks’, which is parallel to socialisation mechanisms in this study. Both knowledge integration and socialisation mechanisms may function as a conduit that organisations vigorously share necessary information through formal and informal channels, and in this vein, they can be interchangeable.

characteristics of the knowledge. Holtbrugge and Berg (2004) distinguish applicable mechanisms for knowledge transfer and RKT according to knowledge type. Tacit knowledge, compared to explicit knowledge, has the characteristics of non-coding and monopolising, and thus firms need to select proper mechanisms in order to facilitate the occurrence of RKT (Zhuang and Guo, 2013). Moreover, in the case of the transfer of tacit knowledge (e.g. LMI), socialisation mechanisms (e.g. the international transfer of managers and global teams) can function as a vehicle to share the knowledge in that such information is significantly embedded in human memories. This means that rich communication media are essential for the transmission of tacit information. In particular, as much of market relevant knowledge, such as LMI, is tacit knowledge that is embedded in organisational practices and the cognitive structure of human bodies, the feasibility of its transfer requires repetitive observation by receivers and intensive interactions with the transferors (Park et al., 2012b). In this vein, frequent interpersonal communications in the daily routine, mutual meetings and headquarter visits enhance tacit knowledge transfer (Bresman et al., 1999; Rhodes, Hung, Lok, Lien and Wu, 2008). In addition, as LMI is knowledge developed from different foreign markets and it is difficult to codify, RKT should be undertaken in a systematic way, including the formation of cross-national teams whose members have previous foreign experience and experience of frequent communications between team members and foreign managers. These all comprise of socialisation mechanisms (Subramaniam and Venkatraman, 2001)⁸.

To sum up, subsidiaries may learn and accumulate important locally-specific

⁸ By contrast, explicit knowledge can be transferrable mainly through written media, such as manuals, guides and reports.

knowledge that is potentially useful to headquarters, but ineffective use of socialisation mechanisms could hinder the transfer and utilisation of that knowledge by MNCs (Miao et al., 2011). Meanwhile, socialisation mechanisms are largely reflected in the quality of the relationships between a parent firm and its subsidiary (Lindsay, Chadee, Mattsson, Johnston and Millet, 2003). A good relationship between the two requires rich communication, including conversations in daily routine through cross-unit teams and job rotation (Foss and Pedersen, 2002). Harrington and Guimaraes (2005) also document that internal communication channels (i.e. the methods in which knowledge is moved from one side to another within the firm), such as cross-functional teams, formal reports, and official and unofficial meetings linking organisational members, improve knowledge flow. The communication between subsidiaries and parent firms is also important because frequent contacts enhance greater information exchanges and it is significantly associated with the enhancement of subsidiaries' abilities to develop knowledge (Birkinshaw, Hood and Jonsson, 1998; Lazarova and Tarique, 2005). It significantly diminishes the obstacles to sharing information and improving capabilities for knowledge assimilation and transformation (Park, 2011a). Consequently, the quality of communication determines the degree of formal and informal sharing of precious knowledge (Ghauri and Park, 2012), which confirms that the success of RKT is mainly a matter of the frequency of subsidiary-headquarters communication (Ghoshal et al., 1994). These explanations also shed light on the importance of certain interactions. Frequent and in-depth interactions are positively associated with sharing and developing knowledge within MNC networks (Björkman et al., 2004; Nonaka, 1994; Park, 2010). Organisational interactions between different units and MNCs are also a crucial factor encouraging knowledge-sharing and are especially advantageous to the transfer of tacit and non-codified knowledge (Noorderhaven and

Harzing, 2009). This discussion leads to the following hypothesis:

Hypothesis 5: Socialisation mechanisms are positively related to subsidiaries' reverse knowledge transfer to MNCs.

3.3.2 Trust

An important element that not only consists of relational capital, but has also often been argued by previous studies as a lubricant facilitating knowledge flow between knowledge transferring and acquiring firms is trust. Trust positively influences the extent of knowledge disclosure, the authenticity of knowledge, and knowledge embracement by the members involved (Sie and Yakhlef, 2009). Additionally, the presence of trust lessens knowledge possessors' efforts to protect their own crown jewels and increases the level of transparency and openness to knowledge recipients (Buckley and Park, 2013). When knowledge possessors take the risk of losing a competitive advantage from delivering and distributing valuable knowledge over other organisations, trust provokes acceptance of vulnerability and enhances the quality and frequency of communication between knowledge exchanging parties (Sankowska, 2013). By contrast, mistrust disturbs knowledge sharing between subsidiaries and MNCs and deters the reverse flow of knowledge. These discussions clearly indicate that trust plays a pivotal role in escalating subsidiaries' motivation to share various and potentially valuable LMI with headquarters (Inkpen and Tsang, 2005).

Similar commentaries pointing out trust as a catalyst promoting knowledge sharing

and subsequent RKT can easily be found from previous studies. For example, both Lee, Gillespie, Mann and Wearing (2010) and Mayer, Davis and Schoorman (1995) highlight that trust positively affects motivations to disclose and share information from one to another and facilitates the exchange and disclosure of knowledge (see also Quigley, Tesluk, Locke and Bartol, 2007). Tsai and Goshal (1998) further document that when two parties trust each other, they commonly show a propensity to share their resources without concern that the other party will take advantage away for nothing. By doing so, trust can contribute to a reduction in transaction costs by diminishing the fear of opportunism by knowledge transferors (Khamseh and Jolly, 2008), and trust may play a critical role as a facilitator to transfer new knowledge (Buckley and Park, 2013). Park (2010) also sheds light on the importance of trust in organisational learning. According to his argument, 1) trust reduces the possibility of opportunistic behaviours, 2) it alleviates potential conflicts between knowledge sender and receiver and 3) it provides firms with environments in which they actively participate in exchanging and sharing knowledge without various safeguards in place to protect themselves. All these series of explanations provided by previous studies emphasise that trust accelerates organisational learning by saving time and resource commitments to verify the accuracy and validity of the knowledge conveyed (McEvily, Perrone and Zaheer, 2003).

Trust influences knowledge sharing in two different ways: from the point of view of the knowledge sender and of the knowledge receiver (McEvily et al., 2003). First, from the standpoint of the sender, trust affects the sender's degree of openness in sharing knowledge with another party, and their openness helps the other party to learn organisationally embedded information by increasing the possibility of knowledge

sharing. Second, from the perspective of the receiver, when the receivers trust the value of knowledge transferred by the exchanging parties, they accept the knowledge at its actual value. In this vein, inter- and intra-organisational trust is crucial since it encourages the sender to actively assist the recipients to understand the transferred knowledge and helps the latter to adequately recognise the value of the information (Lane et al., 2001).

Taken together, this study suggests that trust between headquarters and their subsidiaries is a pre-condition for cooperation between the two and such cooperation positively influences the extent of effective RKT (Boh et al., 2013). In particular, organisational trust is important when subsidiaries transfer knowledge to their headquarters located in a different country (Boh et al., 2013), in that the source of the knowledge which is transferred to the recipient tends to be uncertain (Gallie and Guichard, 2005). In this situation, trust promotes shared understanding and open communication (Bener and Glaister, 2010) and increases mutual transparency to share knowledge (Khamseh and Jolly, 2008), and thus trust functions as an important mechanism both for building fiduciary relationships and encouraging knowledge exchange between them (Hewett and Bearden, 2001). In a similar vein, Kale et al. (2000) argue that relational capital based on mutual trust can facilitate greater exchange, enhance cooperative behaviour which is necessary for the exchange or combination of knowledge and as a result, promote the transfer of information and know-how between committed exchange organisations (also see Tsai and Ghoshal, 1998). Hence, this leads to Hypothesis 6.

Hypothesis 6: Trust is positively related to subsidiaries' reverse knowledge transfer to MNCs.

3.3.3 Organisational distance

Organisational distance⁹ is often referred to as a risk factor which increases ambiguity in the knowledge exchange process (Ambos et al., 2006). Large organisational distance may result in a misunderstanding of the logical linkages between business activities and performances, inputs and outputs, and the causes and effects of specific market-based competency, and thus diminish subsidiaries' knowledge transferability to MNCs (Simonin, 1999a). Organisational distance is defined as the difference between headquarters and subsidiaries in terms of values, practices and structures (Ambos et al., 2006). Simonin (1999b) also defines organisational distance as the degree of dissimilarity in business practices, organisational heritage and culture. Taken together, organisational distance stands for the difference between headquarters and subsidiaries in terms of organisational culture, vision, goals and operational directions.

Previous studies (e.g., Ghauri and Park, 2012; Gupta and Govindarajan, 2000) commonly claim that knowledge is one of the most critical assets of MNCs in order to keep up with other competitors and efficiently cope in a global competitive market. Under the premise, organisational distance (that is, incompatibility of organisational culture, recurrent conflicts in corporate vision and goals, and dissimilar operational directions) between subsidiaries and headquarters within MNC networks yields serious barriers

⁹ Some may suggest that organisational distance is associated with cognitive capital rather than relational capital. However, this researcher argues that there may be an intersection between the two concepts (Al-Tabbaa and Ankrah, 2016). In other words, organisational similarities/distances in organisational vision, value and culture may influence the extent to which two organisations share cognitive structures. The similarities/distances consecutively affect their relationships, which eventually militate in favor of promoting relational capital. In this vein, Park (2011) proposes that organizational distance, such as cultural difference is one of the core elements comprising relational capital (refer to P.77).

obstructing their knowledge flows (Martins, 2012). Moreover, such firms experiencing difficulties in sharing a corporate vision and missions through similar processes and value chains and harmonious norms of behaviour, cannot win in a mutual learning race, which plausibly causes a situation that subsidiaries are not able to reversely transfer LMI (Ambos et al., 2006). According to Hennart and Zeng (2002), the result particularly emerges in the case where organisational distance can become a fuse preventing organisational members from promoting communication, interacting in the routine activities and sharing mutual ideas, and these subsequently bring about a reduction in the motivation to collaborate.

As the part of organisational distance, the occurrence of RKT may be difficult if knowledge providers and recipients do not share a common organisational culture (Boh et al., 2013). As human behaviour and perception are often deeply rooted in social structures, norms and customs, transplantation of LMI, which has an idiosyncratic attribute within MNC networks should be difficult for headquarters (Schlegelmilch and Chini, 2003). In addition, organisational cultural distance not only provokes conflicts between firms (Pothukuchi, Damanpour, Choi, Chen and Park, 2002), but also amplifies misunderstandings and barriers for communicating with the other party (Bener and Glaister, 2010). Cultural distance may also diminish the perceived value of new information by recipients in that cultural gaps often make it difficult for them to understand it adequately, which suggests that the presence of cultural barriers significantly impedes the flow of new information between knowledge senders and receivers (Zeng, Shenkar, Lee and Song, 2013). As an additional complementary note for the role of cultural distance, organisational skills are often tacit and embedded in

organisations; thus, the creation of a favourable learning environment based on compatible organisational culture is essential for the efficient transfer of the skills (Ghauri and Park, 2012). Similarly, Buckley and Park (2013) and Park et al. (2009a) argue that effective knowledge exchange between firms relies heavily on their organisational cultural compatibility, and cultural compatibility significantly enhances the opportunity to acquire knowledge, which subsequently contributes to building a new corporate culture (Buckley and Park, 2013).

The influence of shared vision and goals between knowledge exchanging firms has also been highlighted in much literature dealing with knowledge transfer and RKT. A shared vision refers to the extent of fit between different business units in terms of ambitions, organisational goals and missions (Tsai and Ghoshal, 1998). A shared vision has the potential to link between organisations as it enhances a common understanding of cooperative goals (Colakoglu, 2012). Shared vision embraces the collective goals and ambitions of the individuals of an organization; and thus when organisational members share similar visions, they can prevent potential misunderstandings in their communications and have more chances to exchange or integrate resources and knowledge (Tsai and Ghoshal, 1998). In addition, as strategically important knowledge is likely to be embedded in an organisation and supported by organisational vision, the absence of common organisational goals may trigger situations that knowledge acquirers may skew the value of new information when they share the information with organisations within MNC networks. Holtbrugge and Berg (2004) distinguish the source of knowledge flows between external knowledge that is generated largely from local constituents (customers, suppliers, employees, consultants, etc.) and internal knowledge

that is generated and accumulated mainly in own knowledge reservoir. They also point out that the use of external knowledge (e.g. LMI) is influenced greatly by the organisational distance between subsidiaries and MNCs, and such distance may obstruct rapid and unconstrained flow of knowledge within MNC networks.

To sum up, first, knowledge sharing and RKT can occur with ease when knowledge exchanging parties have similar values (Ajmal and Koskinen, 2008; Lane et al., 2001). Second, the development of shared goals and visions may also serve considerably as a catalyst to enhance knowledge sharing because sharing long-term visions and goals between different units supports business collaborations and increases their efforts to understand each other, which eventually has a positive influence on the extent of resource transfer and complementary knowledge exchanges (Björkman et al., 2004). Lastly, different organisational culture between MNCs and subsidiaries provokes a significant obstacle to developing mutual commitment and the quality of knowledge exchange (Zhan and Chen, 2013). All these explanations highlight the following hypothesis:

Hypothesis 7: Organisational distance is negatively related to subsidiaries' reverse knowledge transfer to MNCs.

3.4 Control Variables for RKT

3.4.1 Mode of establishment

Knowledge is the fundamental resource of firms that want to sustain and/or develop

a globally competitive position; thus, MNCs often seek information residing in foreign countries through FDI in order to complement their own knowledge which has not been available internally (Kedia, Gaffney and Clampit, 2012). However, the levels of RKT can be affected by the entry mode through which a subsidiary has been established (Mudambi et al., 2014). Although this study focuses only on foreign wholly owned subsidiaries or majority foreign ownership subsidiaries (the reason for this will be explained in Chapter 4), the impacts of different market entry strategies on RKT can be different. In the case of Greenfield subsidiaries, MNCs need to input their know-how at the onset stage; however, acquired subsidiaries (i.e., local firms running in local markets prior to MNC acquisitions) possess their own knowledge that is non-duplicative within the context of MNCs (Bjorkman et al., 2004). Gupta and Govindarajan (2000) also argue that acquired subsidiaries are likely to have a larger pool of relevant knowledge to provide to their headquarters than Greenfield subsidiaries. In addition, RKT between Greenfield and acquired subsidiaries is systematically different (Mudambi et al., 2014). For example, at low level of innovativeness, Greenfield subsidiaries can implement higher levels of RKT than an acquired subsidiary as Greenfield subsidiaries share cognitive structures, language and culture with their headquarters. Based on these discussions, it seems to be critical to control for the potential influences of subsidiaries' establishment mode.

3.4.2 Industry Characteristics

As the nature of industry can influence knowledge characteristics, such different industrial characteristics may potentially influence knowledge sharing between subsidiaries and parent firms, indicating that it is important to control for industry-type

effects (Rabbiosi, 2011). In other words, industry type is likely to influence knowledge transfer practices within an organisation (Ambos et al., 2006). As noted by Minbaeva et al. (2003), industry characteristics affect MNC knowledge transfer (and vice versa), since some industries are innately more international and implement a higher level of knowledge transfer between MNC units. Moreover, the speed of changes in technologies and processes varies in different industries (Rabbiosi and Santangelo, 2013).

Service sectors are relatively more culturally specific than manufacturing industries; thus, subsidiaries in service industries may hold different motivations for sharing knowledge (Lane et al., 2001). In line with Yang et al. (2008), who suggest that industry type is likely to influence knowledge transfer within MNC networks, Gupta and Govindarajan (2000) argue that industries that contain characteristics of greater levels of knowledge intensity are likely to be more international than other industries. This study considers that it is crucial to control for the potential influences of industry types.

3.4.3 Subsidiary size

Firm size stands for the level of a subsidiary's strategic position; thus, a stronger strategic position enables better access to resources and knowledge possessed by headquarters, and larger subsidiaries are able to create more knowledge by themselves instead of acquiring knowledge from MNCs (Minbaeva et al., 2003). It is also possible that a subsidiary's resources in large organisations are already enough for them to create and develop valuable knowledge; thus, larger subsidiaries may not need to rely on the resources and know-how of headquarters, which then influences the extent of their RKT

to MNCs (Gupta and Govindarajan, 2000).

To reiterate, larger subsidiaries tend to have more resources that can enhance their learning activities and knowledge transfer (Tsai, 2001), are likely to possess larger knowledge stocks (Li et al., 2007) and can be more likely to provide non-duplicative knowledge to headquarters (Mudambi et al., 2014). In the same vein, large units may control the process of knowledge sharing within organisations and tend to possess more financial and managerial resources to produce new knowledge for units which need it (Tsai, 2002). By contrast, compared to larger organisations, smaller organisations may be eager to acquire headquarter knowledge rather than gaining their knowledge from local markets as they may lack the capability to cultivate and build knowledge by themselves (Park, Giroud and Glaister, 2009). Based on these discussions, it seems to be critical to control for the potential impact of subsidiary size on RKT.

3.4.4 Subsidiary Age

The longer the subsidiaries have been in business, the more embedded they are with local business environments; thus, age can be associated with the transfer of tacit knowledge, such as LMI (Gentile-Ludecke and Giroud, 2012). A subsidiary's innovative knowledge creation depends on the subsidiary's embeddedness - a concept which requires time and strong effort; thus, older subsidiaries, which already have sufficient time to adapt to the local environment, may more easily learn local knowledge than younger subsidiaries (Borini et al., 2012). For a younger subsidiary, a lack of experience may function as a barrier to learn unfamiliar skills and know-how.

The effects of subsidiary age on the extent of RKT have been identified in previous studies (Najafi-Tavani et al., 2012). For instance, Yang et al. (2008) use subsidiary age as a control variable when investigating RKT and conventional transfer from MNCs to subsidiaries. Older subsidiaries have more time to acquire and develop valuable and distinct capabilities and resources which are the basis of effective RKT, but it can be difficult for young organisations to absorb knowledge from the local context and independently create knowledge due to a lack of learning experience (Rabbiosi and Santangelo, 2013). Conversely, older subsidiaries may be more innovative and more interested in knowledge exchange; thus, subsidiary age has perhaps a positive influence on knowledge transfer/RKT (Borini et al., 2012; Minbaeva et al., 2003). Based on these discussions, the subsidiary's age also needs to be considered as a control variable.

3.4.5 Knowledge tacitness

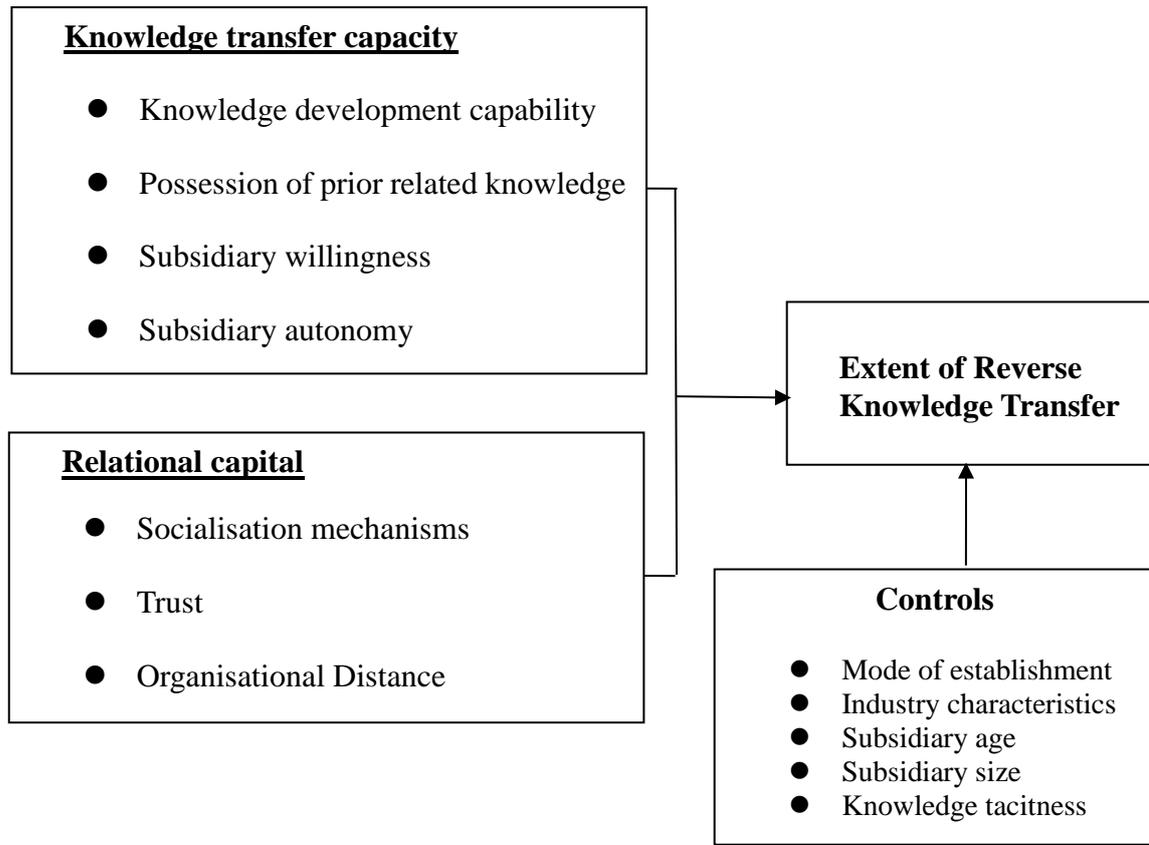
Knowledge tends to originate from exclusive experiences and it often remains embedded, not only in written manuscripts but also in the procedures, practices, standards, and values of organisations; thus, knowledge which is deeply embedded in organisations' cognitive structure plays a critical role in developing their extra capabilities and generating competitive advantage (Bhagat et al., 2002). As was noted earlier, knowledge can be divided into two different facets: explicit and tacit knowledge (Nonaka and von Krogh, 2009). Compared to tacit knowledge, explicit knowledge is relatively easier to imitate, substitute and learn in that it can be codifiable through manuals, guides and instructions. By contrast, tacit knowledge is difficult to absorb because it has sticky characteristics and thus it does not move from one firm to another. These different

attributes of knowledge and its innate nature (i.e., the level of knowledge tacitness) may determine significantly the extent to which subsidiaries reversely transfer their information to headquarters (Easterby-Smith et al., 2008).

As a complementary explanation, the domains and features of knowledge can be classified as tacit or explicit (Dhanaraj et al., 2004). Explicit knowledge can be found in manuals, databases, or contracts (Khamseh and Jolly, 2008), and technological knowledge producing products are often referred to as explicit knowledge (Hau and Evangelista, 2007). Explicit knowledge does not usually require an intensive means of absorbing it as explicit knowledge can be taught with relative ease (Dhanaraj et al., 2004). Tacitness can be defined “in terms of how difficult it is articulate and codify a given domain of knowledge” (Minbaeva, 2007: 573). By contrast with explicit knowledge, tacit information is commonly embodied in employees and their experiences (Giroud and Mirza, 2006), and thus it is logically hard to articulate and codify and subsequently transfer to another entity. In this vein, the effect of tacitness may influence the level of RKT from subsidiaries to MNCs, and thus it is worth controlling the potential impact of the element.

Based on the above discussion, a conceptual framework for this study is presented in Figure 3.1.

Figure 3.1 Conceptual Framework



3.5 Conclusion

This chapter began by introducing the variable constituents of knowledge transfer capacity and relational capital from the perspectives of subsidiaries and headquarters respectively, and highlighted the importance of the relationships between a subsidiary and its headquarters. In Section 3.2, hypotheses were developed by proposing that knowledge development capability, possession of prior related knowledge, willingness to share and subsidiary autonomy will have a positive influence on the extent of RKT. Section 3.3 discussed hypotheses explaining the effects of relational capital (socialisation mechanisms, trust and organisational distance) on the extent of RKT. It is anticipated that

socialisation mechanisms and trust will have a positive impact on the extent of RKT (with respect to organisational distance, this study posited that it would be negatively significant). Section 3.4 described the control variables (mode of establishment, industry characteristics, subsidiary age, subsidiary size and knowledge tacitness), which may have a potential influence on the dependent variable (i.e. the extent of RKT). The next chapter will attempt to provide the appropriate research method and background on the sampling procedure used in order to achieve the research objectives.

Chapter 4. Methodology: Sample and Variable Measurements

4.1 Introduction

The previous chapter illustrated the conceptual framework and hypotheses, and thus this chapter outlines a strategy to collect the data which will be used to test the hypotheses. In other words, this chapter will identify the research methods which will be appropriate to this study. This will be related to the issue of which research methodology is required to provide the foundation of the answer for an inquiry, ‘how the research will be carried out to identify associations between variables and their cause-and-effect relationships’ in the next analysis chapter.

After the introduction section, the next section explains why a questionnaire survey is the best method to achieve the objectives of this study. In addition, this section also describes the pros and cons of the data collection methods and the methods used in the previous key studies of knowledge transfer and RKT. The third section discusses the issues relating to sampling procedures and the choice of appropriate participants. The fourth section summarises the process of questionnaire development procedures with pre-test, which is necessary to finalise a questionnaire. The subsequent fifth section suggests the measurements of dependent, independent and control variables, respectively. The sixth section describes the main data collection process. The seventh section handles the descriptions of survey responses in terms of industry, mode of entry and subsidiary age (i.e., subsidiaries established before the Asian economic crisis in 1997 vs. after the event). This section also includes t-test results to confirm the minimum presence of non-response

bias. The final section is a conclusion.

4.2 Research Methodology

4.2.1 Characteristics of Questionnaire Surveys

The type and number of data to be collected can be determined by the nature of a study and its research objectives (Hair, Babin, Money and Samouel, 2003). For example, an exploratory study is likely to collect narrative data (i.e. qualitative data) by using focus groups, observations, and personal interviews. By contrast, when the study is descriptive or causal, a relatively large amount of quantitative data is required and the data can be collected through large-scale surveys or the utilisation of existing electronic databases (i.e., secondary data). The difference between quantitative and qualitative data in social science research is clear in that one is based on numerical data and the other is rooted in non-numeric data; for example, an observation method is qualitative, and quantification often makes the observation more explicit (Babbie, 2003). Saunders et al. (2009: 414) note that “virtually any business and management research you undertake is likely to involve some numerical data or contain data that could usefully be quantified to help you answer your research question(s) and to meet objectives. Quantitative data refers to all such data and can be a product of all research strategies. To be useful, these data need to be analysed and interpreted. Quantitative analysis techniques assist you in this process”. In particular, quantitative data examination can be descriptive or explanatory and such an analysis can comprise one, two or several variables (Babbie, 2003). Quantitative data collection is mainly accomplished through questionnaire surveys. The use of questionnaire surveys is convenient to identify causal relationships between dependent

and independent variables by asking respondents to judge perceptually a certain phenomenon. (This study seeks to identify a causal relationship between RKT from subsidiaries to MNCs and various determinants potentially expected to influence the event. In this vein, a questionnaire survey is appropriate to achieve the research objectives of this study).

A questionnaire is an effective data-collection mechanism if the researcher knows how to measure the research variables and what is requisite (Sekaran, 2003). A questionnaire is “a preformulated written set of questions to which respondents record their answers, usually within closely defined alternatives (Sekaran, 2003: 236). Although there are different definitions of a questionnaire, it includes all techniques of data collection where a respondent is asked to reply to an identical set of questions in a prearranged order (deVaus, 2002). A questionnaire survey is often regarded as a popular strategy for conducting social science research (Saunders et al., 2009). In particular, it is a common technique allowing researchers to obtain large amounts of data from a certain population. The key strengths of this method are 1) it is possible to standardise the collected data from a certain population; 2) it is also commonly convenient when a relatively small amount of information needs to be acquired from respondents, and 3) it is useful when potential respondents are geographically dispersed (Robson, 2002; Saunders et al., 2009).

Questionnaires can be administered individually or mailed to the respondents, or handed out electronically (Sekaran, 2003). According to Sekaran (2003), when the survey is limited to a local area, the company can arrange groups of employees to reply to the

questionnaires in the workplace and so personally administered questionnaires are appropriate to collect data. The mailed questionnaire is the most common form of self-administered questionnaire (Babbie, 2003). Mailed questionnaires can cover a wide geographical area, and respondents can fill out the questionnaires at their own convenience (Sekaran, 2003). Mailed surveys have advantages: 1) they are comparatively low in cost; 2) they encourage respondents to provide thoughtful replies; 3) they can control possible interviewer bias better than personal interviews (Kanso, 2000); and 4) they provide considerable savings of time, they are convenient to respondents, they provide greater guarantee of anonymity, identical wording, no interviewer bias, and they secure responses (Bailey, 1994).

However, there are also downsides to mailed questionnaires, such as lack of flexibility, low response rates, an inflexible written format, uncontrolled date of response and question order, impossibility of recording spontaneous answers, difficulty of separating wrong address from non-responses, and difficulty of using complex questionnaire format (Bailey, 1994). As the response rates of mailed questionnaires are generally not as high as might be expected, techniques for enhancing the response rates may be required. This study used monetary incentives (i.e., small gifts), follow-up post cards, introductory notification by letters and stamped return postage to provoke higher response rates and counteract the weakness of the questionnaire survey stated above (Kanso, 2000). Hair et al. (2003) suggested ways to raise response rates in mail surveys (see Table 4.1).

Table 4.1 Methods to increase mail survey response rates

Methods	Examples
Preliminary Contact	Letter, email or phone call in advance.
Personalisation	Personally typed and addressed letter, personal signature.
Response Deadline	Supply a due date in the letter.
Appeals	Provide evidence that survey is crucial.
Sponsorship	Indicating sponsorship in case survey sponsor is an important organisation.
Incentives	Non-monetary gifts and small monetary gifts.
Questionnaire Length	Print on both sides of the paper in less than four pages.
Type of Postage	Includes a postage-paid envelop to return the questionnaire.
Follow-ups	Send follow-up reminders and sometimes a second copy of questionnaire.

Source: Hair et al. (2003: 133)

Using a “what” type of question is more likely to favour a questionnaire survey approach. This study also uses this type of question in the key research question i.e. “what are the key factors which affect RKT?” This can be used to investigate aspects of a circumstance, and the building of cause-and-effect relationships between variables is especially useful to the strategy (Robson, 2002). In addition, a questionnaire survey approach is appropriate for descriptive research which asks questions such as “What have you transferred to headquarters?” This type of “what” question is basically related to the inquiry type of a “how much” or “how many” and thus, identifying such ways is more likely to lead to a preference for survey methods than others, and a survey can be easily designed to list the “what” (Yin, 2008). Other questions which are well handled by a questionnaire survey strategy are the “who” or “where” type of enquiry (Robson, 2002). Yin (2008) argues that the first and most crucial condition for distinguishing between

different research methods is to categorise the type of research question being asked; thus, he differentiates research methods according to the type of research question presented as follows (Table 4.2).

Table 4.2 Appropriate research questions for different research methods

Method	Form of Research Question
Experiment	How, why?
Survey	Who, what, where, how many, how much?
Archival Analysis	Who, what, where, how many, how much?
History	How, why?
Case Study	How, why?

Source: Yin (2008: 8)

As time plays a critical role in the design and implementation of research, researchers need to consider a set of time-related options in the design of their research: longitudinal studies and cross-sectional studies (Babbie, 2003). A longitudinal study is designed to allow observations of the same phenomenon for the long term and the studies can be more difficult for quantitative approaches, such as large-scale surveys (Babbie, 2003). A questionnaire survey approach is adequate for a cross-sectional examination (Bailey, 1994). The term “cross-section” refers to coverage of a sample having different ranges of dissimilar backgrounds in terms of age, education, income, race, religion and others. Thus, the method makes it possible to focus on the situation of events in the research population at a particular point in time. In a cross-sectional study, various segments of the population are sampled so that relationships between variables can be explored by cross-tabulation (Zikmund, 2003). By examining various factors between headquarters and subsidiaries, this study focuses on the transfer of LMI from subsidiaries to its headquarters via a cross

sectional approach.

In short, the choice of data collection methods relies on the availability of facilities, the level of accuracy required, the professionalism of the researcher, the period of the research, and other expenses and resources related to and available for collecting the data (Sekaran, 2003). The data collection methods can affect the accuracy and reliability of research data; thus, it is very critical to select the appropriate method (Hair et al., 2003). By comparing research topics with the advantages and disadvantages of each method, researchers can choose one that is appropriate for their needs (Cooper and Schindler, 2008).

In terms of cost and deadline, mail questionnaires generate a much larger chance of nonresponse error though they are typically less expensive, for instance, than interviews; thus, several techniques are generally used in order to promote higher response rates (Zikmund, 2003). Although data collection methods contain many ethical issues, such as the right to privacy of respondents, respondents' right to understand the objective of the research, the need for honesty in data collection and keeping objectivity in reporting data (Zikmund, 2003), self-administered questionnaires may be more useful for sensitive issues (e.g., RKT). (Babbie, 2003). More importantly, a questionnaire survey is one of the best methods when a researcher attempts to identify a cause-and-effect relationship, like in this study.

4.2.2 Selection of Data Collection Method with Evaluation of the Methods Employed by Contemporary Research

In line with the explanation about questionnaire surveys in the previous section, the most appropriate data collection technique to achieve the research objectives of this study can be determined by investigating the methods employed in previous studies. Table 4.3 shows the research populations, methodologies and respondents in the previous key studies on RKT (including knowledge transfer) within MNCs (from MNCs to foreign/ Korean subsidiaries or from foreign/ Korean subsidiaries to MNCs) from 1995 to 2015. As shown in Table 4.3, many extant studies that have investigated knowledge (including know-how, technology and marketing knowledge) transfer between headquarters and subsidiaries utilise predominantly a quantitative methodology (e.g., questionnaire survey) more than a qualitative one (e.g., interviews) (e.g., Ambos et al., 2006; Björkman et al., 2004; Boh et al., 2013; Borini et al., 2012; Foss and Pedersen, 2002; Håkanson and Nobel, 2001; McGuinness et al., 2013; Minbaeva, 2007; Nair et al., 2015; Najafi-Tavani et al., 2012; Peltokorpi, 2015; Pérez-Nordtvedt et al., 2008; Yang et al., 2008, among others). The consistent use of the quantitative methodology may be derived from the research objective of finding the causal relationships between the change in a variable and impact of the change on another variable (Kim, 2003). However, some studies used interviews for data collection (Björkman et al., 2004; Dobrai et al., 2012; Doz, 1996; Håkanson, 1995; Li et al., 2010; Mudambi et al., 2014; Rabbiosi, 2011; Rabbiosi & Santangelo, 2013; Roth et al., 2009; Zou & Ghauri, 2008) and secondary data (Barkema et al., 1997; Chen et al., 2012; Iwasa & Odagiri, 2004) as interviews are suitable to obtain complex and sensitive information, or in a situation requiring a lot of explanations to answer research

topics (Hair et al., 2003) and secondary data are useful when researchers cannot conduct primary research due to cost, legal and physical constraints (Cooper and Schindler, 2008).

With regard to the populations, the majority of previous studies collected data from subsidiaries (IJVs, acquisitions, R&D units, and other foreign subsidiaries) rather than MNCs in order to investigate the determinants of knowledge transfer and RKT. To sum up, studies about knowledge transfer and RKT have generally selected questionnaire surveys although there were exceptional studies employing secondary data and interviews. One possible reason for this may be that scholars have selected methodology in accordance with data availability, respondent accessibility, and time and cost. However, the prevalence of the selection of questionnaire survey in the previous studies on knowledge transfer or RKT suggests that questionnaire survey is an appropriate methodology for this study. Additionally, earlier studies collected data mainly from foreign subsidiaries. Thus, obtaining responses from foreign subsidiaries in this study in order to investigate the key factors affecting RKT should not be problematic.

Table 4.3 Methods used in the previous key studies on knowledge transfer (including RKT) or Korean subsidiaries

Research	Research objective	Population	Sample	Methodology	Respondents
Håkanson, 1995	Identifies conditions influencing sharing, transfer, and synergistic exploitation of technical capabilities.	Swedish MNCs	3 case studies	Interview	General managers
Doz, 1996	Examines how learning takes place in strategic alliances.	Strategic alliances of new product development and business	3 alliance cases	Secondary data & interview	56 executives and managers
Barkema et al., 1997	Examines organisational learning to handle IJVs, and its impacts on longevity.	Expansions of 25 large Dutch firms	224 IJVs	Secondary data	-
Lane & Lubatkin, 1998	Determines critical factors affecting learning in IJVs.	Alliances in biotechnology and pharmaceutical industries	69 R&D alliances	Panel data, questionnaire survey & secondary data	Executives
Bresman et al., 1999	Identifies factors facilitating knowledge transfer and patterns of knowledge transfer.	Swedish MNCs	210 R&D operations & 3 cases	Questionnaire survey & interview	R&D managers
Gupta & Govindarajan, 2000	Explores the determinants of knowledge flows within MNCs	75 MNCs headquartered in the U.S., Europe, and Japan	374 subsidiaries	Questionnaire survey & secondary data	Presidents
Kale et al., 2000	Confirms whether relational capital functions as means of learning partner know-how and protect core proprietary assets.	US alliances	592 companies	Questionnaire survey	Managers

(continued).

Table 4.3 (continued).

Research	Research objective	Population	Sample	Methodology	Respondents
Håkanson & Nobel, 2001	Examines the influence of organisational characteristics on reverse technology transfer	17 Swedish MNCs	Foreign R&D units	Questionnaire survey	Directors
Lane et al., 2001	Tests IJV performance and learning in terms of three different dimensions of absorptive capacity.	Hungarian IJVs	78 IJVs	Questionnaire survey	Presidents or general managers
Tsai, 2001	Examines the effects of network position and absorptive capacity on effectiveness of learning.	2 large MNCs	60 business divisions	Questionnaire survey	Employees
Foss & Pedersen, 2002	Examines the role of subsidiary knowledge sources, the organisational methods and conditions for successful knowledge transfer in MNCs	Subsidiaries of 7 countries	2107 subsidiaries	Questionnaire survey	Executive offices, managers or controllers in the subsidiary
Ivarsson & Vahlne, 2002	Examines extent to which MNCs coordinate and integrate technology through IAs	IAs located in Sweden in 1993	364 acquisitions	Questionnaire survey	Local managers
Tsang, 2002	Examines how firms acquire local knowledge from IJV experience.	Hong Kong and Singaporean IJVs in China	Manufacturing IJVs (550 Hong Kong and 380 Singaporean)	Questionnaire survey & interview	Executives
Björkman et al., 2004	Examines the influence of organisational mechanisms on inter-unit knowledge flows in MNCs.	150 subsidiaries in Finland and 300 subsidiaries in China	134 Finnish and Chinese MNC subsidiaries	Interview	Top managers

(continued).

Table 4.3 (continued).

Research	Research objective	Population	Sample	Methodology	Respondents
Iwasa & Odagiri, 2004	Investigates the role of overseas R&D subsidiaries in enhancing the technological capabilities of firms.	Manufacturing firms (for the 1998) with one or more subsidiaries in the US	137 Japanese multinationals	Secondary Data	-
Norman, 2004	Examines how intent to learn, opportunities to learn, and ability to learn impact on alliance outcomes.	Alliances in micro-electronics, telecommunications, and computers	357 firms	Questionnaire survey	Senior managers
Pak & Park, 2004	Examines the effects of relation- & knowledge-specific variables on knowledge transfer.	Korean IJVs	195 IJVs	Questionnaire survey	Directors
Simonin, 2004	Investigates the process of knowledge transfer in international strategic alliances	Large and medium US companies	147 multinationals	Questionnaire survey	Top executives
Anand et al., 2005	Examines whether the multinational geographic scope of the target firm is critical for transferring resources.	Horizontal acquisitions in Europe and North America between 1988 and 1992	2020 acquisitions	Questionnaire survey	CEOs and senior executives
Zhao et al., 2005	Examines how networks in which IJV partners operate influence transfer and diffusion of knowledge.	Sino IJVs	4 IJVs	Observation & interview	Managers

(continued).

Table 4.3 (continued).

Research	Research objective	Population	Sample	Methodology	Respondents
Ambos et al., 2006	Investigate headquarters' benefits from RKT	Subsidiaries belong to 33 MNCs headquartered in Europe	66 overseas subsidiaries	Questionnaire survey & secondary data	Managers
Minbaeva, 2007	Analyse the impacts of four determinants of knowledge transfer on the extent of knowledge transfer from headquarters to subsidiaries	358 Danish MNCs	305 Danish subsidiaries	Questionnaire survey	HRM manager/ general manager
Pérez-Nordtvedt et al., 2008	Explores the influence of knowledge characteristics, learning intent of receivers, attractiveness of sources, and the quality of relationship on knowledge transfer from the international organisations.	Firms having at least 100 employees and at least 10 per cent in international sales in 2003 from 2004 CorpTech directory	1948 firms	Questionnaire survey	CEOs and senior executives
Yang et al., 2008	Explores the determinants of knowledge transfer to and from subsidiaries in transition economies.	4027 foreign subsidiaries	105 subsidiaries	Questionnaire survey	CEOs
Zou & Ghauri, 2008	Examines process learning & impacts on successful IAs.	Acquisitions in manufacturing sector in China	4 cases	Interview	CEOs and executives

(continued).

Table 4.3 (continued).

Research	Research objective	Population	Sample	Methodology	Respondents
Noorderhaven & Harzing, 2009	Investigate the impacts of social interaction on intra-MNC knowledge flows	2754 subsidiaries of MNCs	169 MNC subsidiaries	Questionnaire survey	Managing directors
Roth et al., 2009	Exploring conditions for subsidiary use of transferred marketing knowledge	15 MNCs	34 interviews	Interview	Marketing managers
Li et al., 2010	Examines impacts of relational and contractual mechanisms on foreign subsidiaries' knowledge acquisitions from local suppliers.	Foreign manufacturing subsidiaries	168 foreign subsidiaries	Interview	Senior managers
Rabbiosi, 2011	Investigate the effects of coordination mechanisms on subsidiary roles and RKT	All Italian MNCs with more than 50 employees operating in manufacturing industries	358 Italian MNCs	Interviews	Top managers
Borini et al., 2012	Investigates factors affecting the reverse transfer of innovation of foreign subsidiaries.	46 Brazilian multinationals operating until 2006	93 subsidiaries from 30 multinationals	Questionnaire survey	CEOs
Chen et al., 2012	Examines emerging-market multinational corporations' (EM MNCs) reverse knowledge spillover through FDI	9953 EM MNCs	493 EM MNCs between 2000 and 2008	secondary data	-

(continued).

Table 4.3 (continued).

Research	Research objective	Population	Sample	Methodology	Respondents
Choi & Johanson, 2012	Explores the impact of expatriates in knowledge translation from headquarters to foreign subsidiaries.	Employees with expatriation experience at Korean MNCs	480 employees in 5 Korean multinationals	Questionnaire survey	Employees
Dobrai et al., 2012	Examines critical issues of knowledge transfer in MNCs	Hungarian subsidiaries	74 subsidiaries	Interview and Questionnaire	Top managers or top HR managers
Najafi-Tavani et al., 2012	Explores the impacts of subsidiary characteristics and relationship characteristics on the extent of RKT.	UK subsidiaries	178 subsidiaries	Questionnaire survey	Managing directors, CEOs or general managers
Park et al., 2012a	Identify the key factors affecting the acquisition of LMI of IJVs	14,765 foreign investments	1389 IJVs	Questionnaire survey	CEOs (allowed pass the questionnaire to the next alternative)
Boh et al., 2013	Explore factors affecting knowledge transfer from parent firm to subsidiary	Vietnamese subsidiaries headquartered in Norway	70 employees in the Vietnamese subsidiaries	Questionnaire survey	Employees
McGuinness et al., 2013	Investigate the attributes that enhance RKT within MNCs.	Geographically dispersed subsidiaries of a MNC	3 subsidiaries	Case study based on an in-depth questionnaire survey	Managing director and heads of three divisions
Rabbiosi & Santangelo, 2013	Investigates the role of subsidiary age in RKT	84 foreign subsidiaries to 41 parent companies	146 transfers of knowledge	Interview	Managers

(continued).

Table 4.3 (continued).

Research	Research objective	Population	Sample	Methodology	Respondents
Mudambi et al., 2014	Explores the relationship between subsidiary innovativeness and RKT.	All Italian MNCs (operating in manufacturing industries with more than 50 employees)	293 Italian subsidiaries	Face-to-face structured interview	Top managers
Nair et al., 2015	Investigates the effects of parent absorptive capacity, perceived subsidiary ability and knowledge relevance on RKT.	The Indian MNCs with acquisitions between 2000 and 2010.	329 Indian MNCs	Questionnaire survey	Managers
Peltokorpi, 2015	Investigate the effects of corporate language proficiency and the richness of communication media on RKT	Foreign subsidiaries located in Japan (Tokyo)	1,363 host country national employees	Questionnaire survey	Middle manager

As shown in Table 4.3, in previous studies, mailed questionnaires, interviews, and secondary data are used as the main research methods. The aim of this study is to examine the extent of RKT by asking “what are the key elements of knowledge transfer capacity which affect RKT?” and “what are the key factors of relational capital which affect RKT?” Lane et al. (2001) demonstrate that it is difficult to find out available and reliable secondary data in emerging countries, thus researchers examining foreign subsidiaries in those countries need to use surveys for data collection. Therefore, secondary data analysis is not suitable for this research due to its unavailability and/or incomplete information relating to the research questions.

Interviews are particularly inappropriate in the Korean context. According to De Mente (2004), Korean society induces people not to express directly personal opinions; therefore, Koreans tend to be too silent and passive in order to use the interview technique. Due to the unique cultural characteristics, Koreans hardly say “no” clearly in the presence of the person concerned. In such situations, main data collection through interviews may provoke distortion of the real world and subsequently incorrect research results. In addition, compared to a questionnaire survey, interviews are likely to be a costly and time-consuming process to collect data as researchers need to travel to the location of participants and carry out a fairly lengthy conversation (Saunders et al., 2009).

Therefore, a questionnaire survey will be undertaken by covering all geographical areas of Korea, and thus availability of respondents is crucial. Additionally, self-administrated questionnaires are typically cheaper and quicker than face-to-face interviews. This consideration is important for a self-funded student who wants to

conduct a survey for a study (Babbie, 2003). Finally, Table 4.3 indicates that all three studies (Choi and Johanson, 2012; Pak and Park, 2004; Park et al., 2012b) investigating knowledge transfer empirically in the Korean context used a mailed questionnaire. Based on previous studies that conducted their empirical experiments in the Korean context, the questionnaire survey method seems to be more suitable for this study than other data collection techniques.

4.3 Questionnaire Survey for Data Collection

Selecting the appropriate data collection method is very critical for researchers, as the selected tool may affect the quality of data and results, and finally decide the success of the empirical investigations. Therefore, a questionnaire survey targeting foreign subsidiaries in Korea was selected as a data collection method in this study. The background and reason for selecting the method were discussed in the previous section.

4.3.1 Sampling Process

The targets for this study are subsidiaries established by MNCs in order to examine the subsidiaries' RKT to their headquarters. The initial population is based on *Foreign Direct Investment* (2014) published by the Korean Ministry of Trade, Industry and Energy (MOTIE). *Foreign Direct Investment* (2014) includes significant reliable information which is authorised by the Korean government. Additionally, the information contains various types of foreign investments which have been managing business-associated activities in Korea, and it provides a comprehensive data list of 15,566 foreign

investments. For this reason, previous studies (e.g., Choi and Beamish, 2004; Ghauri and Park, 2012; Park et al., 2012a; Park and Choi, 2014, Choi and Beamish, 2013) which have attempted to examine the influences of FDI in Korea, also used the same data for their research.

To reiterate, this study attempts to identify key factors affecting the transfer of LMI from MNC subsidiaries located in Korea to their headquarters and observe the phenomenon from the perspective of subsidiaries¹⁰. This means that the population for this study consists of foreign subsidiaries which have a non-Korean parent company and are operating in Korea. In this regard, this research adopts the following sampling criterion for the empirical experiments:

(1) Subsidiaries which hold more than 50 employees. (Micro-sized subsidiaries may be run like personal or family businesses (Miao et al., 2011); thus, they will be unlikely to be involved in knowledge transfer to headquarters)

(2) Subsidiaries which have at least two years of operational experience by 2013. (Rowley et al. (2013) argue that it may be difficult to accumulate fully local market knowledge when they run their business over a short time period.)

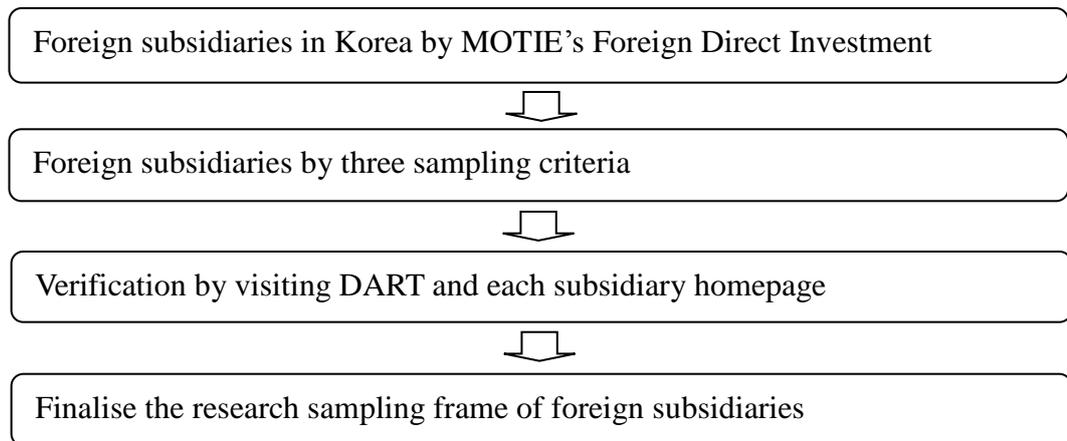
(3) Foreign wholly owned subsidiaries or subsidiaries in which MNCs possess more

¹⁰ Someone may argue that a better sample should be headquarters rather than subsidiaries in that teacher firms (i.e., subsidiaries) may think the transfer of local information is well undertaken and any failure of RKT is due to MNCs. This possibly triggers common method and response biases. In order to examine whether this study suffers from common method bias, three-way methods were conducted. However, it was not found to be a serious problem (this issue will be revisited again). In addition, this study acknowledges the possible existence of response bias in the case where this researcher examines the extent of RKT *per se* (in this situation that subsidiaries insist they have transmitted a huge amount of knowledge can be problematic). However, the objective of this study is not an examination of the extent of RKT, but an inspection on channels facilitating the subsidiaries' RKT to their headquarters. In this vein, examination of subsidiaries would not be problematic.

than 50 per cent equity ownership. They are potentially liable for providing LMI to their headquarters as foreign investors hold dominant power in their subsidiaries' operations. Similarly, in a study about the transfer of LMI in IJVs, Park et al. (2012a) also include only IJVs in which MNCs possess more than 50% of the equity.

After following three sampling processes, subsidiaries were double-checked by using website data. The information can be obtained by using an online website (<http://dart.fss.or.kr/>) which is a web site of Data Analysis, Retrieval and Transfer System authorised by the Financial Supervisory Service, a government department. By using the website, it is possible to find out the current corporate names and their homepage addresses. The data is updated every year by the Korean government, but it is possible that some subsidiaries might not run the business any more, due to a switchover to local firms, end of contract, bankruptcy, diversification by foreign firms, and other reasons. Thus, it was suggested to verify the maintenance of business operations by visiting the company websites of the directory. This is also necessary to find out the location of subsidiaries. In addition, in the case where homepage addresses have been changed, the online database is able to trace it, and thus it is useful to obtain the precise information on the website addresses. Through these processes, a total of 1,343 firms were finally compiled as a sampling frame.

Figure 4.1 Sampling process



4.3.2 Selection of Respondents

It is critical for researchers to select suitable informants, since data collection through inadequate respondents may cause inaccurate empirical outcomes as well as incorrect reflection of real phenomena. With regard to respondent selection, researchers can obtain some ideas about the best informants who recognise the changes in internal knowledge base better than other personnel within organisations through reviewing previous studies, which investigated similar topics. Table 4.4 shows that prior studies regarding knowledge transfer (including RKT) selected different participants/ respondents for data collection through questionnaires.

Table 4.4 Respondents/participants in the previous key studies on knowledge transfer (including RKT)

Positions	Studies
Employees	Choi and Johanson, 2012; Boh et al., 2013
Managers	Ambos et al., 2006; Dobrai et al., 2012; Minbaeva, 2007
General managers	Minbaeva, 2007; Najafi-Tavani et al., 2012
Directors	McGuinness et al., 2013; Najafi-Tavani et al., 2012; Noorderhaven and Harzing, 2009
Executives	Rowley et al., 2013
CEOs	Borini et al., 2012; McGuinness et al., 2013; Najafi-Tavani et al., 2012; Rowley et al., 2013; Yang et al., 2008

It can be seen that questionnaires were distributed to different levels of respondents in previous studies. Whatever the researcher chose as their respondents, no one may deny that respondents can be dichotomised into two groups, such as 1) top management (e.g., CEOs, executives, directors and general managers) and 2) functional or middle managers, and researchers generally have a propensity to prefer to send the questionnaire to the former. Moreover, the choice of respondents in a knowledge transfer study may be related to the information type that researchers want to investigate. That is, in the case where researchers want to explore the transfer of a particular type of knowledge, functional or middle managers are perhaps better informants. For instance, when Bresman et al. (1999) tried to examine specific learning mechanisms associated with the absorption of operational skills, they posted their questionnaires to R&D managers.

However, the main objective of this study is not to discover the critical factors influencing the acquisition of functional knowledge, but to identify the key factors affecting the RKT of local market information (e.g., market data about local competitors and customers, know-how of marketing and market distribution, and market-specific technological know-how). By taking into consideration the two important facts indicated

above, top managers are obviously better informants in this study, as they are likely to identify the changes in organisational information better than middle (functional) managers. In addition, general managers of foreign subsidiaries in Korea are likely to work closely with local firms on the basis of the same knowledge; thus, they can be the eligible person for implementing RKT (Park and Vertinsky, 2016).

4.4 Questionnaire development and Pre-test

Once a questionnaire has been completed, each question and the questionnaire overall needs to be checked and evaluated thoroughly before final data collection, which is called pre-testing or pilot testing (questionnaire design will be explained later) (De Vaus, 2014). Pre-testing is considered to be a necessary process in survey research as it is not only important to recognise questionnaire problems, but also crucial to facilitate the elimination of ambiguities and other causes resulting in bias and errors (Singh, 2007b). In other words, a pre-test is a way to confirm that the respondents understand the questionnaires and are indeed able to answer meaningfully (Perneger, Courvoisier, Hudelson and Gayet-Ageron, 2014). In this regard, pre-testing is a central part of the questionnaire development process; thus, the pre-test in this study is used to clarify that the questionnaire is suitable for data collection in terms of its language and structure in order to successfully collect adequate information required from the target population (Reynolds and Diamantopoulos, 1998).

4.4.1. Questionnaire development procedure

It is critical that a researcher chooses the appropriate respondents to answer the research questions and to address research objectives; thus, the researcher needs to review literature carefully and discusses ideas with colleagues, the supervisor and other interested parties (Saunders et al., 2009). This study employed multi-item scales in order to collect data on most of the main constructs and revised the questionnaire several times.

There were several changes to the questionnaire drafts as follows. First, the first version of the questionnaire was developed in English and reviewed by the supervisor. The contents of the covering letter and the order of questions were revised several times according to the feedback by the supervisor. For instance, the definition of the term ‘knowledge’ in the questionnaire was changed from local marketing knowledge to local market information. In addition, ‘company’ in the questionnaire was changed to ‘firm’.

Second, the questionnaire was translated into Korean and then back-translated to English by the researcher, Korean research students and a university professor, who was teaching English Education, in order to confirm the accuracy of the English version of the questionnaire and search for more appropriate words in the Korean version of the questionnaire. By doing so, some grammatical errors and expressions were amended. The questionnaires were sent in both the English and Korean languages in order to enhance response rates in that respondents can be a Korean or a foreigner. Although foreign respondents may have various national origins, this study prepared only an English version of the questionnaire for a foreigner since English is an international language and

commonly used worldwide. It is likely that respondents, who do not speak English (i.e., Korean respondents), would not be motivated to respond to a questionnaire written in English; thus, mailing the questionnaire in both languages is expected to enhance response rates in surveys (Brick, Montaquila, Han and Williams, 2012).

After that, the questionnaire was shown to a university professor, who has published in journals such as *International Business Review*, *Journal of World Business* and *Management International Review* with the topic of knowledge transfer and acquisition, in order to confirm its appropriateness and explicitness. Following his comments, the order of the questions was modified slightly. The revised version of the questionnaire was, in turn, confirmed by the supervisor, again. Finally, some more items asking general information on firms were added according to the feedback received from the supervisor.

4.4.2. Pre-test administration

According to Baker (1999), a pre-test can be conducted in two stages: preliminary pre-test and a formal one. Preliminary pre-test is generally used to check the meaning of questions at the first stage. Afterwards, a formal pre-test is implemented in a way that it is almost identical with actual survey posterior to conducting the preliminary test. As suggested by explanations given by previous studies, this study also employed two stages of pre-test. For the preliminary test, the questionnaire was pre-tested by 10 PhD students who are studying Economics, Marketing and International Business in Korea. They suggested that some of the questions were ambiguous, and thus several items were re-worded for the sake of clarity. Additionally, some questions were added to the section of

firm background according to their suggestions.

For the formal pre-test, this study conducted a mailed survey to firms, which are similar to the targeted sample as a final pre-test method (the reason for this is given below). Reynolds and Diamantopoulos (1998: 484) also suggest that “To be sure that the pre-test covers all aspects of the field survey, it would appear necessary to use the planned survey method”. In terms of the issue on the sample size of pre-test, De Vaus (2014) suggests that it is important to test the questionnaire with as large a number of people as possible because too few respondents may provoke problems, such as non-response. According to his advice, the sample size should be somewhere between 75 and 100 respondents. He argues further that it will be desirable to undertake the pre-test with respondents, who closely match the final sample.

To adopt these comments regarding the pre-test, this researcher sent out the questionnaire to 90 subsidiaries which were selected by three different formation characteristics: 1) subsidiaries which employ less than 50 employees; 2) subsidiaries which had less than two years of operational experience by 2013; and 3) subsidiaries in which MNCs possess less than 50 per cent equity ownership. Three sampling criteria were imposed for the pre-test in order to avoid the situation that they overlapped with the actual sample (to see the criteria used for the final research sample, go to Section 4.3.1). By doing so, the pre-test sample had similar characteristics to the final sample, and the main survey was not repeated to the sample of the pre-test (for reference, as the sample for the pre-test, 90 subsidiaries were randomly chosen according to the three criteria).

The overall response rate of the pre-test was 17.8 per cent (see Table 4.5). The importance of a follow-up process to raise response rates was noted from the pre-test. The respondents, who participated into the pre-test, said that they had no difficulty in understanding and answering the questions. Based on their feedback, the final version of the questionnaire was completed (see Appendix A).

Table 4.5 Result of pre-test

Sample type	Number in pre-test sample	Returned number	Response rate (%)
subsidiaries with less than 50 employees	30	6	20.0
subsidiaries with less than two years of operational experience	30	5	16.7
subsidiaries in which MNCs possess less than 50 per cent equity ownership	30	5	16.7
Total	90	16	17.8

4.4.3. Final questionnaire

The final questionnaire was completed via several stages of drafts and pre-test process. It consists of three parts. The first part consists of general questions asking about organisational background and subsidiary characteristics, such as ‘type of industry’, ‘number of full-time employees, managerial employees and expatriates’, ‘year of establishment and foreign investment’, ‘ownership composition’, ‘the degree of competition in subsidiary industries’, ‘main activities of a subsidiary’, and ‘types of factory or facility’.

The second part of the questionnaire is made up of three sections concerned with

knowledge tacitness, knowledge transfer capacity and relational capital. The first section deals with questions about the degree of knowledge tacitness. The second section is designed to assess subsidiaries' knowledge transfer capacity (e.g., knowledge development capability, possession of prior-related knowledge, subsidiary willingness and subsidiary autonomy). In the last section, the questionnaire measures the level of relational capital between headquarters and subsidiaries (socialisation mechanisms, trust and organisational distance are included as components comprising relational capital in the research framework).

The final part of the questionnaire was related to the degree of RKT (e.g., information on market data about local customers, local competitors, marketing know-how, distribution know-how, market-specific technological know-how, and purchasing know-how). Additionally, respondents were asked to provide their name, job title and contact details in the case where they would like to receive a copy of the summary of the research findings. The measurements of each variable will be illustrated in the next section.

4.5 Measurements

4.5.1. Dependent variable

The dependent variable is the extent to which subsidiaries transfer LMI to headquarters. The measure of RKT was adapted from Najafi-Tavini et al. (2012a) and focuses on six types of LMI: information on market data about local customers, market data about local competitors, marketing know-how, distribution know-how, market-specific technological know-how, and purchasing know-how (classified by Gupta and

Govindarajan, 1994). This variable was measured by a five-point Likert scale (1 = very little, 5 = to very much), by asking respondents to answer the question “to what extent has this firm successfully transferred ... to headquarters?”

4.5.2. Independent variables

The independent variables expected to influence the RKT are categorised into two dimensions (see the research framework in detail): ‘knowledge transfer capacity (i.e., the characteristics of knowledge senders)’ and ‘relational capital (i.e., the characteristics of the relationships between knowledge senders and receivers)’. The first dimension is related to factors determining knowledge transfer capacity, which enable subsidiaries to teach or transfer LMI to headquarters. The second dimension is mainly comprised of factors explaining relational capital, which may affect the relationship between the parties directly involved in RKT.

4.5.2.1 Knowledge Transfer Capacity

Knowledge development capability

In order to transfer valuable knowledge to headquarters, subsidiaries need to have knowledge development capability in order to accumulate a stock of knowledge. When subsidiaries own adequate knowledge development capability, they will be able to efficiently access locally residing knowledge, turn it into articulate know-how and transform the knowledge into absorbable information (Tsai, 2001). Simonin (2004) argues that the capability corresponds to the appropriate deployment of human capital. That is, a sufficient level of well-educated personnel involvement is critical for effective

learning and the enhancement of internal abilities which are required to assist in the acquisition process (including storage) and the dissemination of relevant information. The influence of knowledge development capability on RKT is measured by an index relating to qualified employees, training and local embeddedness. To decide items for knowledge development capability, various facets suggested by previous studies are incorporated. Andersson, Forsgren and Holm (2002) and Gammelgaard et al. (2012) suggest that the extent of a subsidiary's knowledge access and development is affected considerably by the relationships or frequency of interactions with different business partners representing local embeddedness. Additionally, knowledge development capability is also related to a subsidiary's level of human capital as external knowledge can best be acquired and exploited when the subsidiary has and holds excellent individuals (Holtbrugge and Berg, 2004; Wang et al., 2004).

Accordingly, respondents were asked to answer the questions. "Our employees in the firm have adequate academic background to understand and use local market information very well." "This firm has expatriates who possess superior managerial and technical skills." "We commit significant resources to educating and training (a) non-managerial employees and (b) managerial employees to master local market information." "This firm has (a) a close relationship (b) frequent contacts (face-to-face contacts, letter, phone, etc.) with its local business actors, such as customers, suppliers and local institutions." Knowledge development capability was operationalised by a 5-point scale (ranging from "entirely disagree" to "extremely agree").

Possession of prior related knowledge

Knowledge is a valuable resource within MNC networks (Schulz, 2003); thus, accumulation and storage of organisational knowledge often features as the main success element of MNCs (Holtbrugge and Berg, 2004). A subsidiary's LMI helps headquarters to successfully develop competitive new products by providing a comprehensive understanding of specific local markets and exercise adequate localisation strategy (Lee et al., 2008). In addition, the possession of relevant knowledge by subsidiaries plays a pivotal role in helping parent firms to pay particular attention to subsidiary knowledge and recognise the possible benefits of the knowledge (Yang et al., 2008). These explanations may indicate that the ability to transfer and teach valuable knowledge largely comes from a function of knowledge transferring from a firm's level of prior related knowledge. That is, knowledge transfer can be greatest when teacher firms possess prior related knowledge (Park, 2011a).

Although there may be various ways to find out the possession of prior related knowledge of subsidiaries, the assessment of business relatedness with parent firms can be one of the most efficient approaches (Park, 2010). As business relatedness between a knowledge sender and a receiver reflects the fact that the knowledge sender possesses some previous knowledge of industry, customers and products that are associated with the knowledge possessed by the knowledge receiver, it (i.e., the level of business relatedness) can be used as a proxy for the measurement of previous related knowledge (Anh et al., 2006). Ghauri and Park (2012) also document that the level of similarity in products or services between knowledge transfers and receivers can be used to assess prior related knowledge. Mudambi et al. (2014) further argue that activity similarity

between knowledge exchanging parties influences decisively RKT. Taken together, knowledge relevance between subsidiaries and headquarters was measured by asking “compared to headquarters, how similar are (is) a) the products, b) the service, c) the customers, d) the basic technology, and e) the basic skills which are (is) produced (or provided and shared) by this firm.” Each question was measured by using a five-point Likert scale ranging from “entirely different” to “extremely similar”.

Willingness

The extant literature sheds light on the role of willingness as a fuse encouraging knowledge transfer (Martins, 2012; Minbaeva and Michailova, 2004). Knowledge holders will be more willing to share their knowledge if they receive or recognise an obvious reward (benefit) for doing so; thus, motivation to increase this willingness is important to the occurrence of successful knowledge transfer (Minbaeva, 2007). The same logic can be applied to subsidiary and MNC relationships. The willingness of subsidiaries commonly has a positive effect on the transfer of local information to MNCs (Minbaeva and Michailova, 2004). In order to measure subsidiary willingness, the perceptual measures suggested by Najafi-Tavani et al. (2012) were adapted. Respondents were asked to answer, “to what extent does this firm receive motivation which is associated with the transfer of its knowledge to headquarters?”, “to what extent does headquarters emphasise knowledge transfer as a criterion for assessing this firm?”, “to what extent is this firm’s main establishment motivation associated with the transfer of its knowledge to headquarters?”, “to what extent does this firm commit a considerable amount of time and resources for knowledge transfer to headquarters?”. All questions were based on a five-point Likert scale ranging from “very little” to “very much”.

Autonomy

Although subsidiaries play critical roles in organisational learning and knowledge diffusion within MNC networks (Kim et al., 2012) and subsidiary-headquarter relationship is represented as a hierarchical connection, intense centralisation (reverse to subsidiary autonomy) is unlikely to have a positive impact on knowledge sharing as much as extreme centralization (i.e. tight control by the headquarters) may harm subsidiaries' creativeness, which is detrimental for their knowledge sharing (Tsai, 2002). Several studies also prove that subsidiary autonomy has a positive effect on intra-organisational knowledge sharing. Miao et al. (2011) find that subsidiary autonomy can influence both the development of valuable knowledge and the occurrence of knowledge transfer within MNC networks. Foss and Pedersen (2002) comment that the autonomy of the subsidiary can be crucial for transferring knowledge to MNCs. Accordingly, following the operationalization of Miao et al. (2011), subsidiary autonomy was measured by asking respondents to indicate the extent of a subsidiary's strategic decision making without headquarters' interference. By using a five-point Likert scale (1 = entirely disagree, 5 = to extremely agree), the following questions were asked of respondents: "This firm is free to make decisions in terms of the following categories: 1) developments and changes in products/services for the domestic and export markets; 2) subsidiary human resource management; 3) financial management including pricing policy, and 4) marketing activities."

4.5.2.2 Relational Capital

Socialisation mechanisms

This variable was measured by four items using a five-point Likert scale (1- entirely

disagree; 5- to extremely agree). The first two items were based on the study of Ghauri, Cave and Park (2013) and respondents were asked to indicate if “there are (1) efficient channels for communication, and (2) frequent interfaces (i.e., visits and meetings) between this firm and headquarters.” Moreover, this study presupposes the influence of socialisation mechanisms between a subsidiary and its headquarters on RKT. It posited that socialisation mechanisms enhance significantly the extent of RKT (Najafi-Tavani et al., 2012) and the degree of teamwork involving people from both headquarters and its subsidiaries can be used to gauge the socialisation mechanisms (Rabbiosi and Santangelo, 2013). Accordingly, respondents were also asked to respond to the following two statements: (3) “our employees are often dispatched to co-work with headquarters” and (4) “active managerial support by headquarters is common for this firm.”

Trust

Morgan and Hunt (1994) conceptualise trust as a component, which can exist when both entities have overall confidence in an exchange of one another’s reliability. Accordingly, the one item measures the overall feature of trust in the working relationship with headquarters by asking if “there is a high level of trust between headquarters and the top management of this firm”. Another item measures the degree of trust of subsidiaries in its headquarters, and respondents were asked to respond to the statement “we trust that headquarters will make no decisions detrimental to this firm.” In addition, the third question, “we believe that headquarters trust that we will make no decisions detrimental to headquarters” in the questionnaire. Each question was associated with a five-point Likert scale (ranging from “entirely disagree’ to “extremely agree”).

Organisational Distance

Some factors, such as cultural differences, idiosyncratic corporate vision, incongruent goals, dissimilar business practices and non-identical operational mechanisms, generate a perception of “organisational distance.” The presence of these factors may create various problems in the knowledge transfer process (Ambos et al., 2006; Anh et al., 2006; Rabbiosi and Santangelo, 2013; Schlegelmilch and Chini, 2003). As an example, shared vision enhances the level of mutual understanding and meaningful communication in the process of knowledge sharing (Li et al., 2007). Additionally, knowledge transfer usually requires the share of common organisational goals and a high degree of mutual understanding of its cultural aspects. Building on the contributions of previous research, several items were used to capture different facets of organisational distance. Using a five-point Likert scale (ranging from “entirely disagree” to “extremely agree”), respondents were asked to indicate the extent to which they agree or disagree with the following statements. (1) “This firm has similar organisational culture to headquarters”, (2) “Cultural differences with headquarters have not been issues in this firm”, (3) “The formal vision statement of this firm and headquarters is similar”, (4) “This firm shares the same goal with headquarters”, and (5) “The business practices and operational mechanisms of this firm and headquarters are similar.” Then, the data have been reversely coded.

4.5.3 Control Variables

Mode of establishment

An important reason for an international acquisition, compared to Greenfield investment, is to learn target firms’ knowledge and to transfer the knowledge to other

MNCs' units (Bresman et al., 1999; Bjorkman et al., 2004). Unlike Greenfield subsidiaries to which MNCs need to transfer own knowledge, acquired local units tend to have a unique local knowledge base (Gupta and Govindarajan, 2000), which also indicates that international acquisitions rather than Greenfields implement more RKT activities to MNC headquarters (Foss and Pedersen, 2002). Thus, the levels of RKT between Greenfield and acquired subsidiaries are likely to be different (Mudambi et al., 2014). For this reason, the mode of establishment is selected as a control variable. In order to control the potential influence of the factor on RKT, a dummy variable was used (1= Greenfield subsidiaries, and 0= brownfield subsidiaries).

Industry Characteristics

Industry characteristics may have the critical influence on knowledge transfer within MNC networks since the innate attributes of knowledge can differ according to industry (Minbaeva et al., 2003). For example, local market relevant knowledge used in service sectors is more difficult for subsidiaries to learn, in that know-how in such industries is typically embedded in human beings, which logically lessens the extent to which headquarters have opportunities to absorb the information (Lane and Lubatkin, 1998; Rabbiosi, 2008; Yli-Renko et al., 2001). So services are more likely to contain tacit knowledge and may require a process to transform tacit knowledge to explicit knowledge, so that knowledge moves from one firm to another (Park et al., 2009a). In other words, the patterns of knowledge flows in manufacturing industries are different from those in service industries (Yang et al., 2008). Therefore, industry characteristics need to be controlled and measured by a dummy variable (1= service industries, and otherwise 0).

Subsidiary size

Several studies (e.g. Bjorkman et al., 2004) have shown that subsidiary size can affect knowledge transfer. Given the organisational power which is derived from size, larger firms often have the chance to interact with local entities, generate knowledge by themselves and usually accumulate more information than smaller firms (Li et al., 2007). This explanation indirectly implies that knowledge outflow will be higher when the size of subsidiaries is large (Minbaeva et al., 2003). Based on these arguments, subsidiary size is included in the research framework. Extant empirics examining knowledge transfer in international domains commonly measure the variable as the number of employees in each subsidiary (e.g., Minbaeva et al., 2003; Park et al., 2009a; Park, Whitelock and Giroud, 2009; Tsai, 2001; Yang et al., 2008). This study uses the same criteria. The respondents were asked to indicate the total number of employees in their firms by means of an open-ended question. For the complementary analysis (i.e., Spearman rank order correlation), subsidiary size was divided into three different groups (i.e., small-sized subsidiaries with less than 100 employees, medium-sized subsidiaries with between 100 and 300 employees, and large-sized subsidiaries with more than 300 employees).

Subsidiary Age

Older subsidiaries tend to be more innovative and interested in knowledge exchanges to other MNC units (Minbaeva et al., 2003). In addition, older subsidiaries have had more time to embed in their local environment and accumulate a knowledge stock which is the basis of effective RKT (Rabbiosi and Santangelo, 2013). Thus, subsidiaries' duration of operations has been related to organisational knowledge; that is, older subsidiaries tend to have higher levels of such knowledge (Mudambi and Navarra, 2004). Foss and

Pedersen (2002) and Park et al. (2009a) also argue that older IJVs tend to have a better knowledge base as they have greater time for knowledge accumulation. For these reasons, this study includes subsidiary age as a control variable. Following Anh et al. (2006), Mudambi et al. (2014), Park et al. (2009a), and Yang et al. (2008), subsidiary age was measured by the number of years since creation of the organisations. (Its criterion was year 2015)

Knowledge tacitness

Knowledge can be generally categorised as tacit or explicit. Some knowledge has more tacit characteristics than the other (Rabbiosi and Santangelo, 2013). Moreover, it has long been argued that tacit knowledge is harder to codify and difficult to transfer due to its sticky attributes (Blomkvist, 2012). In this vein, this study views the factor as a necessary element to be controlled as a control variable and includes it (*knowledge tacitness*) to measure the extent to which the subsidiary's knowledge is characterised by tacit information. This study focuses on six types of LMI classified by Gupta and Govindarajan (1994).

Using a five-point Likert scale ranging from “entirely disagree” to “extremely agree”, respondents were asked to indicate the extent to which they agree or disagree with the following questions. (1) “It is hard to verbally transfer market data about customers to headquarters”, (2) “It is hard to encode and write down market data about customers in reports or documents with the purpose of transferring the knowledge to headquarters”, (3) “It is hard to verbally transfer market data about competitors to headquarters”, (4) “It is hard to encode and write down market data about competitors in reports or documents

with the purpose of transferring the knowledge to headquarters”, (5) “It is hard to verbally transfer marketing know-how to headquarters”, (6) “It is hard to encode and write down marketing know-how in reports or documents with the purpose of transferring the knowledge to headquarters”, (7) “It is hard to verbally transfer distribution know-how to headquarters”, (8) “It is hard to encode and write down distribution know-how in reports or documents with the purpose of transferring the knowledge to headquarters”, (9) “It is hard to verbally transfer market-specific technological know-how to headquarters”, (10) “It is hard to encode and write down market-specific technological know-how in reports or documents with the purpose of transferring to headquarters”, (11) “It is hard to verbally transfer purchasing know-how to headquarters”, and (12) “It is hard to encode and write down purchasing know-how in reports or documents with the purpose of transferring to headquarters”

Table 4.6 Operationalisation of the variables using Likert-type questions

Variables	Measure indicators	Sources
<p>Reverse Knowledge Transfer</p> <p>Measured on a five-point scale 1=very little, to 5=very much</p>	<ul style="list-style-type: none"> -To what extent has this firm successfully transferred market data about customers to headquarters? -To what extent has this firm successfully transferred market data about competitors to headquarters? -To what extent has this firm successfully transferred marketing know-how to headquarters? -To what extent has this firm successfully transferred distribution know-how to headquarters? -To what extent has this firm successfully transferred market-specific technological know-how to headquarters? -To what extent has this firm successfully transferred purchasing know-how to headquarters? -Overall, to what extent has this firm successfully transferred local market information to headquarters? 	<p>Najafi-Tavini et al. (2012); Gupta and Govindarajan (1994)</p>
<p>Knowledge development capability</p> <p>Measured on a five-point scale 1=entirely disagree, to 5=extremely agree</p>	<ul style="list-style-type: none"> -Our employees in the firm have adequate academic background to understand and use local market information very well. -This firm has expatriates who possess superior managerial and technical skills. -We commit significant resources to educating and training non-managerial employees to master local market information. -We commit significant resources to educating and training managerial employees to master local market information. 	<p>Wang et al. (2004); Andersson et al. (2002)</p>

	<p>-This firm has a close relationship with its local business actors, such as customers, suppliers and local institutions.</p> <p>-This firm has frequent contacts (face-to-face contacts, letter, phone, etc.) with its local business actors, such as customers, suppliers and local institutions.</p>	
<p><i>Possession of prior-related knowledge</i></p> <p>Measured on a five-point scale 1=entirely different, to 5=extremely similar</p>	<p>-Compared to headquarters, how similar are the products which are produced by this firm?</p> <p>-Compared to headquarters, how similar is the service which is provided by this firm?</p> <p>-Compared to headquarters, how similar are the customers who are shared by this firm?</p> <p>-Compared to headquarters, how similar is the basic technology which is shared by this firm?</p> <p>-Compared to headquarters, how similar are the basic skills which are shared by this firm?</p>	Park (2011a)
<p><i>Willingness</i></p> <p>Measured on a five-point scale 1=very little, to 5=very much</p>	<p>-To what extent does this firm receive motivation which is associated with the transfer of its knowledge to headquarters?</p> <p>-To what extent does headquarters emphasise knowledge transfer as a criterion for assessing this firm?</p> <p>-To what extent is this firm's main establishment motivation associated with the transfer of its knowledge to headquarters?</p> <p>-To what extent does this firm commit a considerable amount of time and resources for knowledge transfer to headquarters.</p>	Najafi-Tavini et al. (2012)
<p><i>Autonomy</i></p> <p>Measured on</p>	<p>-This firm is free to make decisions in developments and changes in products/services for the domestic and export markets.</p> <p>-This firm is free to make decisions in subsidiary human resource management.</p>	Miao et al. (2011)

<p>a five-point scale 1=entirely disagree, to 5=extremely agree</p>	<p>-This firm is free to make decisions in financial management including pricing policy. -This firm is free to make decisions in marketing activities.</p>	
<p><i>Socialisation mechanisms</i> Measured on a five-point scale 1=entirely disagree, to 5=extremely agree</p>	<p>-There are efficient channels for communication between this firm and headquarters. -There are frequent interfaces (i.e., visits and meetings) between this firm and headquarters. -Our employees are often dispatched to co-work with headquarters. -Active managerial support by headquarters is common for this firm.</p>	<p>Ghauri et al. (2013); revised from Najafi-Tavani et al., 2012; Rabbiosi & Santangelo, 2013</p>
<p><i>Trust</i> Measured on a five-point scale 1=entirely disagree, to 5=extremely agree</p>	<p>-There is a high level of trust between headquarters and the top management of this firm. -We trust that headquarters will make no decisions detrimental to this firm. -We believe that headquarters trust that we will make no decisions detrimental to headquarters.</p>	<p>Created by this study</p>
<p><i>Organisational Distance</i> Measured on a five-point scale 1=entirely disagree,</p>	<p>-This firm has a similar organisational culture to headquarters. -Cultural differences with headquarters have not been issues in this firm. -The formal vision statement of this firm and headquarters is similar. -This firm shares the same goal with headquarters. -The business practices and operational mechanisms of this firm and headquarters are similar.</p>	<p>Li et al. (2007)</p>

to 5=extremely agree		
<p><i>Knowledge tacitness</i></p> <p>Measured on a five-point scale 1=entirely disagree, to 5=extremely agree</p>	<ul style="list-style-type: none"> -It is hard to verbally transfer market data about customers to headquarters. -It is hard to encode and write down market data about customers in reports or documents with the purpose of transferring the knowledge to headquarters. -It is hard to verbally transfer market data about competitors to headquarters. -It is hard to encode and write down market data about competitors in reports or documents with the purpose of transferring the knowledge to headquarters. -It is hard to verbally transfer marketing know-how to headquarters. -It is hard to encode and write down marketing know-how in reports or documents with the purpose of transferring the knowledge to headquarters. -It is hard to verbally transfer distribution know-how to headquarters. -It is hard to encode and write down distribution know-how in reports or documents with the purpose of transferring the knowledge to headquarters. -It is hard to verbally transfer market-specific technological know-how to headquarters. -It is hard to encode and write down market-specific technological know-how in reports or documents with the purpose of transferring to headquarters. -It is hard to verbally transfer purchasing know-how to headquarters. -It is hard to encode and write down purchasing know-how in reports or documents with the purpose of transferring to headquarters. 	<p>Blomkvist (2012); Gupta and Govindarajan (1994)</p>

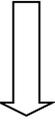
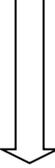
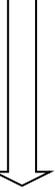
4.6 Main data collection

This study focuses on foreign subsidiaries in Korea, and the data for this research were collected from March 2015 to June 2015 (four months). After several revisions and pre-test processes, the finalised questionnaire was sent to subsidiaries via first-class postage mail (i.e., recorded delivery). The post also included a covering letter and pre-paid envelope for return. At the same time, the same questionnaire was also sent through e-mail that was already checked at the onset stage of the survey in order to provide respondents with convenience of participation in the survey as well as to increase response rates. Follow up phone calls were made and reminder postcards were sent to non-responding subsidiaries every two weeks. When the researcher phoned, some respondents wanted to receive the questionnaire by e-mail. In that case, another questionnaire was sent to their individual e-mail, again. Moreover, some respondents said they did not find the questionnaire, and thus another questionnaire was sent to them to help them not to waste time and efforts to find the questionnaire which had been sent before.

As aforementioned in Section 4.2.2., monetary incentives are likely to improve higher response rates. Consequently, this research used monetary incentives in order to increase response rates and indicated that “ten respondents will receive a Portmeirion wall clock in a prize draw” in a covering letter. As another way to motivate respondents to participate in the survey, the researcher guaranteed respondents that they would receive a copy of the research summary where they provide their personal details (e.g., phone/ fax number and e-mail address) at the end of the questionnaire.

A total of 454 responses were received out of the 1,343 questionnaires sent to respondents. However, 22 responses were not usable due to an incomplete questionnaire, which resulted in 432 usable questionnaires that could be used for data analysis and represented a 32 per cent response rate. Compared to previous studies which have generally achieved 10 to 20 per cent response rates in the Korean context (e.g., Park, 2010; Park and Ghauri, 2011), a 32 per cent can be considered as very good. To sum up, the procedure of the main data collection is described in Figure 4.2.

Figure 4.2 The procedure of the main data collection

Time	Process
1 st Jan, 2015 	<ul style="list-style-type: none"> ● The Questionnaire was finalised after revising through pre-test.
28 th Feb, 2015 	<ul style="list-style-type: none"> ● Sample was drawn from sample procedures. ● Participants were selected by comparing previous research on knowledge transfer.
1 st Mar, 2015 	<ul style="list-style-type: none"> ● The Questionnaires were sent by first-class postage mail with covering letters and pre-paid envelopes. ● Follow-up phone calls were made every two weeks and e-mails were sent to enhance response rates.
30 th April, 2015 	<ul style="list-style-type: none"> ● First due date of the survey (for two months, 292 questionnaires were collected)
1 st May, 2015 	<ul style="list-style-type: none"> ● Another questionnaire was sent by post and e-mail targeting non-respondents. ● Reminder postcards were sent to non-respondents
30 th June, 2015	<ul style="list-style-type: none"> ● E-mails with attached questionnaires were sent ● Follow-up phone calls were made every two weeks. ● Final due date of the survey (for more two months, 162 questionnaires were collected) ● A total of 454 questionnaires were collected and 22 of them were disregarded due to incomplete data

4.7 Descriptions of Survey Responses

Respondents were asked to provide the basic profiles of their companies, such as

industry, firm size (number of full-time employees), organisation age, and the mode of establishment (i.e., Greenfield vs. brownfield). Frequencies in sampling frame are similar to those in the sample, which confirms that the data collected are representative. A representative sample stands for a sample which represents a whole and larger data (Lee, Taddy and Gray, 2010) and stands for a scaled-down version of the whole sample, expressing its characteristics (Grafstrom and Schelin, 2014). In addition, the responses were tested for non-response bias by using key parameters. The data comparisons between sample and responses in terms of involved industry characteristics, the mode of entry, and the year of establishment (e.g. before the Asian economic crisis in 1997 vs. after the event) are conducted in order to estimate the possibility of non-response bias (Ambos and Birkinshaw, 2010; Chung, 2014). The following illustrate these profiles.

4.7.1. Main industry involved

Respondents were asked to report the main industry sector in which they operate. Table 4.7 and Figure 4.3 show that all data had an equal collection rate in nearly every industry, though they were not exactly the same as the actual sample. The majority of samples were from machinery (12.1%), electronics (12.8%), and chemistry (9.2%). Similarly, most respondents answered that their industry was engaged in machinery (10.9%), electronics (13.7%), and chemistry (8.1%).

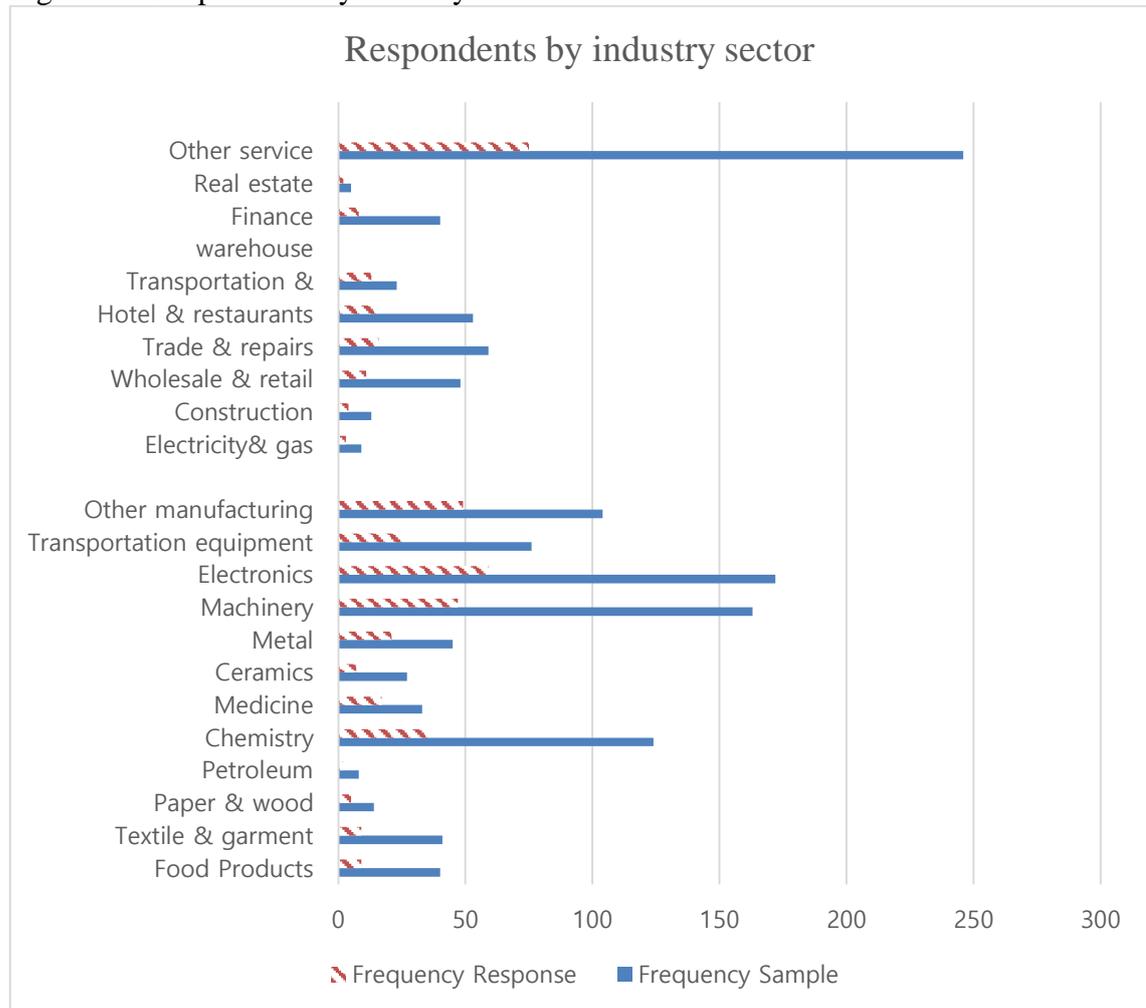
Table 4.7 Respondents by industry sector

Sector	Industry	Frequency		%		Response Rate (%)
		Sampling frame	Sample	Sampling frame	Sample	
Manufacturing	Food Products	40	9	3.0	2.1	22.5
	Textile & garment	41	9	3.1	2.1	22.0
	Paper & wood	14	5	1.0	1.1	35.7
	Petroleum	8	2	0.6	0.5	25.0
	Chemistry	124	35	9.2	8.1	28.2
	Medicine	33	17	2.4	3.9	51.5
	Ceramics	27	7	2.0	1.6	25.9
	Metal	45	21	3.4	4.9	46.7
	Machinery	163	47	12.1	10.9	28.8
	Electronics	172	59	12.8	13.7	34.3
	Transportation equipment	76	25	5.7	5.8	32.9
	Other manufacturing	104	49	7.7	11.3	47.1
	Subtotal	847	285	63.0	66.0	33.6
Service	Electricity & gas	9	3	0.7	0.7	33.3
	Construction	13	4	1.0	0.9	30.8
	Wholesale & retail	48	11	3.6	2.5	22.9
	Trade & repairs	59	16	4.4	3.7	27.1
	Hotel & restaurants	53	15	3.9	3.4	28.3
	Transportation & warehouse	23	13	1.7	3.0	56.5
	Finance	40	8	3.0	1.9	20.0
	Real estate	5	2	0.4	0.5	40.0
	Other service	246	75	18.3	17.4	30.5
	Subtotal	496	147	37.0	34.0	29.6
Total		1,343	432	100.0	100.0	32.2

Notes:

1. Sampling frame (%) = sampling frame frequency / total sampling frame (1,343) x 100
2. Sample (%) = sample frequency / total sample (432) x 100
3. Response rate (%) = sample frequency / sampling frame frequency x 100

Figure 4.3 Respondents by industry sector



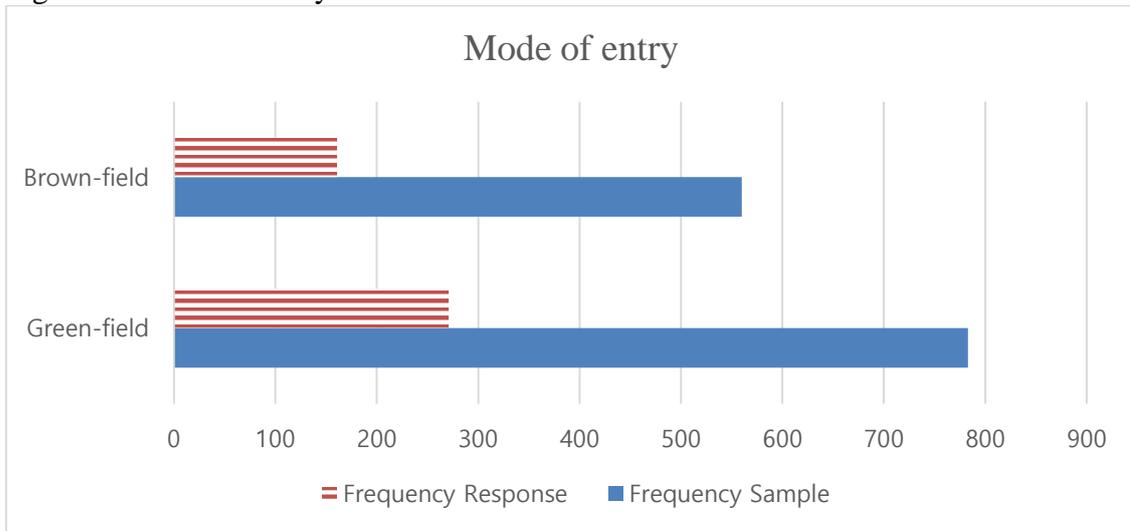
4.7.2. Mode of entry

Respondents were asked to provide information on mode of entry. The majority of MNC subsidiaries in the Korean market were established by green-field type of investments (i.e., Green-field: 58.3%; brown-field: 41.7%). Similarly, most respondents answered that their entry mode was based on green-field (62.7%), followed by brown-field (37.3%). Refer to Table 4.8 and Figure 4.4 for details.

Table 4.8 Mode of entry

Origin	Frequency		%		Response rate (%)
	Sampling frame	Sample	Sampling frame	Sample	
Green-field	783	271	58.3%	62.7%	34.6%
Brown-field	560	161	41.7%	37.3%	28.8
Total	1,343	432	100.0	100.0	32.2%

Figure 4.4 Mode of entry



4.7.3. Subsidiaries established before Asian economic crisis in 1997 vs. after the event

Respondents were asked to provide information on the year of establishment. According to *Foreign Direct Investment* (2014) published by the Korean government, 57 per cent of foreign investments were made after the Asian economic crisis. Similarly, Table 4.9 and Figure 4.5 show that the data collected are not much different from the actual sample.

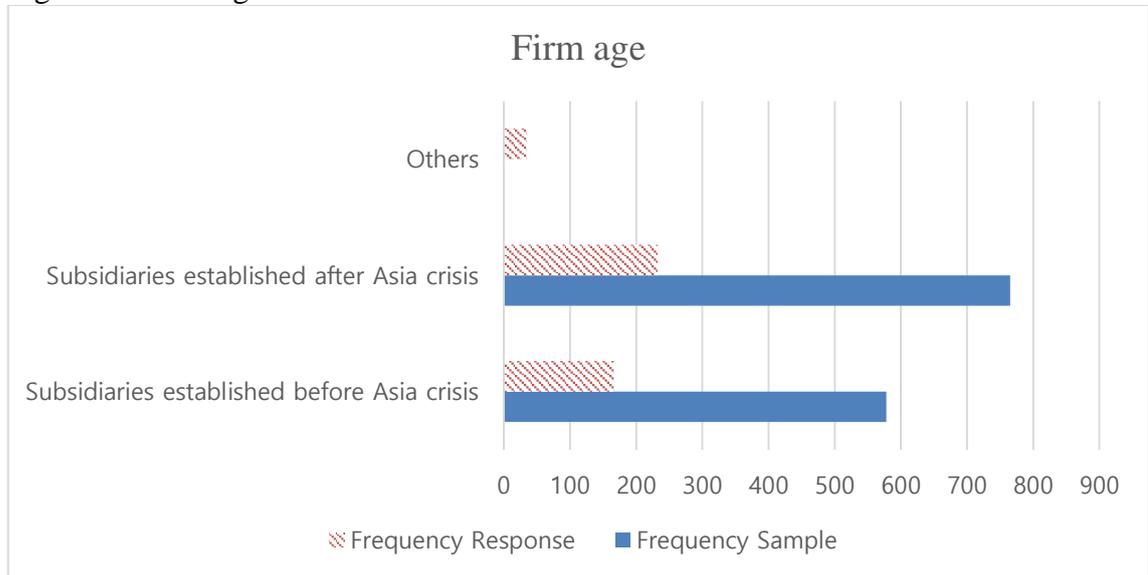
Table 4.9 Firm age

Ownership	Frequency		%		Response rate (%)
	Sampling frame	Sample	Sampling frame	Sample	
Subsidiaries established before Asian crisis	578	166	43.0	41.7	28.7
Subsidiaries established after Asian crisis	765	232	57.0	58.3	30.3
Others	-	34	-	-	N.A
Total	1,343	432	100.0	100.0	

Notes:

1. Others are missing value.
2. Response (%) = sample frequency / (432-34) x 100

Figure 4.5 Firm age



4.7.4. T-test

A t-test was run to further confirm that the data did not suffer from non-response bias. Following Najafi-Tavini et al. (2012) and Connors and Elliot (1994), this study compares early responses with late responses in terms of RKT and firm size. Korkeila, Suominen, Ahvenainen, Ojanlatva, Rautava, Helenius and Koskenvuo (2001) argue that differences in outcomes between early and late responses indicate the presence of a non-response

bias. The fundamental idea was that each group, which were categorised as early and late responses, may not have different characteristics in their pattern of RKT and their size in the case where the non-response bias is negligible. The early responses are the first 50 per cent of responses and late responses are the rest of them. The results found by the technique suggest no significant differences between early and late respondent firms, which verifies that non-response bias is not present (Table 4.10).

Table 4.10 Results from T-Test

	Responses	N	Mean	S.D	t	p value
Reverse knowledge transfer	Early responses	216	2.739	0.808	1.367	.172
	Late responses	216	2.640	0.686		
Firm size ¹¹	Early responses	216	193.712	423.258	-1.413	.159
	Late responses	216	323.023	1272.060		

These results led to a clear conclusion that non-response bias was not present and that the analysis could proceed to the next stage.

4.8 Conclusion

This chapter began with suggesting a research methodology in order to decide the appropriate method for data collection of the research. After reviewing methods used in the previous key studies on knowledge transfer (including RKT) or Korean subsidiaries, a questionnaire survey was selected for this research. In the second section, the process

¹¹ Mean and S.D are calculated by excluding missing values.

of sampling and the selection of participants are presented. Then, explanations on questionnaire development and pre-test are explained in detail.

The construct of measurements of dependent, independent and control variables are explained in Section 4.5. The next section illustrates the procedures for the main data collection. Through the questionnaire survey, 432 responses usable for statistical analyses were finally collected, which gives a 32 per cent response rate. Section 4.7 provides descriptions and comparisons of survey responses according to 'industry', 'mode of entry' and 'subsidiaries established before the Asian crisis vs. after the event' between samples and responses for checking non-response bias. Additionally, the results of the t-test also confirm the minimum presence of non-response bias.

Chapter 5. Data Analysis

5.1 Introduction

This chapter starts with examining whether the data experience common method variance and consists of diverse statistical techniques including descriptive analyses, reliability test, confirmatory factor analysis, multiple linear regressions and Spearman rank order correlations. The primary data analysis is undertaken in two different ways. First, OLS regression is employed to uncover the key components influencing RKT from subsidiaries to their parents (this is the main objective of this research). Second, the survey data is categorised into three different groups by organization size: large, medium and small subsidiaries. This will extend the understanding of the research area in that subsidiary size encompasses various meanings, such as strategic importance to MNCs, the extent of operational activities in local markets, and different organisational characteristics *per se*. The examination will let us know how the roles of the significant factors are changed in three different sized groups of subsidiaries.

5.2. Common Method Variance

Respondents were asked to judge perceptually both dependent and independent variables, and in this situation, the minimum presence of common method variance (CMV) needs to be confirmed. When self-report surveys are used in collecting data for the same respondents simultaneously, CMV can be a problem (Chang, Van Witteloostuijn and Eden, 2010; Malhotra, Kim and Patil, 2006; Andersson and Bateman, 1997). According to

Podsakoff, MacKenzie, Lee and Podsakoff (2003), there are two kinds of remedies that can be used to confirm the non-presence of CMV: procedural and statistical remedies. In terms of procedural remedies, one is to allow the respondents to be anonymous. Another is to bring the respondents to a sense of confidence that there is no right or wrong answer and that they can be honest in completing a questionnaire. This research tried to prove that respondents could trust the survey by guaranteeing the anonymous treatment of the data and followed these procedural remedies. With regard to statistical remedies, Harman's one factor analysis is a common technique to check the problem. The basic idea is that in the case where CMV is serious (1) one factor appears from the factor analysis or (2) one general factor explains the majority of the covariance among the measures. Conversely, if more than one factor appears, then the CMV issue can be negligible (Malhotra, Patil and Kim, 2007).

All variables assessed by respondents' perceptual measurement were fed into the analysis. The proportion of variance criterion shows four dimensions. 'Willingness' and 'organisational distance' have high loadings on the first factor (22.26%); 'possession of prior related knowledge', 'autonomy', 'trust' and 'extent of knowledge transfer' have high loadings on the second factor (16.54%); 'knowledge development capability' and 'socialisation mechanism' have high loadings on the third factor (15.68%); and 'knowledge tacitness' has high loadings on the fourth factor (11.63%). As previously mentioned, when CMV is a serious issue in research, a single factor appears in a factor analysis or one general factor accounts for most of the covariance among the variables subjectively measured by respondents (Aulakh and Gencturk, 2000). However, no general factor emerges from the analyses, which means that CMV is not a major problem.

This clearly verifies that the data does not suffer from the issue (Table 5.1).

Table 5.1 Harman's single factor analysis

Variables measured by respondents' perceptual judgments	Factor 1	Factor 2	Factor 3	Factor 4
Knowledge tacitness				.913
Knowledge development capability			.663	
Possession of prior related knowledge		.761		
Willingness	.960			
Autonomy		.556		
Socialisation mechanisms			.746	
Trust		.628		
Organisational distance	.950			
Extent of knowledge transfer		.420		
% of variance	22.26%	16.54%	15.68%	11.63%

In order to further confirm that the problem was negligible, 50 questionnaires were re-sent to 1) respondents who had responded to the original survey to confirm the consistency of their answers and 2) different people (e.g., directors and general managers) in the sample subsidiaries, whose CEOs and executives had responded, respectively. The reason to undertake the second process (i.e. posting the questionnaire to different people) is that in the case where the same questionnaire is sent to other respondents (e.g., directors and general managers) whose CEOs participated in the survey earlier and the second survey responses are similar to the first one, the concern about CMV can be discarded (Luo, 2006). This research received 21 questionnaires from the same respondents and 23 from other top managements, and no significant inconsistency was found.

5.3 The key drivers impacting on subsidiary knowledge transfer to their parents.

5.3.1 Descriptive Analysis: Correlation matrix

As a pre-condition to undertaking OLS regression analysis, it should be confirmed that a multicollinearity problem does not exist. Multicollinearity occurs when the independent variables are correlated with one another and becomes a serious problem when two or more independent variables are highly correlated (Keller, 2012). Multicollinearity provokes shared variance between independent variables, and thus diminishes the power to predict the dependent measure as well as to identify the relative roles of each independent variable (Hair, Black, Babin and Anderson, 2010). Multicollinearity is generally regarded as a concern because the regression coefficients may be unstable; thus, when two variables are very highly correlated, there is no reason to treat them as separate variables (Bryman, 1999).

As the first step to confirm the non-presence of the issue, Table 5.2 presents the means, standard deviations and correlations among the five control variables, seven independent variables and their correlations with the dependent variable (extent of reverse knowledge transfer). Tabachnick and Fidell (1996) warn about the elimination of variables from a conceptual framework in the case where a correlation of .70 or more is uncovered. However, Kim (2005) advises .80, and Pallant (2001) suggests .90, respectively, as the cut-off point at which multicollinearity is defined. According to Table 5.2, the problem of multicollinearity is very small, even if Tabachnick and Fidell's (1996) conservative

opinion is adopted, in that all of the correlations are below .4.

However, this study also detects an exception in that the correlation between ‘willingness’ and ‘organisational distance’ is quite high, indicating that the variance inflation factor (VIF) values need to be examined to check more precisely the level of multicollinearity among the variables. A second measure of multicollinearity is the VIF, which is calculated basically as the inverse of the tolerance value (the degree of variability of the selected independent variables is not explained by the remaining independent variables); thus, a higher VIF value reflects cases of higher degrees of multicollinearity (Hair et al., 2010). The VIF value should not exceed 5.0 and as long as the value is under the cut-off point, the data is usable for further analysis (Hair et al., 2003). The results from the additional assessment are shown in Table 5.6, and they indicate clearly that multicollinearity is not high enough to engender problems (the maximum value is 4.860).

Table 5.2 Descriptive analysis: Correlation matrix

	Mean	S.D	1	2	3	4	5	6	7	8	9	10	11	12
1. Mode of establishment	0.37	0.48	1.00											
2. Industry characteristics	0.34	0.47	0.10*	1.00										
3. Size	258.82	951.73	0.04	0.02	1.00									
4. Age	17.65	12.47	-0.02	0.14**	0.27**	1.00								
5. Knowledge tacitness	3.60	0.44	0.03	0.05	-0.01	0.01	1.00							
6. Knowledge development capability	3.30	0.77	-0.16**	0.00	0.09	-0.10	-0.06	1.00						
7. Possession of prior related Knowledge	2.55	1.09	0.13**	-0.13**	-0.03	0.02	-0.01	-0.06	1.00					
8. Willingness	3.49	0.61	0.05	0.05	0.05	0.05	-0.03	0.19**	0.09	1.00				
9. Autonomy	2.49	0.67	0.09	0.05	0.03	-0.06	-0.03	0.13**	0.12*	0.19**	1.00			
10. Socialisation mechanisms	3.11	0.60	-0.08	0.03	0.00	-0.05	-0.02	0.20**	-0.05	0.11*	0.06	1.00		
11. Trust	2.63	1.09	0.08	-0.00	-0.02	0.07	0.08	0.13**	0.27**	0.24**	0.17**	0.23**	1.00	
12. Organisational distance	3.54	0.57	-0.00	0.03	0.06	0.03	-0.03	0.22**	0.07	0.89**	0.16**	0.17**	0.27**	1.00
13. Extent of reverse knowledge transfer	2.69	0.75	-0.08	-0.02	0.02	-0.09	0.04	0.22**	0.10*	0.36**	0.30**	0.19**	0.26**	0.31**

N = 432

** p < 0.01; * p < 0.05

5.3.2 Reliability test

The simpler method of checking measurement error is to test a measure of the reliability with the variables which are used in the study (Cramer, 2003). Cronbach's alpha has also been assessed to confirm the data reliability before regressions are undertaken. Cronbach's alpha is the most common method of checking reliability; and Cronbach's alpha is calculated from the number of questions on a questionnaire and the average inter-question correlation (Hinton, McMurray and Brownlow, 2014). They argue further that a high correlation between the different questions means that they are measuring the same construct and only a small amount of error will exist. Cronbach's alpha ranges from 0 (wholly unreliable) to 1 (entirely reliable).

Hair et al. (2003) and Park, Im and Kim (2011) advise that the minimum acceptable Cronbach's alpha value is .5 (that is, the data collected through survey are reliable if alpha values are above .5). Table 5.3 demonstrates that the survey instrument's data is reproducible.

Table 5.3 Reliability test

		Cronbach's alpha
Independent variables	Knowledge Transfer capacity	
	Knowledge development capability	0.731
	Possession of prior related knowledge	0.912
	Willingness	0.557
	Autonomy	0.628
	Relational capital	
	Socialisation mechanisms	0.553
	Trust	0.899
	Organisational distance	0.645
Dependent variable	Extent of reverse knowledge transfer	0.926

5.3.3 Validity tests: Confirmatory factor analysis

To check for any contradictions between the hypotheses developed in the research framework and data, a confirmatory factor analysis was conducted (Hair, Anderson, Tahtam and Black, 2005). The results show that the factor score of the measured variables has a significance level below 0.001; thus, no item was deleted (see Table 5.4). This study examines χ^2 , GFI, AGFI, RMR, CFI, and RMSEA to evaluate their adequacy for producing the optimal composition of items by stage. The results show that the model fit indicators recorded 1.38 (this measure is the chi-square value divided by the degree of freedom $247.528/179=1.38$), 0.903, 0.879, 0.069, 0.908, and 0.061, respectively, to demonstrate a satisfactory model fit. Hair, Black, Babin and Anderson (2014) argue that a chi-square value which is smaller than 2.0 is regarded as very good, and can be acceptable when the value is between 2.0 and 5.0.

This study uses the Composite Reliability (CR) coefficient to verify the internal consistency of each construct and all of the factors which are used for measurement are recorded at above 0.7, which is the internal consistency standard (Hair et al., 2005). Convergent validity, which stands for the variables within a single factor are highly correlated, can be tested by checking the factor loadings. Acceptable convergent validity is realised when the average variance (AVE) appeared is $\geq 50\%$ or the CR is larger than AVE (Salehi, Harris, Marzban and Coyne, 2015). The results show that constructs exceed the standard value ($CR > 0.7$, $AVE > 0.5$); thus, all variables have convergent validity.

Table 5.4 Confirmatory Factor Analysis

Factors	AVE	C.R
Knowledge Development Capability	0.654	0.850
Possession of Prior Related Knowledge	0.748	0.936
Subsidiary Willingness	0.517	0.810
Subsidiary Autonomy	0.523	0.813
Socialisation Mechanisms	0.518	0.804
Trust	0.832	0.937
Organizational Distance	0.521	0.844
Reverse Knowledge Transfer	0.698	0.942

***p<0.001

$\chi^2(d.f)$	GFI	AGFI	RMR	NFI	RMSEA
p>0.05	≥ 0.90	≥ 0.80	≤ 0.08	≥ 0.90	≤ 0.08
247.528(179), p=0.000	0.903	0.879	0.069	0.908	0.061

5.3.4 Confirmation of the underlying conceptual structure of LMI employed in the framework

Factor analysis refers to a statistical method which can be used to reduce a large number of factors to a smaller set of primary variables which summarise the fundamental information included in the key variables. Meanwhile, factor analysis is more frequently used to identify “an underlying conceptual structure in a set of dependent variables by examining the correlations between each variable in the set with every other variable” (Coolidge, 2000: 265; George and Mallery, 1995: 175). That is, factor analysis helps researchers to determine which variables in a set are highly interrelated and classifies essential dimensions within dependent variables. Exploratory factor analysis is the most commonly used version of factor analysis to identify the main variables (constructs) which will clarify the intercorrelation matrix (Foster, 2001).

Based on explanations given above, the main objective of factor analysis in this study

is to identify the underlying relationships and dimensions of a set of dependent variables (i.e., identify whether characteristics are different among LMI reversely transferred from overseas subsidiaries to parent firms). If there are underlying dimensions possessing different knowledge characteristics, the dependent variable can be divided and grouped into the interrelated variables for the multiple linear regression analyses. Exploratory factor analysis is employed to identify the fundamentally different dimensions of the dependent variable as measured by six items (except overall LMI).

To detect those essential variables and dimensions, principal components factoring by using the varimax rotation procedure is undertaken (Kang and Kim, 2002: 304). Varimax rotation helps an understanding of the attributes of each factor (Kang and Kim, 2002: 306). Rotation itself is needed, in that the original factor structure may be mathematically correct but difficult to interpret. The factor rotation phase is carried out to achieve what is called internal structure; that is, high factor loadings on one factor and low loadings on all others.

A scree plot helps to identify the number of factors to be extracted. Figure 5.1 indicates clearly a sensible cut-off point at one. In the same vein, total variance explained on 6 items for LMI also confirms that there is only single factor solution, which is just parallel to those of the scree test. In other words, the proportion of variance criterion proposes only one independent dimension because in total they account for 72.28 per cent of total variance, as shown in Table 5.5. These results point out that this research does not need to divide the dependent variable and it is better to use the data as a single dependent variable for the OLS regression analysis.

Figure 5.1 Scree plot on six items for LMI

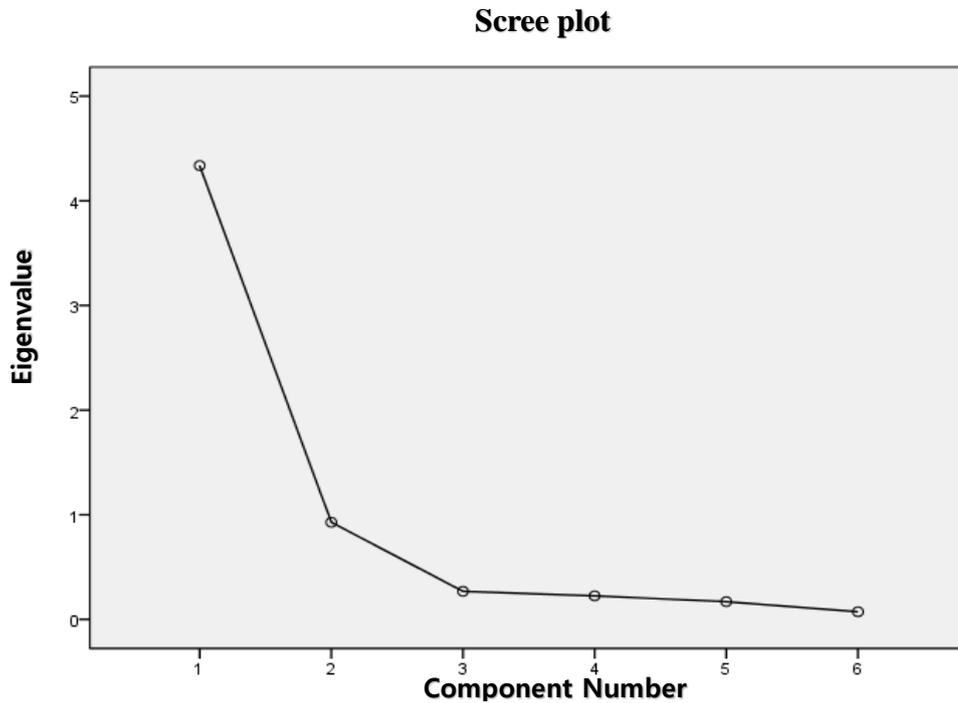


Table 5.5 Total variance explained on six items for LMI

Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.337	72.280	72.280	4.337	72.280	72.280
2	.928	15.467	87.747			
3	.268	4.472	92.219			
4	.225	3.746	95.965			
5	.170	2.826	98.790			
6	.073	1.210	100.000			

Extraction method: Principal Component Analysis

5.3.5 OLS regression analysis

The purpose of this study is to identify the key factors affecting RKT from overseas subsidiaries to headquarters, which indicates that the primary objective is to find a cause-

and-effect relationship between independent and dependent variables. As Hair, Anderson and Tatham (1987: 20) point out, “OLS regression analysis is a statistical technique that can be used to analyse the relationship between a single dependent (criterion) variable and several independent (predictor) variables. The objective of multiple regression analysis is to use several independent variables whose values are known to predict the single dependent value the researcher wishes to know”. This simple explanation indicates that OLS regression is the best technique to achieve the target goal explained.

Therefore, OLS regression analysis is used to test the hypotheses, and Table 5.6 shows the results from the technique. Both the control variables (mode of establishment, industry characteristics, size, age and knowledge tacitness) and the predictors (knowledge development capability, possession of prior related knowledge, willingness and autonomy) in knowledge transfer capacity were entered into Model 1, whereas controls and components (socialisation mechanisms, trust and organisational distance) in relational capital were inputted into Model 2. Model 3 is a full model. The results indicate that all regression models are highly significant ($p < 0.001$).

Table 5.6 OLS regression analysis for RKT from subsidiaries

Variables	Model 1	Model 2	Model 3	VIF
<i>Controls</i>				
Mode of establishment	-0.077 [†]	-0.055	-0.083 [†]	1.105
Industry characteristics	-0.028	-0.018	-0.036	1.070
Size	0.090 [†]	0.124 [*]	0.097 [*]	1.111
Age	-0.100 [*]	-0.134 ^{**}	-0.106 [*]	1.140
Knowledge tacitness	0.079 [†]	0.051	0.064	1.020
<i>Knowledge Transfer capacity</i>				
Knowledge development capability	0.152 ^{**}		0.123 ^{**}	1.168
Possession of prior related knowledge	0.036		0.024	1.116
Willingness	0.295 ^{***}		0.435 ^{***}	4.772
Autonomy	0.235 ^{***}		0.224 ^{***}	1.108
<i>Relational capital</i>				
Socialisation mechanisms		0.104 [*]	0.105 [*]	1.112
Trust		0.170 ^{**}	0.113 [*]	1.229
Organisational distance		0.252 ^{***}	-0.182 [†]	4.860
	R ²	0.254	0.176	0.290
	Adjusted R ²	0.236	0.159	0.268
	F	14.532 ^{***}	10.272 ^{***}	12.943 ^{***}

Notes:

Coefficients are standardised.

N = 432; [†] p < 0.10; * p < 0.05; ** p < 0.01; *** p < 0.001

With respect to control variables, firm size and age are statistically significant in all models (size is positively significant, but age is negative). These results mean that large subsidiaries have a propensity to possess better knowledge transfer capacity than small subsidiaries. This is probably because large affiliated firms have more strategically important subsidiaries than small firms, and thus parent firms may tend to invest more organisational resources in the former, which logically motivates large organisations to transfer high-quality LMI to their headquarters. In order to investigate thoroughly which drivers play a pivotal role in improving the extent of RKT in different organisation sizes, Spearman rank order correlations are used in the next section.

By contrast, old organisations may suffer from inertia, which functions as a hindrance to the transfer of market information to their parent firms. In addition, Ghauri and Park (2012) suggest that most researchers believe that due to long term operations with foreign parents who own firm-specific capabilities, it is often expected that older organisations tend to have a better knowledge reservoir and information management capability. However, they also argue that this general view may not be applicable in the case when firms operate in business environments which experience rapid economic changes, such as Korea. The mode of establishment, industry characteristics and knowledge tacitness are all insignificant. These possible reasons for the influences of controls will be discussed further in the next chapter.

In terms of the first dimension, ‘knowledge transfer capacity’, most of the variables included in the research framework are positively significant. First, ‘knowledge development capability’ has a strong positive association with ‘the extent of RKT’ in Models 1 and 3 ($p < 0.01$), so *hypothesis 1* is accepted. Second, as expected, both ‘willingness’ and ‘autonomy’ are also significant ($p < 0.001$ in all Models), and positively related to the level of RKT to MNCs, which supports *hypotheses 3* and *4*. Third, ‘possession of prior related knowledge’ does not, however, reveal any statistically meaningful relationship with ‘the extent of RKT’, which does not render support for *hypothesis 2*.

For the second dimension, ‘relational capital’, all variables are selected as crucial factors determining knowledge exchange between MNCs and their subsidiaries. First, the regression results shed light on the importance of ‘socialisation mechanisms’ to teach

market information to parent firms ($p < 0.05$) and thus *hypothesis 5* is supported. Second, trust is statistically significant in Model 2 ($p < 0.01$) and its power remains in Model 3 ($p < 0.05$), which indicates their positive associations. So, *hypothesis 6* is supported. Third, this study anticipated initially that organisational distance would bring a detrimental effect to subsidiaries' teaching environments. Interestingly, the symptom of its obstacle influence is not found in Model 2 ($p < 0.001$), though it is marginally significant in Model 3 in the expected directions ($p < 0.1$). Hence, *hypothesis 7* is partially supported. This result raises a need to examine carefully why such an outcome emerges.

Table 5.7 Summary of hypothesis testing

Hypothesis 1	Knowledge development capability by subsidiaries is positively related to their reverse knowledge transfer to MNCs.	Supported
Hypothesis 2	The possession of prior related knowledge by subsidiaries is positively related to their reverse knowledge transfer to MNCs.	Rejected
Hypothesis 3	Subsidiaries' willingness to share own information is positively related to their reverse knowledge transfer to MNCs.	Supported
Hypothesis 4	Subsidiaries' autonomy is positively related to their reverse knowledge transfer to MNCs.	Supported
Hypothesis 5	Socialisation mechanisms are positively related to subsidiaries' reverse knowledge transfer to MNCs.	Supported
Hypothesis 6	Trust is positively related to subsidiaries' reverse knowledge transfer to MNCs.	Supported
Hypothesis 7	Organisational distance is negatively related to subsidiaries' reverse knowledge transfer to MNCs.	Partially supported

5.3.6 Testing interaction effects

As the results of organisational distance are different between models 2 and 3 in Table

5.6, this study attempts to observe its interaction effects with components associated with dimension 1 (i.e., knowledge transfer capacity). An interaction effect stands for combined influence of two or more independent variables on a dependent variable (Powers and Knapp, 2010). An interaction effect shows that a relationship is dependent upon the values of another variable; thus, it indicates circumstances under which relationships change in direction and/or strength (Aguinis and Gottfredson, 2010). For quantitative variables, statistical interaction appears when the slope of the relationship between a dependent variable and an independent variable changes as the levels of the other independent variables change (Agresti and Finlay, 1997; Weiss, 1995).

In other words, when two lines in the Figures intersect it can be interpreted that organisational distance has an interaction effect with a variable in the dimension 1 (i.e., knowledge transfer capacity). For instance, among Figures 5.2 – 5.5, lines denoting organisational distance and knowledge development capability cross in Figure 5.2, and those representing organisational distance and subsidiary willingness also intersect in Figure 5.4. In other words, the effect of organisational distance depends on the presence or effect of knowledge development capability and willingness. These results mean that organisational distance interacts with knowledge development capability and willingness; thus organisational distance influences negatively RKT in the presence of both variables of ‘knowledge development capability’ and ‘willingness to transfer’. On the other hand, there is no interaction between organisational distance and possession of prior related knowledge or autonomy in Figures 5.3 and 5.5. This means that organisational distance can function as a facilitator of RKT regardless of the presence of the variables, “possession of prior related knowledge” and “autonomy”. That is why the negative

influence of organisational distance is found in Model 3, but is not found in Model 2 of the OLS regression (see Table 5.6).

Figure 5.2 Interaction effects of ‘knowledge development capability’ and ‘organisational distance’ on a subsidiary’s RKT

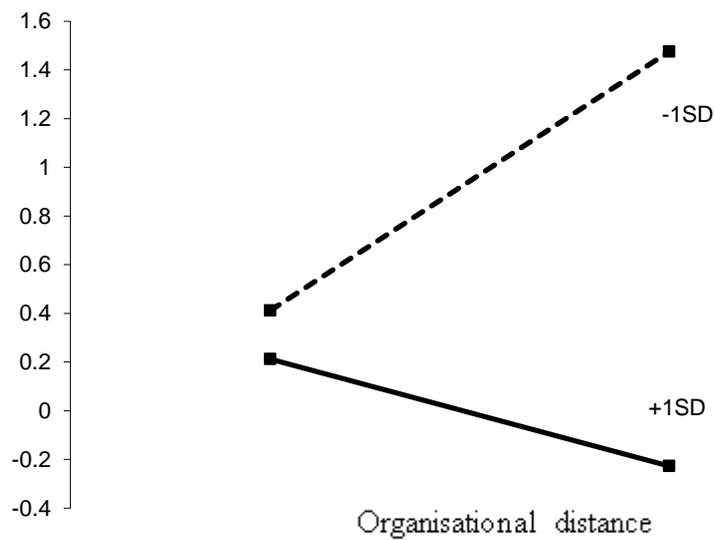


Figure 5.3 Interaction effects of ‘possession of prior related knowledge’ and ‘organisational distance’ on a subsidiary’s RKT

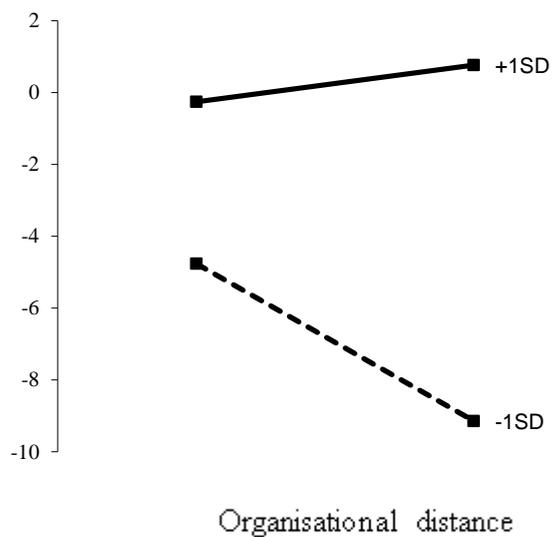


Figure 5.4 Interaction effects of ‘willingness’ and ‘organisational distance’ on a subsidiary’s RKT

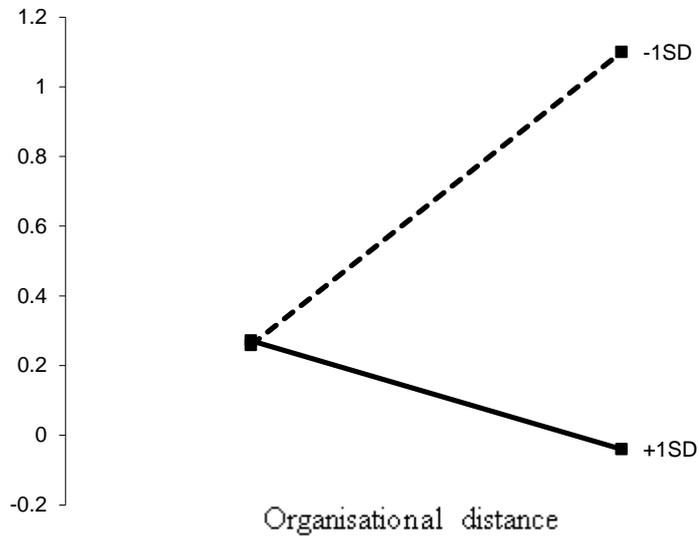
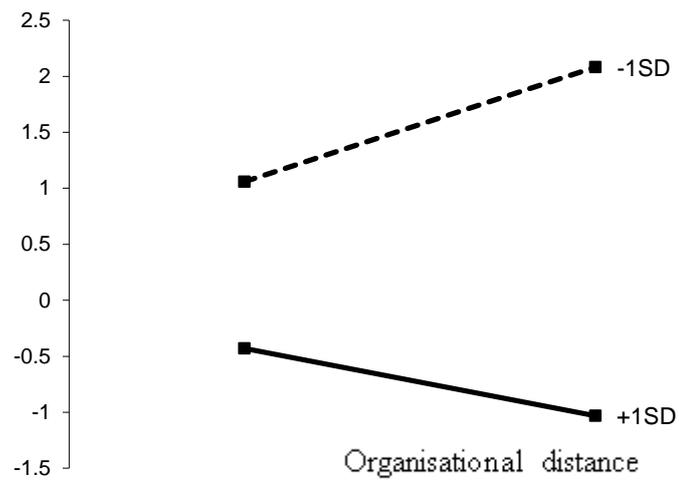


Figure 5.5 Interaction effects of ‘autonomy’ and ‘organisational distance’ on a subsidiary’s RKT



5.4 The difference between the main factors in large, medium, and small-sized subsidiaries

This study classified the sample into three different categories: large-, medium-, and small-sized subsidiaries. According to the Scope of Korean SMEs published by the Korean Small and Medium Business Administration (SMBA, 2007), organisations are referred to large firms when they employ more than 300 people. By contrast, the same information suggests that companies employing fewer than 50 people are small firms. However, as explained earlier in the sampling procedure, this study discarded those micro subsidiaries (i.e., where subsidiary size is less than 50 employees) because they may not be involved in RKT activities, or they are possibly based on a family business by foreign individual investors, and such firms may not undertake important business operations in the market. Thus, this researcher considers small firms to be ones in which the number of employees is less than 100. Hence, subsidiaries employing between 100 – 300 people are medium-sized firms, and employing more than 300 people are large-sized firms. When this study applies this criterion, the sample sizes for each category are 62 (i.e., large-sized firms), 101 (i.e., medium-sized firms) and 264 (i.e., small-sized firms), respectively.

However, this means that the sample size for large firms is too small to conduct a reliable analysis. Keller (2012: 768) states that Spearman rank correlation coefficient can be an option to solve this problem and indicates that “One or both variables may be ordinal; or if both variables are interval, the normality requirement may not be satisfied. In such cases, we measure and test to determine whether a relationship exists by employing a nonparametric technique, the Spearman rank correlation coefficient”. The

Spearman rank correlation coefficient is a method of investigating the degree of correlation between two variables measured at the ordinal level (Van Matre and Gilbreath, 1983). Park (2012) also utilised the same statistical method to overcome his small sample size problem when pursuing a similar research agenda (i.e., knowledge acquisition by overseas subsidiaries from foreign parents).

Based on explanations given above, this study used the technique particularly for large-sized subsidiaries, and Model 4 in Table 5.8 is the statistical result from the method. Although outcomes from Spearman rank order correlations for other types of subsidiaries are provided for consistency purposes, the sample sizes for small and medium-sized firms are enough to conduct regressions. For reference, both Models 5-1 and 6-1 are results from Spearman rank order correlations, whereas Models 5-2 and 6-2 are outcomes from regressions. (It is assumed that given the sample sizes for small and medium-sized firms, the results from Models 5-2 and 6-2 (i.e., regression analyses) are much more precise and robust, and thus emphasis has been added in those models by treating them as bold lines).

Table 5.8 Spearman rank order correlations

Variables	Model 4 (N = 62)	Model 5 (N = 101)		Model 6 (N = 264)	
		5-1	5-2	6-1	6-2
<i>Controls</i>					
Mode of establishment	-0.309*	-0.051	0.017	-0.010	-0.061
Industry characteristics	-0.031	-0.036	0.002	-0.045	-0.075
Size	0.379**	0.237*	0.240*	0.159**	0.179**
Age	-0.131	-0.113	-0.208*	-0.100	-0.115[†]
Knowledge tacitness	-0.073	0.050	0.037	0.059	0.0147
<i>Knowledge transfer capacity</i>					
Knowledge development capability	0.267*	0.004	0.060	0.168**	0.140*
Possession of prior related knowledge	0.145	0.206*	0.032	0.050	0.022
Willingness	0.174	0.432**	0.730***	0.269**	0.211
Autonomy	0.385**	0.149	0.071	0.258**	0.248***
<i>Relational capital</i>					
Socialisation mechanisms	0.077	0.168	0.100	0.284**	0.130*
Trust	0.387**	0.296**	0.272**	0.175**	0.033
Organisational distance	0.149	0.294**	-0.443**	0.250**	-0.047
R ²					
0.409					
Adjusted R ²					
0.321					
F					
6.669***					
8.201***					

Notes:

Spearman rank order: ** p<0.001; * p<0.05.

Regressions: † p < 0.10; * p < 0.05; ** p < 0.01; *** p < 0.001

5 respondents did not report information on firm size. Thus, they were not included in the analyses.

According to Table 5.8, the components which played a pivotal role in improving the extent of RKT from large overseas subsidiaries to their parent firms are ‘knowledge development capability’, ‘autonomy’ and ‘trust between subsidiaries and headquarters’. However, the results are interestingly somewhat different for medium-sized firms, and the factors functioning as a facilitator are ‘willingness’, ‘trust’ and ‘organisational distance’ (‘organisational distance’ is negatively significant). Drivers which positively

influence the extent to which subsidiaries transfer valuable LMI to MNCs in small-sized firms are ‘knowledge development capability’, ‘autonomy’ and ‘socialisation mechanisms’. Meanwhile, in line with OLS regression examinations, the group analysis for subsidiary size reveals that the possession of prior related knowledge (Hypothesis 2) does not turn out to be a significant factor affecting RKT in any model. These results are summarised in Table 5.9. The reasons why these results are different from each other by size will be discussed in the next chapter.

Table 5.9 Summary of results

	Key factors
Large-sized subsidiaries	Knowledge development capability Autonomy Trust
Medium-sized subsidiaries	Willingness Trust Organisational distance
Small-sized subsidiaries	Knowledge development capability Autonomy Socialisation mechanisms

5.5 Conclusion

The issue of common method variance needs to be solved in that all dependent and independent variables were measured by respondents’ perceptual judgements. Thus, it is included in Section 5.2. By primarily using statistical analysis (i.e. Harman’s one factor analysis) and other remedies, the concern about possible common method variance was

dismissed. Prior to conducting the analyses, a minimal presence of a multicollinearity and the internal consistency (i.e., Cronbach's alpha) of the data were confirmed.

The objective of this study was to identify key factors affecting the reverse transfer of LMI from overseas subsidiaries to their headquarters. In order to detect the components, it primarily used two different statistical techniques: OLS regression and Spearman rank order correlations. The OLS regression analyses identified that except for the possession of prior related knowledge, all hypotheses were either supported or partially supported.

Knowledge development capability, autonomy and trust were found to affect RKT, but subsidiary willingness, socialisation mechanisms and organisational distance had no effect on large-sized subsidiaries. Knowledge development capability, autonomy and socialisation mechanisms positively affect RKT in small-sized subsidiaries, but willingness, trust and organisational distance have no influence. In the case of medium-sized subsidiaries, willingness, trust and organisational distance influence on RKT. However, knowledge development capability, autonomy and socialisation mechanisms do not have a major impact on RKT.

Chapter 6. Discussions of Results

6.1 Introduction

An MNC's competitive advantage is increasingly dependent upon how they control critical resources, such as important knowledge and know-how (Lee et al., 2008). Subsidiaries have commonly been recipients acquiring knowledge and know-how from their headquarters, but the role played by overseas subsidiaries has been changing from solely beneficiaries to donors reversely providing locally specific and unique knowledge to their headquarters as an internal knowledge source. In other words, the overseas subsidiaries increasingly do not just develop knowledge for their own purposes, but function as vehicles to transmit the acquired and developed knowledge (i.e., RKT) to their headquarters.

Therefore, this study has attempted to identify the primary determinants affecting the RKT phenomenon in the context of Korea. In order to achieve the research objective, both regression analyses and Spearman rank order correlation were used. Some interesting findings were obtained, and this section will discuss the results from the empirical analysis outlined in Sections 5.3 and 5.4. The main purpose of this section is to expand the understanding of the different influencing RKT and, together with an analysis of previous studies, put forward reasons why such results might emerge.

This chapter consists of four parts. The first part explains possible reasons for the results of the control variables including knowledge tacitness. The second part explores

the cause-and-effect relationships between factors comprising knowledge transfer capacity and the extent of subsidiaries' RKT. The relationships were not only investigated overall, but associations were re-examined by dividing the sample into three different organisational size categories (i.e., large, medium and small-sized subsidiaries). The third part observes the causal relationships between factors comprising relational capital and the RKT phenomenon, and also discusses different influences of the factors in terms of different organisational size groups. The final section is finished by a conclusion.

6.2 Brief Discussion on the Influence of the Controls

Mode of establishment is negatively significant in large-sized subsidiaries and overall, which means that brownfield subsidiaries generally better transfer LMI to MNC headquarters (it was measured as dummy variables by coding 1 when subsidiaries are Greenfield type and otherwise 0). This is probably because the brownfield type of subsidiaries already possess LMI in that they used to be local firms until MNCs purchased their equity share and thus have long operated in local markets as local firms. Acquired subsidiaries can access the local knowledge more easily than Greenfield subsidiaries, as acquired subsidiaries are already existing firms in local markets and have previously developed relationships with other local firms (Najafi-Tavani et al., 2012). In this vein, it is logical that compared to Greenfield types of subsidiaries, they are high knowledge transferors.

Similar to mode of establishment, industry characteristics were measured by dummy variables (1= service industries, and otherwise 0), but it was found to be insignificant for

all models regardless of subsidiary size. The reason for the result is perhaps related to knowledge characteristics. That is, LMI in manufacturing industries is not much different from that in service sectors.

According to both statistical analyses (i.e., OLS regressions and Spearman rank order correlations), size is especially a matter for RKT from subsidiaries to MNC headquarters in that the control variable is significant in all models. There may be various reasons. Larger subsidiaries may have more diverse knowledge portfolios and therefore are more likely to own information that MNC headquarters want to learn. In addition to their current size of knowledge reservoir, the organisational structure is more formal and well-developed in large firms (Minguzzi and Passaro, 2000) and the amount of available resources to use knowledge transfer is also affected by firm size (Park et al., 2012b). Compared to smaller subsidiaries, it is easier for larger firms to implement programmed learning processes as they have sufficient internal resources. In smaller subsidiaries, on the other hand, the learning process is perhaps based on unplanned and unsystematic processes. These explanations clearly inform the finding that subsidiary size is positively correlated with the extent to which subsidiaries reversely transfer LMI to their parent firms.

Subsidiary age is negatively significant in all models except for large-sized subsidiaries, which indicates that younger subsidiaries are generally high knowledge transferors. It is plausible that the longer subsidiaries have been running, the more chance there will have been for their employees to learn how to obtain knowledge. Conversely, because younger or new subsidiaries possess a weak knowledge base (Wang et al., 2004),

they are likely to have intent to learn, which may positively function as a fuse igniting knowledge acquisition and may subsequently speed up RKT to MNCs. However, without detailed examinations, this remains conjecture.

The most interesting result is the statistical insignificance of knowledge tacitness. It was assumed that tacit knowledge should be difficult to learn and transfer. However, unexpectedly, both the regression and Spearman rank order correlations reveal that a control variable, knowledge tacitness, is not associated at all with RKT from subsidiaries to their parent firms. Although this is an interesting outcome, it may be understood in terms of there being different types of knowledge, but that this study handles only LMI. In other words, if the study had explored factors affecting the reverse transfer of various information by subsidiaries (i.e., the study included different knowledge possessing characteristics in the research framework), the results might be changed. In this vein, the results from both tests (i.e., OLS regressions and Spearman rank order correlations) are acceptable but at the same time, this is one of the key research limitations of this study (it is acknowledged as a limitation in the limitation section). The significant and insignificant control variables of this study are presented in Table 6.1.

Table 6.1 Critical controls influencing reverse transfer of LMI from subsidiaries to MNCs

	Overall subsidiaries	Large-sized subsidiaries	Medium-sized subsidiaries	Small-sized subsidiaries
Mode of establishment	-	-	/	/
Industry characteristics	/	/	/	/
Size	+	+	+	+
Age	-	/	-	-
Knowledge tacitness	/	/	/	/

Note: +: positively significant factor, -: negatively significant factor, /: insignificant factor

6.3 Knowledge Transfer Capacity and RKT

This study confirms that knowledge transfer capacity is a fundamental determinant of the extent of RKT. However, the prior related knowledge has no influence on the extent of RKT. A significant finding of this study is that subsidiaries' knowledge development capability, their willingness to share and autonomy also influence the extent of RKT.

6.3.1. Knowledge development capability

According to the OLS regression results (Section 5.3.5), the first hypothesis (H1) (i.e., the impact of knowledge development capability on RKT) is supported. This means that the knowledge development capability of subsidiaries fosters knowledge absorption, refinement and subsequent reverse transfer to MNCs and therefore subsidiaries need to develop their knowledge so that greater RKT to their headquarters may occur. This result implies that subsidiaries should not only cultivate and upgrade the level of their capability for their own purposes but also that they need to sustain interactions with local business

actors in order to yield a series of connections linking absorbing new knowledge, blending it with existing knowledge, creating new innovative information and then finally transferring the knowledge to their headquarters. That is perhaps the primary reason why the extant literature has also found that knowledge development capability (i.e. a subsidiary's possession of sufficient capability and local embeddedness) induces the enhancement of a subsidiary's knowledge transfer to its headquarters (i.e. Andersson, Bjorkman and Forsgren, 2005; Håkanson and Nobel, 2001; Iwasa and Odagiri, 2004).

The empirical outcomes of this study imply that overseas subsidiaries become valuable sources of MNCs' competencies and capabilities to sustain their competitiveness. Subsidiaries' accumulation of capabilities for market embeddedness and local knowledge developments are the key for MNCs to enlarge the extent of the reverse absorption of new information from subsidiaries and improve their market positions in the global arena. For a subsidiary, embeddedness stands for business relationships that they have developed with local entities through various interactions, and this capability often contributes to subsidiary competencies as well as to the competitive advantage of its headquarters (Dellestrand, 2011). Although some extant literature (e.g., Ambos et al., 2006; Najafi-Tavani et al., 2012) dealing with subsidiary knowledge transfer has failed to find the combined effects of its local embeddedness and a subsidiary's level of human capital (as a part comprising knowledge development capability) on RKT, the results uncovered by this study indicate that this factor (i.e., subsidiaries' knowledge development capability) is a short-cut guiding to efficient and effective RKT to their headquarters. If knowledge senders do not have an appropriate level of knowledge development capabilities, this situation may indicate that they suffer from a lack of competences in teaching own

information and that the knowledge is perhaps transferred with lower efficiency and effectiveness, and that the recipients might not be able to completely understand the transferred knowledge (Tang et al., 2010).

The results of the group analysis on the effects of different sizes of subsidiaries also show that the factor is one of the critical drivers promoting RKT in large- and small-sized subsidiaries. However, in the case of medium-sized subsidiaries, knowledge development capability has no association with RKT. Li et al. (2010) document that large-sized firms are likely to be able to allocate more resources to enhance their knowledge development capability, possibly by investing organisational assets in education and training. The findings arising from the Spearman rank order correlation are in line with this suggestion.

Firm size reflects the strategically important position of a subsidiary from the perspective of headquarters, and thus larger subsidiaries tend to receive greater support from MNC networks, which also help these subsidiaries to cultivate more knowledge, for instance, than their medium-sized counterparts. Similar findings have been obtained in previous studies. Ciabuschi, Forsgren and Martin (2012) emphasise that larger subsidiaries hold greater intra-MNC bargaining power, and this functions as a key to obtaining support from headquarters, which results in a virtuous circle leading to RKT to MNCs. Dellestrand (2011) suggests that large-sized subsidiaries are relatively more visible within MNC networks, which also makes it easier for the former to gain various aids from headquarters. Other extant literature on RKT proposes that larger subsidiaries are likely to possess innately greater ability to create new knowledge (Gupta and Govindarajan, 2000) and have a propensity to make better use of its embedded

relationships (Bresman et al., 1999; Dellestrand, 2011). This is because they have both more opportunities to access external knowledge and enjoy more frequent interactions with information sources (Almeida, Dokko and Rosenkopf, 2003). In addition, the size of a subsidiary influences its power over internal and external relationships with business actors (Mudambi and Navarra, 2004).

Small-sized subsidiaries are often placed in a situation of shortage of financial/ human resources and managerial skills (Marcotte and Niosi, 2005) and thus experience a lack of resources necessary to exploit innovative opportunities. Due to the lack of internal resources, they are likely to try to access external knowledge resources for survival purposes (Geneste and Galvin, 2015). They are generally less bureaucratic and this plays a pivotal role in establishing favourable environments to generate innovations (Sinani and Meyer, 2004). In particular, headquarters are likely to be motivated to support such small-sized subsidiaries in order to cover for insufficient resources and this forces headquarters to allocate resources to the survival of the small-sized subsidiaries and this plausibly catalyses RKT. In addition, newer firms (i.e., small-sized firms) have no prior experiences of failure, and are more likely to explore new and innovative knowledge that may offer high profits to them (Casillan, Acedo, and Barbero, 2010). Firms with a strong tendency to explore knowledge are capable of absorbing and digesting new, innovative knowledge, making decisions freely to invest and calculating the resources needed to develop this capability within the firm through effective knowledge exchange between organisational members (Ozsomer and Gencturk, 2003).

Unlike large- and small-sized subsidiaries, it may be difficult for medium-sized firms

to reserve enough corporate assets and obtain headquarters support, though both components are useful to enhance knowledge development capability. In other words, they tend to suffer from difficulties in accessing, developing and innovating local knowledge, primarily due to the shortage of strategic assets. However, headquarters are not likely to endeavour to help them in that they are not micro subsidiaries, and this retards the cultivation of their knowledge development capabilities. For these reasons, knowledge development capability in large- and small-sized subsidiaries has a positive association with RKT.

6.3.2. Possession of prior related knowledge

The second hypothesis (H2) is about the relationships between the possession of prior related knowledge and RKT. The data analysis shows that there is no significant association between the two. Considering the fact that a number of previous studies (e.g., Lane and Lubatkin, 1998; Park, 2011a; Schildt, Keil and Maula, 2012; Schulz, 2003) indicated that the possession of prior related knowledge is a pre-condition for knowledge transfer and their mutual relationships, this result is surprising. For instance, Schulz (2003) demonstrates empirically that a sender's ownership of prior related knowledge is the key to knowledge transfer. Extant empirics generally argue that related knowledge provokes teaching confidence, as well as functions as a conduit for the improvement of absorptive capacity (e.g. Park, 2011a). Furthermore, Lane and Lubatkin (1998) and Schildt et al. (2012) shed light on the role of relevant knowledge in the transfer of tacit information and suggest that it is a fuse which ignites increases in the transfer of a firm's knowledge transfer capacity. Based on these statements, this study posits that RKT should be

facilitated when subsidiaries own prior related knowledge.

Despite earlier studies which suggest the positive influence of prior related knowledge on knowledge transfer, this study has failed to find a positive linkage between them. However, it can be argued that the new finding can be understood when we change our way of thinking. For example, Asmussen, Foss and Pedersen (2013) point out that if the knowledge of the subsidiary is closely related to the knowledge possessed in the headquarters, it may be thought of as redundant knowledge by headquarters and may lead to the inhibition of knowledge transfer from subsidiaries. The intent to learn new LMI by headquarters can be diminished as they already have similar knowledge to information transferred from subsidiaries and the information is considered not to be new or fresh at all. In other words, in the case where headquarters intend to acquire unrelated diverse knowledge through RKT (Nair et al., 2016), they may not recognise the potential benefits of the similar knowledge and thus do not intend to adopt the knowledge possessed by subsidiaries (Yang et al., 2008).

The results of the group analysis exploring the effects of different organisational sizes on RKT also show that the factor has no association with subsidiary RKT. LMI encompasses cultural, institutive and even historical aspects, which implies that such information inevitably has tacit characteristics. When organisations have prior-related knowledge, they can generally learn and teach with great ease in that they do not need to apply experimental ways in the process of knowledge exchange. However, this may not be the case for the transfer of local tacit knowledge and subsidiaries need to apply a creative means of the adequate teaching of such information, though they own prior

relevant skills to some extent. In a similar vein, Lichtenthaler (2009) divides knowledge into technological and market information and finds that a firm's prior relevant knowledge of the two performs differently in an organisational learning process. Moreover, Park (2011a) found that positive influence of prior related knowledge on knowledge transfer was related not to tacit knowledge (LMI), but technological knowledge. Another possible reason for this is that the possession of prior related knowledge is perhaps a prerequisite for RKT, but it does not function as a sufficient condition for the phenomenon. That is, the factor may work better when it interacts with, for instance, a sufficient stock of human capital (i.e., firms have well-trained employees involved in the reverse transfer of knowledge) than an organisation which possesses only prior experience alone.

6.3.3. Willingness

The relationships between subsidiary willingness and the extent of RKT (Hypothesis 3) show a significant association between the independent and dependent factors. This finding means that subsidiaries tend to develop new LMI which enables them to help their headquarters to understand and eventually acquire the developed knowledge, so that MNCs are not behind in global business competition. In addition, a prerequisite for the situation is that subsidiaries have a willingness to share knowledge with their headquarters (Lee et al., 2008). In turn, this result implies that headquarters need to increase motivational methods in order to increase RKT in that subsidiary willingness to transfer their developed knowledge is important. It is consistent with previous empirical research, such as that by Najafi-Tavani et al. (2012) and Rhodes et al. (2008), who

demonstrate that willingness to share and transfer knowledge can play a critical role in effective knowledge transfer.

Instead of willingness, Husted and Michailova (2002) used the term ‘hostility towards sharing knowledge’ and explained the reasons why knowledge senders sometimes have this hostility. As knowledge is one of its competitive advantages, the firm may try to keep it as well as be reluctant to spend time and effort on knowledge transfer. When an overseas subsidiary holds significant knowledge, it may worry about the loss of its bargaining power if the knowledge is transferred to their headquarters (Schuler-Zhou and Schuller, 2013). Subsidiaries might be unwilling to share their knowledge with headquarters in this situation due to the concerns about the weakening of their position within MNC networks after the transfer. Previous studies emphasise a necessity to develop more sophisticated and objective evaluation systems (Blomkvist, 2012), and rewards or benefit systems (Minbaeva and Michailova, 2004; Minbaeva, 2007) in order to increase subsidiaries’ willingness to share knowledge with MNCs. This means that MNCs need to offer continuous and appropriate compensations to their overseas subsidiaries, when they undertake greater RKT.

The results of the group analysis of size also reveal that, for medium-sized subsidiaries, willingness is one of the decisive determinants of the occurrence of RKT. Medium-sized firms may have the benefits of utilising their resources with their own intentions (i.e. the advantages of retaining flexibility) because unlike small firms which are heavily supported by headquarters, they do not receive strong supports and aids from headquarters which means that they can avoid the parent’s interference in their resource

use. In addition, they may have less-structured routines as well as moderately available resources, and thus their intention to transfer should be important and it logically determines whether they implement RKT or not. In particular, LMI absorption or development (as a pre-stage for RKT) in medium-sized subsidiaries tend to be promoted by cooperation with local stakeholders as they do not obtain considerable support from MNCs in that 1) they have better resources than small-sized firms; and 2) the subsidiaries are not strategically important compared to large-sized firms. Thus, medium-sized subsidiaries may need to ask local stakeholders whether they (i.e., subsidiaries) can transfer any LMI developed by collaborations with local entities to the MNCs (this may also lead to the assumption that the knowledge development capabilities of medium-sized subsidiaries will not affect the transfer of LMI which is acquired and developed by the subsidiary to the MNCs). However, if medium-sized subsidiaries have a strong willingness to share LMI with the MNC, they will ask local stakeholders for their understanding and transfer knowledge to the MNC. Therefore, subsidiary willingness in medium-sized subsidiaries is fundamental to RKT.

By contrast, in the case of large-sized subsidiaries, their willingness to transfer is not confirmed as a key factor for RKT. Since large subsidiaries have a propensity to contribute more to the accomplishment of MNCs' organisational goals, they are able to exercise considerable influence with headquarters. This may motivate the latter to exercise strong control against the former, at least about RKT, and the tight control in this domain may subsequently lessen their willingness to teach and extend RKT (Schuler-Zhou and Schuller, 2013).

Small-sized firms do not typically have the expertise or resources to earn knowledge from local markets (Cavusgil, Calantone and Zhao, 2003). Due to the insufficient ownership of organisational resources, a pre-condition for small-sized subsidiaries to reversely transfer local information possibly is extensive resource allocation by headquarters. Once headquarters input resources and assets to subsidiaries, MNCs may wish to enforce the subsidiaries' RKT activities. If this occurs, it harms the subsidiaries' motivation and willingness to transfer knowledge to the former. In a similar vein, Schuler-Zhou and Schuller (2013) argue that headquarters can push subsidiaries quite easily as long as they possess the resources required by them, but this may lessen their willingness to share and the subsequent extent of RKT. Based on these arguments, in the case of large- and small-sized subsidiaries, the results from this study suggest that strong coercion and pressure exercised by their headquarters reinforce subsidiaries' opposition to knowledge exchange, which is, in turn, linked to the discussions of autonomy.

6.3.4. Autonomy

This study supports Hypothesis 4 by finding a close association between subsidiary autonomy and RKT. This means that the greater autonomy, the higher the level of RKT. In other words, subsidiaries enjoying enlarged autonomy make a quick decision for fitting into local markets, and this helps them to cultivate locally residing precious information, which subsequently leads to higher RKT. This result confirms commentaries from previous studies which perceive autonomy as a fuse which ignites knowledge transfer. Gammelgaard et al. (2012) suggest that in the case of higher autonomy, subsidiaries can overcome resource constraints by increasing the frequency of interactions with local

partners and that such interactions are a key vehicle to learn LMI. Although subsidiary knowledge can be the source of competitive advantage for MNCs, sharing the knowledge is a systematic process for identifying, obtaining, absorbing, synthesising, generating, sharing and using knowledge in order to realise organisational objectives (Abdullah and Liang, 2013). However, these systematic processes (and knowledge sharing) would not be plausible if subsidiaries are tightly controlled by headquarters and cannot make their own decisions that are suitable to local market conditions. Additionally, it is possible that subsidiaries with high levels of autonomy are easily able to acquire more valuable knowledge for RKT from their operations in the local market than subsidiaries with low levels of autonomy (Miao et al., 2011).

This study also suggests that autonomy facilitates RKT in the case of large and small-sized subsidiaries. However, in the case of medium-sized subsidiaries, subsidiary autonomy has no association with RKT. The resource dependence theory, for example, argues that when a subsidiary grows in size, it will possess more resources for acquiring and developing new local knowledge to become less dependent on the headquarters in developing local knowledge, and will demand greater autonomy from the headquarters (Nohria and Ghoshal, 1997). Thus, medium-sized subsidiaries are growing in size, but still need to be dependent on headquarters and demand greater autonomy to carry out business activities which fit in with the local environment. For these reasons, autonomy in medium-size subsidiaries is not critical for RKT.

Organisational autonomy is closely linked to the size issue in that headquarters will try to control subsidiaries when the former (i.e., headquarters) invests large amounts of

resources in the latter (i.e., subsidiaries) (Pisoni, Fratocchi and Onetti, 2013). Although the strategic importance of larger subsidiaries triggers MNCs' desire to be involved in their operations, larger subsidiaries are likely to have greater autonomy for two main reasons. First, with abundant resources, large-sized subsidiaries are less dependent on MNCs and can also demand greater autonomy in utilising resources and doing business according to local circumstances (Nohria and Ghoshal, 1997). Second, they are better able to allocate their own resources to generate knowledge that is transferrable to their headquarters (Minbaeva et al., 2003; Mudambi and Navarra, 2004; Tsai, 2002). According to Peng and Beamish (2014), when a subsidiary becomes bigger, the headquarters will lose its ability to control the subsidiary with abundant available resources.

While large organisations usually own a high level of organisational capabilities to perform knowledge sharing (Park and Ghauri, 2011), small-sized firms often experience a lack of the resources that are necessary to absorb new LMI and implement reverse transfer of the knowledge to headquarters. Due to this, they inevitably encounter greater MNC control. However, they may also try autonomously to make good use of their limited resources. Where subsidiaries are successful in their operation without headquarters' support, they will be able to enjoy organisational autonomy and carry out RKT via their own resources, which is expected to increase the possibility of them becoming high knowledge transferors. When foreign subsidiaries can gain access to LMI that is unique to the host country and assimilate the knowledge, the knowledge provides them with power and greater autonomy from their headquarters (Chen et al., 2012). In this vein, when large- and small-sized subsidiaries have more autonomy, the extent of

RKT from them will be enlarged.

6.4 Relational Capital and RKT

This study has found that subsidiaries are able to absorb and develop LMI which can function as a vehicle to enhance the MNCs' competitive advantages by means of the knowledge transfer capacity. However, in order to facilitate knowledge sharing between subsidiaries and their parent firms, this study considers that the management of the relationships between them is also an important issue. This section will attempt to discuss the importance of the subsidiary-parent relationships (i.e. relational capital) by focusing on the components (socialisation mechanisms, trust and organisational distance) which comprise relational capital. A significant finding of this study is that socialisation mechanisms and trust between a subsidiary and its headquarters have positive associations with RKT. Additionally, organisational distance in the presence of both 'knowledge development capability' and 'subsidiary's willingness to transfer' has a negative influence on RKT.

6.4.1. Socialisation Mechanisms

A close association is found between socialisation mechanisms and RKT, thereby supporting Hypothesis 5. The result indicates that efficient use of socialisation mechanisms between headquarters and subsidiaries can contribute to RKT. The results are in line with previous literature exploring RKT and which have identified socialisation mechanisms as effective channels for transferring knowledge (e.g., Chung, 2014; Najafi-

Tavani et al., 2012).

Extensive and continual communications between knowledge exchanging entities often hasten mutual interactions and offer the best opportunities for them to share knowledge. MNCs are expected to acquire potential and unique local knowledge and information through these relational ties and the strong connections between them (Lee et al., 2008). Close relationships improve the opportunities for people within organisations to share emotions, feelings and experiences through increases in face-to-face and physical contact (Cavusgil et al., 2003).

In a similar vein, Chalos and O'Connor (2004) suggest that the frequency of financial and operational communications between subsidiaries and foreign parents enhance greater cooperation and lead to greater information sharing. Socialisation mechanisms, including visits, meetings and teamwork involving overseas subsidiaries and their parent firms trigger a situation in which both can mutually learn knowledge (that is, knowledge flow is bilateral) and induce reciprocal benefits in that such mechanisms increase the level of intimacy between them and help them to understand each other (Rabbiosi and Santangelo, 2013). As a result, the socialisation mechanisms within MNC networks enable subsidiaries to maximise the transfer of LMI to their headquarters.

In addition, this finding suggests that subsidiaries need to pay particular attention about how they use socialisation mechanisms to maximise the extent of RKT. As explained in the previous paragraph, effective communications facilitate interactions between knowledge transmitting and receiving parties and then enhance knowledge

transfer. Similarly, Bresman et al. (1999) point out that socialisation mechanisms have a great effect, especially on the transfer of tacit knowledge. Socialisation mechanisms, such as social ties between organisational units, provoke the collaboration which, in turn, makes them more open and willing to share their knowledge (Nair et al., 2015). Moreover, according to Khan et al. (2015), the use of socialisation mechanisms is useful when greater knowledge inequality and dissimilar learning capabilities between knowledge sharing actors are present.

The results of the group analysis on size show that for small-sized subsidiaries, socialisation mechanisms are one of the critical conduits leading to RKT. Despite the significant influence of socialisation mechanisms on RKT in the regression analysis, the mechanisms in large- and medium-sized subsidiaries have no effect on RKT. This result indicates that compared to small-sized firms, large- and medium-sized firms are likely to hold sufficient resources to perform RKT, and thus socialisation mechanisms may not be the best path to contribute to RKT in these organisations.

The results are in line with previous literature exploring knowledge transfer between MNC headquarters and subsidiaries which suggests that larger sized firms can participate more in knowledge transfer than smaller sized firms without using socialisation mechanisms, but that knowledge transfer in small-sized firms may be heavily dependent on socialisation mechanisms (Cho and Lee, 2004). Possible reasons can be found in explanations given by Van Wijk, Jansen and Lyles (2008). They argue that size often triggers positive effects on knowledge transfer as larger firms may have extra resources contributing to their activities, which suggests that socialisation mechanisms are a

relatively more useful device for small-sized firms than other types. Moreover, small-sized subsidiaries will possibly try to utilise the mechanisms in an effort to persuade the headquarters that the new and innovative knowledge which has been locally acquired and developed will contribute to the MNCs' competitiveness (Yang et al., 2008).

In addition, smaller organisations are considered to be less effective than large firms in conducting cross border knowledge transfer because 1) the transfer of tacit knowledge requires more costs (i.e., financial resources) which smaller firms usually do not own and 2) the insufficient stock of human resources as well as a lack of managerial skills also decrease the level of RKT (Marcotte and Niosi, 2005). The shortage of these necessary financial/human resources within the subsidiary inhibits knowledge transfer (Dellestrand and Kappen, 2012). The possible options that can be used to support the subsidiaries suffering from such a difficulty are possibly frequent guides, meetings and visits (i.e., socialisation mechanisms). Previous studies also indicate that the exercise of informal mechanisms used by headquarters functions particularly well for learning in small firms, but they have a propensity to be ignored by large organisations as they are more reliant on the transfer of knowledge (Almeida et al., 2003). Marcotte and Niosi (2005) found that the highly specialised and tacit knowledge (e.g. LMI) of small-sized firms can be more effectively transferred via face-to-face communications or personal meetings, rather than written documents. In this vein, socialisation mechanisms for small-sized subsidiaries are one of the fundamental channels leading to RKT.

6.4.2. Trust

Hypothesis 6 is supported by the finding of a close association between trust and RKT. This finding indicates that subsidiaries and headquarters need to build mutual trust in order to increase knowledge sharing between them. In other words, an atmosphere of a lack of trust in organisational relationships may cause the suspension of knowledge sharing, and thus MNCs may lose opportunities to utilise more localised information in developing their product and exert localisation strategies in certain local markets. It means that headquarters are required to make efforts to gain subsidiaries' trust toward the former in order to obtain subsidiaries' unique knowledge, which is necessary for sustaining headquarters' competitive advantage. The previous literature provides considerable evidence that trust rooted in trust-based relationships facilitates knowledge exchange as it can enhance motivations to open the knowledge reservoir, reduce conflict and increase efforts to share information (Levin and Cross, 2004). In a similar vein, trust often diminishes the time and costs that are needed to check the presence of opportunistic behaviour (Li et al., 2007), which indicates that perceived trustworthiness plays a critical role in improving effective knowledge transfer (Rhodes et al., 2008; Boh et al., 2013; Chung, 2014).

The results of the group analysis on size indicate that for large- and medium-sized subsidiaries, trust is one of the key factors affecting RKT. Compared to small-sized subsidiaries, larger (i.e., large- and medium-sized) subsidiaries are able to modify and innovate knowledge by themselves as well as have more opportunities to earn local information from external environments (Park et al., 2009b). The trust between MNCs

and subsidiaries enables subsidiaries to establish network linkages with local business actors to learn and acquire knowledge in local markets that can be a critical source of RKT in the end (Williams and Du, 2014). This explanation suggests that relatively larger subsidiaries may try to keep the knowledge and will not transfer it to headquarters if they do not trust parent firms. In other words, when subsidiaries are unwilling to lose their bargaining power by releasing their valuable and developed knowledge, they may hesitate to carry out RKT.

The statements above mean that RKT from subsidiaries to headquarters will occur efficiently when MNCs manage effectively the trust relationship with their subsidiaries and MNCs allow their subsidiaries to maintain appropriate power to adapt to local environments. In the case of small-sized firms, headquarters are required to support subsidiary operations; otherwise it will be difficult for the subsidiary to survive in local markets and compete against strong local rivalries; thus, headquarters can control and monitor the process of knowledge transfer (Ciabuschi, Martin and Stahl, 2010). Small-sized subsidiaries may be forced to comply with the headquarters' instructions and guides regardless of whether or not the former trusts the latter, as they have limited resources and market power. This may be the primary reason why the association between trust and subsidiary RKT in small-sized subsidiaries is statistically insignificant. To sum up, in large- and medium-sized subsidiaries, trust between a subsidiary and its headquarters functions as a vehicle to influence the extent of RKT.

6.4.3. Organisational Distance

Hypothesis 7, which posited a negative relationship between organisational distance and RKT, was partially supported. According to the OLS regression results, the determinant is positively significant in Model 2 and then negatively in Model 3 (i.e., the full model). (This study posited that the factor will have a negatively significant association with RKT). The result from the full model is consistent with the view of previous literature that cultural distance obstructs knowledge sharing. A sense of distance increases difficulties in the communication and understanding of knowledge which is embedded in shared values and vision between the knowledge exchanging parties (Li et al., 2007). In addition, dissimilarities between headquarters and subsidiaries negatively affect employees' learning abilities and impede significantly mutual knowledge sharing for the same reason (Boh et al., 2013). In other words, compatible organisational characteristics are an especially important element for boosting favourable learning environments, as well as absorptive capacity, in that learning organisations may not use experimental ways for learning information when knowledge acquiring and transferring organisations share a common cognitive structure. When subsidiaries share a congruent organisational structure with headquarters it usually increases the richness of their psychic intimacy, which promotes their knowledge sharing. Organisational distance provokes misunderstanding and particularly hinders knowledge flows across national boundaries (Van Wijk et al., 2008). If knowledge transfer can minimise misunderstanding, a faster process of knowledge transfer can take place, and this leads additionally to subsidiaries' new knowledge developments or new knowledge transfer to MNCs (Boh et al., 2013).

However, the perception of the effects of organisational distance can be different according to situations. As shown in Section 5.3.6, organisational distance functions particularly positively in the absence of both ‘knowledge development capability’ and ‘subsidiary willingness’. Similarly, Vaara, Sarala, Stahl and Bjorkman (2012) provide similar explanations with these results. According to them, when subsidiaries have different characteristics and operate very differently from headquarters, the headquarters may restrict their autonomy. This will harm subsidiaries’ capability to increase knowledge development through interacting with local cluster and adapt to local environments. At the same time, the former (i.e. the subsidiaries) may not be motivated to attempt to transfer locally cultivated information in the case where the headquarters coercively enforce the subsidiaries to follow the headquarters’ instructions due to organisation distance. These explanations clearly indicate that the interactions between organisational distance and 1) knowledge development capabilities and 2) subsidiaries’ willingness to transfer knowledge negatively function for RKT. Conversely, if subsidiaries have lower knowledge development capability and are willing to transfer knowledge, the organisational distance between headquarters and subsidiaries functions positively in RKT.

The results of the group analysis on size also show that organisational distance in medium-sized subsidiaries has a negative influence on RKT. As aforementioned in Section 6.3.1, large subsidiaries are better able to utilise their resources to implement knowledge transfer, but compared to them, smaller sized (i.e. medium- and small-sized) subsidiaries often require headquarters supports, such as resource allocations, for the occurrence of knowledge transfer. However, organisational distance may reduce

headquarters' motivation to allocate resources for medium-sized subsidiary operations. MNCs' efforts to support small-sized subsidiaries are absolutely crucial for subsidiary survival; however, medium-sized subsidiaries are less dependent on headquarters. This triggers further a situation in which MNCs think that it may be wasteful to invest resources in knowledge transfer processes (Dellestrand and Kappen, 2012). In other words, the allocation of headquarters' resources to its subsidiaries may be regarded as value-destroying when headquarters do not understand the subsidiaries' local environments appropriately due to organisational distance. For these reasons, medium-sized subsidiaries are unlikely to receive necessary support from their headquarters in the presence of organisational distance, which logically leads to less RKT.

It was found that organisational distance is not statistically significant in small-sized subsidiaries (though the sign is negative). The possible reasons for this are as follows: 1) parent firms may ask small-sized foreign subsidiaries to follow and adopt headquarters' standard practices and 2) small-sized subsidiaries are more heavily reliant on resources from their parent firms than medium-sized subsidiaries. This may induce a situation that they perhaps have to follow headquarters' requests rather than resist them (Cheng and Yu, 2012). This may mean that psychic organisational distance between small-sized subsidiaries and headquarters is generally minimal. In the case of large-sized subsidiaries, they have enough internal resources, and thus may possess enough highly educated human capital to overcome organisational distance (Han and Lee, 2013). For these reasons, organisational distance in large- and small-sized subsidiaries is found not to have a significant influence on RKT in this study.

6.5 Conclusion

As a result of rapid technological change and increasing global competition, MNCs are facing greater difficulties than ever before in sustaining their competitive advantages (Yang, 2007). In this situation, organisational knowledge functions as a fundamental base of critical resources for MNCs to maintain competitive advantage. Moreover, market knowledge helps MNCs to predict more accurately the potential commercial changes in certain local market environments and thus absorption of LMI can enhance their competitiveness because: 1) it helps to create actual market opportunities by recognising customer problems; 2) it helps to decide the market value of new product developments and technological changes; and 3) it helps to formulate an effective marketing strategy for developing and selling new products (Wiklund and Shepherd, 2003). However, due to the nature of market transactions, market knowledge held by firms and customers in the market tends to be highly tacit and culture-specific (Simonin, 1999b). In this vein, RKT is not simply implemented between organisations, but factors such as knowledge transfer capacity and relational capital differentially influence the transfer process.

To reiterate, in order to identify the prime movers, which facilitate subsidiaries' reverse transfer of LMI, regression analyses were used as a primary examination. Most factors were found to be significant, affecting factors on RKT in the expected directions. Their different impacts in dissimilar organisational sizes were examined by undertaking additional regressions and Spearman rank order correlations. The sample was divided into three different sized groups: large-, medium-, and small-sized subsidiaries. Organisational

size was found to be a crucial driver affecting the extent to which subsidiaries transfer LMI to their parent firms.

To sum up, RKT cannot be initiated only through subsidiaries' capabilities as suggested in the literature on knowledge transfer. Instead, RKT is a combined result of subsidiaries' capabilities and their relationships with headquarters. This study makes important contributions to finding out the relationships between transfer capacity, relational capital and RKT. Based on the literature review and the outcomes of this study, future research avenues will be suggested in the next chapter.

Chapter 7. Conclusions

7.1 Introduction

This study has investigated the key factors affecting reverse knowledge (i.e. LMI) transfer from subsidiaries in Korea to their foreign headquarters. The extant literature dealing with RKT has identified the key facilitators and impediments affecting the phenomenon (e.g., Ambos et al., 2006; Björkman et al., 2004; McGuinness et al., 2013; Najafi-Tavani et al., 2012; Rabbiosi, 2011; Noorderhaven and Harzing, 2009; Rabbiosi and Santangelo, 2013; Yang et al., 2008). Although these previous studies provided important insights, the following limitations remain.

First, the previous studies have been mainly carried out in transition economies, such as China, Hungary and Vietnam and have neglected advanced emerging markets, like Korea. Korea suffered from an economic crisis at the end of 1997, and due to that event, the Korean government implemented various open policies to improve the location specific advantages of Korea and attract inward foreign investment (the government believed that the inflow of foreign direct investment (FDI) would help overcome the economic crisis). The key element, which has been conventionally emphasised as a prerequisite for economic growth by many scholars, is technological progress, and Korea used to cultivate technological innovation through various means at the early stage of economic development. This indicates that Korea may possess own know-how facilitating local innovation and thus foreign firms are probably motivated to learn the locally residing unique market information. This means that it is possible to investigate

the key determinants which affect subsidiaries' LMI transfer to their headquarters by observing MNC subsidiaries operating in Korea. Second, while recent studies of MNCs have found that subsidiaries play a critical role in providing headquarters with various sources of new knowledge, no one has tried to discover the key factors affecting the transfer of LMI. Third, there is a view that both 'knowledge sender's ability' and 'knowledge transferor's willingness to transfer knowledge' are crucial determinants in the process of knowledge transfer from headquarters to subsidiaries (Minbaeva and Michailova, 2004), but examination of the influence of the two factors on RKT is still in its infancy. Finally, studies about the effect of knowledge relevance between headquarters and subsidiaries on RKT are few in number except Yang et al.'s (2008) study which investigated the impact of subsidiaries' possession of prior related knowledge to headquarters on RKT. For these reasons, this study decided to investigate what drives subsidiaries' RKT to headquarters by focusing on factors comprising knowledge transfer capacity and relational capital in the Korean context.

The rest of this chapter provides the contributions with the key findings and the implications of this study. The limitations of the study and future research directions are also outlined.

7.2 Contributions to knowledge

Given the importance of RKT for MNC competitiveness, researchers have increasingly attempted to identify the main factors influencing the RKT from subsidiaries. Although empirical examinations of RKT have been undertaken by previous studies to

some extent, there still exists a critical hole in several respects. First, as was stated in the previous sentence, it is true that there are some extant empirics dealing with the topic and the perception of subsidiary knowledge as an important source for enhancing MNCs' competitiveness. However, with respect to knowledge type, empirical experiments exploring subsidiaries' transfer of LMI to their headquarters are few in number. This indicates that further research needs to be conducted to refine the research area (i.e., RKT). In addition, it is hard to find empirical investigations focusing on countries which have recently approached becoming advanced economies. This study fills both those research gaps and attempts to uncover key determinants affecting the reverse transfer of LMI from subsidiaries to MNCs in a Korean context. By doing this, this study cements an extant hole, and therefore contributes to current knowledge.

Second, previous studies have employed fragmentary theoretical concepts in similar empirical examinations. That is, some studies emphasised either relational capital between knowledge transferors and acquirers as a catalyst to enhance a favourable learning environment (e.g. Lee et al., 2008) or knowledge possessors' transfer capacity improving recipients' learning effects (e.g. Park, 2011a). Some other studies relating to knowledge acquisition by headquarters recommend that learning is not plausible without social embeddedness; and thus subsidiaries need to enjoy organisational autonomy for their embeddedness within local networks (e.g., Joao et al., 2011; Mudambi and Navarra, 2004) or knowledge relevance between information exchanging parties (e.g. Ghauri and Park, 2012), or the maximisation of knowledge transfer within MNC networks is not possible without the application of suitable socialisation mechanisms (Gupta and Govindarajan, 2000). However, the discussion relating to the key determinants affecting

RKT has not reached an academic consensus and there are still significant topics of academic debate.

This study uncovered how the various elements of knowledge transfer capacity and relational capital effect RKT via an empirical analysis of a sample of 432 subsidiaries in Korea. A subsidiary's knowledge transfer capacity to teach and instruct locally embedded tacit knowledge is strengthened when it owns abilities to absorb and assimilate new information and as a result, transfers it effectively within MNCs. Subsidiary willingness to share knowledge and unconstrained business autonomy function as stimulants to more effective knowledge transfer. Furthermore, relational capital between subsidiaries and MNCs is upgraded significantly when socialisation mechanisms work properly and mutual trust is present. This may mean that RKT is not possible if interactions based on socialisation are uncommon and if this triggers distrust and conflicts in the headquarters-subsidary relationship. Organisational distance particularly negatively functions in the presence of both knowledge development capability and a subsidiary's willingness to transfer. Based on the findings previously explained, this study extends our understanding of RKT via the use of the theoretical concepts, knowledge transfer capacity and relational capital.

Finally, although organisational size can matter for knowledge exchange between MNCs and their subsidiaries, no one has paid scholarly attention and attempted to identify the impact of organisational size in RKT studies. The extent of internal resources possessed by large and small subsidiaries is not identical, which may influence their innate inclinations to learn LMI. Moreover, the strategic importance between large and

small subsidiaries within MNC networks cannot be the same, and small miniatures may require additional support from MNC headquarters for their survival in foreign markets. This study has tried to identify the impacts of these components for organisations of different sizes by grouping the sample into large, medium and small-sized subsidiaries. Through these examinations, it was found that the key determinants influencing the RKT phenomenon are different for different sizes of organisation. That is to say, the main factors for large subsidiaries are knowledge development capability, subsidiary autonomy and trust between subsidiaries and MNCs. However, for medium-size firms, the key elements are subsidiary willingness, trust and organisational distance. By contrast, RKT is affected by knowledge development capability, subsidiary autonomy and socialisation mechanisms in small-sized organisations. Prior to this study, there has been no investigation of whether relational capital and knowledge transfer capacity have the same effect on organisations of different sizes. This study finds that those determinants are not identical, when organisations are classified into three groups: large-, medium- and small-sized subsidiaries. Therefore, this study helps to extend our understanding of the context of RKT and this is an important contribution to knowledge.

In summary, together with the theoretical contributions, this study has made contributions as follows. First, factors affecting RKT from subsidiaries to MNCs have not reached an academic consensus, and the results uncovered by this study can serve as a stepping stone for further academic discussion. Specifically, this empirical study has been undertaken in a leading emerging economy, and thus the research framework suggested can be applied to other emerging economy contexts, such as China, India and Vietnam. Secondly, this study extends our understanding of RKT via the use of the theoretical

concepts, 'knowledge transfer capacity' and 'relational capital'. Third, one of the most significant contributions of this study is the finding that those key determinants affecting the reverse transfer of knowledge owned by subsidiaries to MNCs are considerably influenced by subsidiary size. This paves the way for further empirical surveys exploring the function of organizational size.

7.3 Applied implications

The implication of the results of this study is that subsidiaries can improve their knowledge transfer capacity by increasing knowledge development capability (through external embeddedness, education and training), willingness (i.e., intent to share that might be escalated by rewards and compensations) and subsidiary autonomy (i.e., decision power). Martin and Salomon (2003) also shed light on the importance of knowledge transfer capacity as a fuse to ignite RKT. They argue that knowledge transfer capacity is a prime mover for RKT and helps to have controls in the process of knowledge sharing.

Another implication of the results is that both subsidiaries and headquarters should develop and strengthen relational capital by reinforcing formal and informal ties through continued reciprocal interplays and enhanced communications. Knowledge, especially tacit knowledge, which is rooted in a firm's memory, tends to be transformed into codifiable and articulate information so that the knowledge is mutated to acquirable skills (Cavusgil et al., 2003). In this vein, socialisation mechanisms in intra-firm relationships are commonly regarded as vehicles and channels for effective knowledge sharing, and

both mutual trust at an organisational level and common organisational congruence are also considered to play critical roles in increasing knowledge exchange (Li, 2005).

This study offers important implications for MNC managers. First, the study finds that subsidiary willingness is the key pre-condition for RKT to take place by enhancing knowledge transfer capacity. This suggests that MNC managers need to consider carefully how to improve subsidiary motivation to transmit locally residing information. Second, the results suggest that subsidiary autonomy is a better knowledge transferor than the exercise of tight control over subsidiaries by headquarters. This implies that the hierarchical relationship in MNC networks and subsequent heavy control by MNCs can make it difficult for subsidiaries to demonstrate the latter's teaching capability. Thus, MNC managers should nurture an amicable relationship with their subsidiaries and collaboratively support, rather than closely supervise, them and help them to overcome obstacles encountered in business operations, which will improve their knowledge transfer capacity. A third practical implication for MNC managers is that they should be well-informed of the fact that tacit knowledge, such as LMI, is often embedded in human beings, and thus MNC managers should pay particular attention to provide training and education programs to subsidiaries' organisational members as a possible way to increase their knowledge development capability. Finally, MNC managers should strive to build a network of trust with subsidiaries, otherwise RKT from subsidiaries to headquarters can be difficult.

7.4 Limitations and future research directions

Although this study contributes significantly to current knowledge on RKT and relevant theoretical discussions, as well as providing practical implications to MNC managers, it also contains some limitations. First, it would be useful to enlarge geographically the empirical investigation of this study and examine subsidiaries in other countries. Since results may be different in other geographical contexts, the research model suggested needs to be experimented with different national contexts. This will extend the generalisability of the findings. Second, this research used only quantitative data collection method, but qualitative methods such as interviews were not employed. Given the fact that both quantitative and qualitative tests have distinctive pros and cons, the use of the latter may be expected to complement some of drawbacks of the former. Third, knowledge can be divided into various types, but this research has used only LMI. This suggests a need for future studies to test other knowledge types. Fourth, although this study has examined a cause-and-effect relationship between dependent and independent variables, we do not know if there may be interactions among predictors. In this vein, another future research avenue would be to use, for example, structural equation modelling, to investigate relationships between variables. Fifth, the study was not able to uncover statistically a reason why organisational distance specially interacts with certain factors. Therefore, there is a need for further investigation of this matter. Sixth, this study did not differentiate manufacturing industries from service sectors. Given that manufacturing and service sectors possess different characteristics, a comparison of the drivers promoting RKT from subsidiaries to MNC headquarters is another future research path. Seventh, the data analysis did not investigate potential differences between

subsidiaries which had been established by Greenfield and brownfield. This study suggests that additional empirical examination needs to be conducted to identify if and how the drivers are different in both entry mode contexts.

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Appendix A: Survey Questionnaire

Name

Title (CEO or Equivalent)

Address

Dear

Re: Title

I am a Researcher in International Business and I am writing this letter to ask you to participate in a research project being undertaken at the University of the Huddersfield, UK into the “Reverse knowledge transfer from overseas subsidiaries to their headquarters”.

Your firm has been selected from “Foreign Direct Investments” published by the Ministry of Trade, Industry and Energy (MOTIE). All your responses to the questionnaire will remain strictly confidential. Thus, it would be appreciated if you could answer the questionnaire in an open and candid manner as there are no right or wrong answers. If you are not sure of an answer to any question please provide your best estimate. Although I guarantee strict anonymity, you do not need to identify yourself in any way on the questionnaire if you do not want to.

Your answer to the questionnaire will make a major contribution to improving the understanding of foreign direct investment in Korea through the publication of invaluable findings in academic journals, seminars and other conferences. I believe that it will also be beneficial for your firm as this research focuses on the key determinants which facilitate reverse knowledge transfer through international operations. In addition, a better understanding of these mechanisms will eventually help your firm to enhance corporate performance.

If you wish to receive a copy of the summary of this research, please check the box on the last page of the questionnaire. Ten respondents will receive a Portmeirion wall clock in a prize draw.

If you have any questions, please do not hesitate to contact me on +82 (0)10 4158 3532.

Thank you for your cooperation.

Yours sincerely,

Kum-Sik Oh (E-mail: u1274661@hud.ac.uk)

Researcher in International Business, University of Huddersfield, UK.

Of which managerial employees: ()

A3-3. Total annual sales during the latest financial year (Please indicate in Korean Won):
()

A4. Organisation Age

A4-1: The Year of Establishment: ()

A4-2: The Year of Foreign Investment: ()

A5. Foreign ownership configuration: (%)

A6. The largest foreign origin (by ownership share): ()

A7. In your opinion, how competitive is the industry in Korea in which your firm is operating?

- 1. Not competitive
- 2. Not very competitive
- 3. Moderately competitive
- 4. Very competitive
- 5. Extremely competitive

A8. Please indicate which of these activities are performed by your firm.

- 1. R&D (Product development)
- 2. Production
- 3. Marketing & sales
- 4. Other (please specify)_____

A9. Please indicate the most important activities which your firm is engaged in..

- 1. Manufacturing
- 2. Services
- 3. Other (please specify)

A10. Please indicate the types of factory or facility which this firm is operating.

- 1. Greenfield (newly built at inception)
- 2. Brownfield (taken over from local partner or other firm)

Part B1: Knowledge Tacitness

For each question, please tick the box (☑) in the right hand column which most closely=reflects the situation in your firm		
B1. It is hard to verbally transfer market data about customers to headquarters.	1. Entirely disagree 2. Disagree 3. Neutral 4. Agree 5. Extremely agree	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
B2. It is hard to encode and write down market data about customers in reports or documents with the purpose of transferring the knowledge to headquarters.	1. Entirely disagree 2. Disagree 3. Neutral 4. Agree 5. Extremely agree	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
B3. It is hard to verbally transfer market data about competitors to headquarters.	1. Entirely disagree 2. Disagree 3. Neutral 4. Agree 5. Extremely agree	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
B4. It is hard to encode and write down market data about competitors in reports or documents with the purpose of transferring the knowledge to headquarters.	1. Entirely disagree 2. Disagree 3. Neutral 4. Agree 5. Extremely agree	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
B5. It is hard to verbally transfer marketing know-how to headquarters.	1. Entirely disagree 2. Disagree 3. Neutral 4. Agree 5. Extremely agree	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
B6. It is hard to encode and write down marketing know-how in reports or documents with the purpose of transferring the knowledge to headquarters.	1. Entirely disagree 2. Disagree 3. Neutral 4. Agree 5. Extremely agree	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
B7. It is hard to verbally transfer distribution know-how to headquarters.	1. Entirely disagree 2. Disagree 3. Neutral 4. Agree 5. Extremely agree	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
B8. It is hard to encode and write down distribution know-how in reports or documents with the purpose of transferring the knowledge to headquarters.	1. Entirely disagree 2. Disagree 3. Neutral 4. Agree 5. Extremely agree	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>

B9. It is hard to verbally transfer market-specific technological know-how to headquarters.	1. Entirely disagree 2. Disagree 3. Neutral 4. Agree 5. Extremely agree	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
B10. It is hard to encode and write down market-specific technological know-how in reports or documents with the purpose of transferring to headquarters.	1. Entirely disagree 2. Disagree 3. Neutral 4. Agree 5. Extremely agree	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
B11. It is hard to verbally transfer purchasing know-how to headquarters.	1. Entirely disagree 2. Disagree 3. Neutral 4. Agree 5. Extremely agree	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
B12. It is hard to encode and write down purchasing know-how in reports or documents with the purpose of transferring to headquarters.	1. Entirely disagree 2. Disagree 3. Neutral 4. Agree 5. Extremely agree	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>

Part B2: Knowledge Transfer Capacity (Characteristics of Knowledge Senders)

For each question, please tick the box (☑) in the right hand column which most closely reflects the situation in your firm		
B13. Our employees in the firm have adequate academic background to understand and use local market information very well.	1. Entirely disagree 2. Disagree 3. Neutral 4. Agree 5. Extremely agree	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
B14. This firm has expatriates who possess superior managerial and technical skills.	1. Entirely disagree 2. Disagree 3. Neutral 4. Agree 5. Extremely agree	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
B15. We commit significant resources to educating and training non-managerial employees to master local market information.	1. Entirely disagree 2. Disagree 3. Neutral 4. Agree 5. Extremely agree	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
B16. We commit significant resources to educating and training managerial employees to master local market information.	1. Entirely disagree 2. Disagree 3. Neutral 4. Agree 5. Extremely agree	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>

B17. This firm has a close relationship with its local business actors, such as customers, suppliers and local institutions.	1. Entirely disagree 2. Disagree 3. Neutral 4. Agree 5. Extremely agree	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
B18. This firm has frequent contacts (face-to-face contacts, letter, phone, etc) with its local business actors, such as customers, suppliers and local institutions.	1. Entirely disagree 2. Disagree 3. Neutral 4. Agree 5. Extremely agree	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
B19. Compared to headquarters, how similar are the products which are produced by this firm?	1. Entirely different 2. Different 3. Neutral 4. Similar 5. Extremely similar	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
B20. Compared to headquarters, how similar is the service which is provided by this firm?	1. Entirely different 2. Different 3. Neutral 4. Similar 5. Extremely similar	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
B21. Compared to headquarters, how similar are the customers who are shared by this firm?	1. Entirely different 2. Different 3. Neutral 4. Similar 5. Extremely similar	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
B22. Compared to headquarters, how similar is the basic technology which is shared by this firm?	1. Entirely different 2. Different 3. Neutral 4. Similar 5. Extremely similar	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
B23. Compared to headquarters, how similar are the basic skills which are shared by this firm?	1. Entirely different 2. Different 3. Neutral 4. Similar 5. Extremely similar	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
B24. To what extent does this firm receive motivation which is associated with the transfer of its knowledge to headquarters?	1. Very little 2. Little 3. Neutral 4. Much 5. Very much	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
B25. To what extent does headquarters emphasise knowledge transfer as a criterion for assessing this firm?	1. Very little 2. Little 3. Neutral 4. Much	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>

	5. Very much	<input type="checkbox"/>
B26. To what extent is this firm's main establishment motivation associated with the transfer of its knowledge to headquarters?	1. Very little 2. Little 3. Neutral 4. Much 5. Very much	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
B27. To what extent does this firm commit a considerable amount of time and resources for knowledge transfer to headquarters.	1. Very little 2. Little 3. Neutral 4. Much 5. Very much	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
B28. This firm is free to make decisions in developments and changes in products/services for the domestic and export markets.	1. Entirely disagree 2. Disagree 3. Neutral 4. Agree 5. Extremely agree	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
B29. This firm is free to make decisions in subsidiary human resource management.	1. Entirely disagree 2. Disagree 3. Neutral 4. Agree 5. Extremely agree	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
B30. This firm is free to make decisions in financial management including pricing policy.	1. Entirely disagree 2. Disagree 3. Neutral 4. Agree 5. Extremely agree	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
B31. This firm is free to make decisions in marketing activities.	1. Entirely disagree 2. Disagree 3. Neutral 4. Agree 5. Extremely agree	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>

Part B3: Relational capital (Characteristics of the relationships between knowledge senders and receivers)

For each question, please tick the box (☑) in the right hand column which most closely reflects the situation in your firm		
B32. There are efficient channels for communication between this firm and headquarters.	1. Entirely disagree 2. Disagree 3. Neutral 4. Agree 5. Extremely agree	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
B33. There are frequent interfaces (i.e., visits and meetings) between this firm and headquarters.	1. Entirely disagree 2. Disagree 3. Neutral	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>

	4. Agree 5. Extremely agree	<input type="checkbox"/> <input type="checkbox"/>
B34. Our employees are often dispatched to co-work with headquarters.	1. Entirely disagree 2. Disagree 3. Neutral 4. Agree 5. Extremely agree	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
B35. Active managerial support by headquarters is common for this firm.	1. Entirely disagree 2. Disagree 3. Neutral 4. Agree 5. Extremely agree	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
B36. There is a high level of trust between headquarters and the top management of this firm.	1. Entirely disagree 2. Disagree 3. Neutral 4. Agree 5. Extremely agree	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
B37. We trust that headquarters will make no decisions detrimental to this firm.	1. Entirely disagree 2. Disagree 3. Neutral 4. Agree 5. Extremely agree	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
B38. We believe that headquarters trust that we will make no decisions detrimental to headquarters.	1. Entirely disagree 2. Disagree 3. Neutral 4. Agree 5. Extremely agree	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
B39. This firm has a similar organisational culture to headquarters.	1. Entirely disagree 2. Disagree 3. Neutral 4. Agree 5. Extremely agree	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
B40. Cultural differences with headquarters have not been issues in this firm.	1. Entirely disagree 2. Disagree 3. Neutral 4. Agree 5. Extremely agree	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
B41. The formal vision statement of this firm and headquarters is similar.	1. Entirely disagree 2. Disagree 3. Neutral 4. Agree 5. Extremely agree	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>

B42. This firm shares the same goal with headquarters.	1. Entirely disagree 2. Disagree 3. Neutral 4. Agree 5. Extremely agree	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
B43. The business practices and operational mechanisms of this firm and headquarters are similar.	1. Entirely disagree 2. Disagree 3. Neutral 4. Agree 5. Extremely agree	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>

Part C: Reverse Knowledge Transfer

For each question, please tick the box (☑) in the right hand column which most closely reflects the situation in your firm		
C1. To what extent has this firm successfully transferred market data about local customers to headquarters?	1. Very little 2. Little 3. Neutral 4. Much 5. Very much	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
C2. To what extent has this firm successfully transferred market data about local competitors to headquarters?	1. Very little 2. Little 3. Neutral 4. Much 5. Very much	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
C3. To what extent has this firm successfully transferred marketing know-how to headquarters?	1. Very little 2. Little 3. Neutral 4. Much 5. Very much	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
C4. To what extent has this firm successfully transferred distribution know-how to headquarters?	1. Very little 2. Little 3. Neutral 4. Much 5. Very much	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
C5. To what extent has this firm successfully transferred market-specific technological know-how to headquarters?	1. Very little 2. Little 3. Neutral 4. Much 5. Very much	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
C6. To what extent has this firm successfully transferred purchasing know-how to headquarters?	1. Very little 2. Little 3. Neutral 4. Much 5. Very much	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>

C7. Overall, to what extent has this firm successfully transferred local market information to headquarters?	1. Very little	<input type="checkbox"/>
	2. Little	<input type="checkbox"/>
	3. Neutral	<input type="checkbox"/>
	4. Much	<input type="checkbox"/>
	5. Very much	<input type="checkbox"/>

Please provide the following information about yourself (optional):

What is your name? (_____)

What is your job title? (_____)

Contact details

Phone No.: +82 - (_____) - (_____) - (_____)

Fax No.: +82 - (_____) - (_____) - (_____)

E-mail: _____ @ _____

Thank you for your assistance. If you wish to receive a copy of the summary of this research, please provide personal information above.

설문지

성명
직위
주소

참조: 제목

무엇보다 먼저 귀사의 무궁한 발전을 기원합니다.

저는 국제경영을 전공하고 있는 연구원이며, 영국에 소재한 허더스필드 대학교에서 진행하는 연구 프로젝트에 참여해 주실 것을 부탁 드리고자 본 편지를 드립니다. 참고로, 연구주제는 “해외 자회사로부터 본사로의 역지식이전”입니다.

귀사는 통상산업자원부에서 매년 발간하는 정부공시자료인 외국인투자기업 현황으로부터 선택되었으며, 본 설문에 대한 모든 답변은 학술적 용도로만 사용될 뿐 엄격히 비밀이 유지될 것임을 명확히 말씀 드립니다. 따라서 솔직한 답변을 해주실 것을 부탁 드리며, 본 설문에 대한 정답이나 오답은 없음도 아울러 언급 드립니다. 만일 특정 질문에 대한 정확한 답변을 알지 못하시는 경우 가장 근접한 답변을 표기내지 명시해 주시기 바랍니다. 비록 엄격한 비밀유지를 다시 한 번 더 강조 드리지만, 원하지 않으시는 경우 본 설문 내 신상정보를 기입하지 않으셔도 무방합니다.

귀하의 답변은 본 연구결과를 학술저널, 세미나 및 기타 학술대회에서 발표함으로써 한국 내 외국인직접투자에 대한 이해의 폭을 증진시킬 것이라고 확신합니다. 해외 자회사 운영을 통한 역지식이전을 용이하게 하는 주요 결정인자를 살펴보고 있는 본 논문의 결과는 귀사에도 도움이 될 것으로 여겨집니다. 아울러, 이러한 메커니즘에 대한 보다 더 나은 이해는 궁극적으로 귀사의 기업성과 증진에도 기여할 것으로 판단됩니다.

만일 본 연구결과의 요약본을 받아보길 원하시는 경우, 설문지의 마지막 페이지에 위치한 정보요청을 기입해주시기 바랍니다. 본 설문에 응답한 응답자 중 10 분에 대해 추첨을 통해 포트메리온 벽시계를 증정할 계획입니다.

질문사항이 있으신 경우, +82 (0)10 4158 3532로 연락해 주십시오.

협조에 다시 한 번 더 감사드립니다.

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자회사로부터 다국적기업으로의 역지식이전: 한국에서의 실증결과

설문지

용어설명

- 본 설문에서 “지식”이란, 한국에 대한 시장정보를 의미합니다.
- 본 설문에서 의미하는 “당사”라 함은, 귀사 (즉, 국제합작기업, 국제인수를 통한 다국적기업의 자회사 혹은 해외 자회사)를 뜻합니다. 반면, “해외 투자기업”이라 함은, 국제합작기업의 외국인 파트너 혹은 귀사에 부분적 지분을 소유하고 있는 해외기업을 의미합니다.
- 본 설문에서 말하는 “본사”는 해외 투자기업입니다.

파트 A: 귀사에 대한 정보

파트 A1: 기업 배경

귀사에 대한 아래 정보를 제공해 주십시오.

A1. 기업명:

A2. 귀사가 속해 있는 산업을 명시해 주십시오 (하나만)

- | | |
|------------------|------------------|
| a. 식품 () | m. 전기 및 가스 |
| b. 섬유 및 의류 () | n. 건설 |
| c. 제지 및 목재 () | o. 도소매 |
| d. 석유 () | p. 무역업 |
| e. 화공 () | q. 숙박 및 음식점업 |
| f. 의약 () | r. 운수 및 창고 |
| g. 요업 () | s. 금융 |
| h. 금속 () | t. 부동산 |
| i. 기계 () | u. 기타 서비스 (상세기술) |
| j. 전기 및 전자 () | |
| k. 운송용 기기 | |
| l. 기타 제조업 (상세기술) | |

A3. 기업규모

A3-1. 상근직 종업원의 수: ()

- 그 중 관리직 종업원의 수: ()
- A3-2. 외국인 주재원의 수: ()
- 그 중 관리직 종업원의 수: ()
- A3-3. 작년도 총매출액 (단위: 원화): ()
- A4. 기업연령
- A4-1: 설립연도: ()
- A4-2: 외국인 투자가 행해진 연도: ()
- A5. 해외기업의 주식 지분율: (%)
- A6. 해외기업 최대 지배주주의 국적 (지분율 기준):
()
- A7. 귀사가 영업하고 있는 한국 내 산업은 현재 얼마나 경쟁이 치열한지요?
1. 전혀 경쟁이 없음
 2. 경쟁이 거의 없음
 3. 경쟁이 낮음
 4. 경쟁이 치열함
 5. 경쟁이 매우 치열함
- A8. 귀사에 의해 수행되는 가장 비중 있는 활동을 표기해 주십시오.
1. 연구개발 (제품개발)
 2. 생산
 3. 마케팅 및 영업
 4. 기타 (상세기술) _____
- A9. 귀사가 수행하고 있는 가장 중요한 활동을 명시해 주십시오.
1. 제조
 2. 서비스
 3. 기타 (상세기술)
- A10. 귀사가 영업하고 있는 공장 혹은 시설의 유형을 표기해 주십시오.
1. 그린필드 (영업을 위해 신규 설립된 공장이나 시설)
 2. 브라운필드 (국내 및 기타기업의 기존 공장 혹은 시설에 에 대한 인수)

파트 B1: 지식의 암묵성

<p>각 질문에 대해, 귀사의 상황을 가장 적절히 묘사한 답변을 오른쪽 칼럼에서 선택하여 다음과 같이 표시 (☑) 하여 주십시오.</p>		
<p>B1. 국내 고객에 대한 시장정보를 문서가 아닌 구두로 본사에 알려주기 어렵습니다.</p>	<p>1. 매우 부정 2. 부정 3. 보통 4. 동의 5. 매우 동의</p>	<p><input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/></p>
<p>B2. 국내 고객에 대한 시장정보를 본사에 알려줄 목적으로 리포트 혹은 문서를 작성하기 어렵습니다.</p>	<p>1. 매우 부정 2. 부정 3. 보통 4. 동의 5. 매우 동의</p>	<p><input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/></p>
<p>B3. 국내 경쟁기업에 대한 시장정보를 문서가 아닌 구두로 본사에 알려주기 어렵습니다.</p>	<p>1. 매우 부정 2. 부정 3. 보통 4. 동의 5. 매우 동의</p>	<p><input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/></p>
<p>B4. 국내 경쟁기업에 대한 시장정보를 본사에 알려줄 목적으로 리포트 혹은 문서를 작성하기 어렵습니다.</p>	<p>1. 매우 부정 2. 부정 3. 보통 4. 동의 5. 매우 동의</p>	<p><input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/></p>
<p>B5. 국내 마케팅 노하우에 대한 시장정보를 문서가 아닌 구두로 본사에 알려주기 어렵습니다.</p>	<p>1. 매우 부정 2. 부정 3. 보통 4. 동의 5. 매우 동의</p>	<p><input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/></p>
<p>B6. 국내 마케팅 노하우에 대한 시장정보를 본사에 알려줄 목적으로 리포트 혹은 문서를 작성하기 어렵습니다.</p>	<p>1. 매우 부정 2. 부정 3. 보통 4. 동의 5. 매우 동의</p>	<p><input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/></p>
<p>B7. 국내 유통 노하우에 대한 시장정보를 문서가 아닌 구두로 본사에 알려주기 어렵습니다.</p>	<p>1. 매우 부정 2. 부정 3. 보통 4. 동의 5. 매우 동의</p>	<p><input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/></p>
<p>B8. 국내 유통 노하우에 대한 시장정보를 본사에 알려줄 목적으로 리포트 혹은 문서를 작성하기 어렵습니다.</p>	<p>1. 매우 부정 2. 부정 3. 보통 4. 동의 5. 매우 동의</p>	<p><input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/></p>

B9. 국내시장관련 기술 노하우에 대한 정보를 문서가 아닌 구두로 본사에 알려주기 어렵습니다..	1. 매우 부정 2. 부정 3. 보통 4. 동의 5. 매우 동의	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
B10. 국내시장관련 기술 노하우에 대한 정보를 본사에 알려줄 목적으로 리포트 혹은 문서를 작성하기 어렵습니다.	1. 매우 부정 2. 부정 3. 보통 4. 동의 5. 매우 동의	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
B11. 국내 구매 노하우에 대한 시장정보를 문서가 아닌 구두로 본사에 알려주기 어렵습니다.	1. 매우 부정 2. 부정 3. 보통 4. 동의 5. 매우 동의	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
B12. 국내 구매 노하우에 대한 시장정보를 본사에 알려줄 목적으로 리포트 혹은 문서를 작성하기 어렵습니다.	1. 매우 부정 2. 부정 3. 보통 4. 동의 5. 매우 동의	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>

파트 B2: 지식이전능력

각 질문에 대해, 귀사의 상황을 가장 적절히 묘사한 답변을 오른쪽 칼럼에서 선택하여 다음과 같이 표시 (☑) 하여 주십시오.		
B13. 당사의 종업원들은 국내 시장정보를 이해하는데 무리가 없을 만큼 적절한 학력을 소지하고 있습니다.	1. 매우 부정 2. 부정 3. 보통 4. 동의 5. 매우 동의	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
B14. 당사에는 우수한 경영 및 기술 노하우를 소지한 외국인 주재원들이 근무하고 있습니다.	1. 매우 부정 2. 부정 3. 보통 4. 동의 5. 매우 동의	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
B15. 당사는 비(非)관리직 종업원들이 국내 시장정보를 적절히 이해할 수 있도록 돕기 위해 충분한 교육 및 연수훈련을 시행하고 있습니다.	1. 매우 부정 2. 부정 3. 보통 4. 동의 5. 매우 동의	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
B16. 당사는 관리직 종업원들이 국내 시장정보를 적절히 이해할 수 있도록 돕기 위해 충분한 교육 및 연수훈련을 시행하고 있습니다.	1. 매우 부정 2. 부정 3. 보통 4. 동의 5. 매우 동의	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>

B17. 당사는 고객, 협력기업 및 국내 유관기관들과 긴밀한 관계를 유지하고 있습니다.	1. 매우 부정 2. 부정 3. 보통 4. 동의 5. 매우 동의	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
B18. 당사는 고객, 협력기업 및 국내 유관기관들과 긴밀한 접촉 (대면접촉, 편지, 유선 등을 통해)을 유지하고 있습니다.	1. 매우 부정 2. 부정 3. 보통 4. 동의 5. 매우 동의	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
B19. 본사와 비교하여, 얼마나 유사한 제품을 생산하고 있습니까?	1. 매우 다름 2. 다름 3. 보통 4. 유사함 5. 매우 유사함	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
B20. 본사와 비교하여, 얼마나 유사한 서비스를 제공하고 있습니까?	1. 매우 다름 2. 다름 3. 보통 4. 유사함 5. 매우 유사함	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
B21. 본사와 귀사가 공유하고 있는 고객군은 얼마나 유사한지요?	1. 매우 다름 2. 다름 3. 보통 4. 유사함 5. 매우 유사함	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
B22. 본사와 귀사가 공유하고 있는 기초 기술은 얼마나 유사한지요?	1. 매우 다름 2. 다름 3. 보통 4. 유사함 5. 매우 유사함	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
B23. 본사와 귀사가 공유하고 있는 기초 노하우는 얼마나 유사한지요?	1. 매우 다름 2. 다름 3. 보통 4. 유사함 5. 매우 유사함	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
B24. 본사로의 지식이전에 대한 귀사의 동기부여는 어느 정도인지요?	1. 매우 조금 2. 조금 3. 보통 4. 많이 5. 매우 많이	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
B25. 귀사를 평가하는 주요 기준으로써 본사는 지식이전을 어느 정도 강조하고 있는지요?	1. 매우 조금 2. 조금 3. 보통 4. 많이	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>

	5. 매우 많이	<input type="checkbox"/>
B26. 귀사가 설립된 이유는 본사로의 지식이전과 어느 정도 관련이 있는지요?	1. 매우 조금 2. 조금 3. 보통 4. 많이 5. 매우 많이	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
B27. 본사로의 지식이전을 위해 귀사는 어느 정도의 시간과 자원을 투자하고 있는지요?	1. 매우 조금 2. 조금 3. 보통 4. 많이 5. 매우 많이	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
B28. 당사는 국내 및 수출시장을 타깃하기 위한 제품과 서비스의 개발에 있어 자유로운 의사결정을 하고 있습니다.	1. 매우 부정 2. 부정 3. 보통 4. 동의 5. 매우 동의	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
B29. 당사는 인적자원 관리에 있어 자유로운 의사결정을 하고 있습니다.	1. 매우 부정 2. 부정 3. 보통 4. 동의 5. 매우 동의	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
B30. 당사는 가격정책을 포함한 재무관리에 있어 자유로운 의사결정을 하고 있습니다.	1. 매우 부정 2. 부정 3. 보통 4. 동의 5. 매우 동의	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
B31. 당사는 마케팅 활동에 있어 자유로운 의사결정을 하고 있습니다.	1. 매우 부정 2. 부정 3. 보통 4. 동의 5. 매우 동의	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>

Part B3: 관계자본

각 질문에 대해, 귀사의 상황을 가장 적절히 묘사한 답변을 오른쪽 칼럼에서 선택하여 다음과 같이 표시 (☑) 하여 주십시오.		
B32. 당사와 본사 간 커뮤니케이션을 위한 효율적인 채널이 존재합니다.	1. 매우 부정 2. 부정 3. 보통 4. 동의 5. 매우 동의	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
B33. 당사와 본사 간 활발한 접촉 (방문 및 미팅)이 이루어지고 있습니다.	1. 매우 부정 2. 부정 3. 보통	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>

	4. 동의 5. 매우 동의	<input type="checkbox"/> <input type="checkbox"/>
B34. 당사의 종업원들은 본사와의 공동작업을 위해 수시로 파견되고 있습니다.	1. 매우 부정 2. 부정 3. 보통 4. 동의 5. 매우 동의	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
B35. 당사에 대한 본사의 활발한 경영지원이 행해지고 있습니다.	1. 매우 부정 2. 부정 3. 보통 4. 동의 5. 매우 동의	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
B36. 본사와 당사의 최고 경영진 간에는 돈독한 신뢰 관계가 형성되어 있습니다.	1. 매우 부정 2. 부정 3. 보통 4. 동의 5. 매우 동의	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
B37. 우리는 본사가 당사에 부정적인 영향을 미칠 수 있는 의사결정은 하지 않을 것으로 믿고 있습니다.	1. 매우 부정 2. 부정 3. 보통 4. 동의 5. 매우 동의	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
B38. 본사는 우리가 영업에 부정적인 영향을 미칠 수 있는 의사 결정은 하지 않을 것으로 믿고 있습니다.	1. 매우 부정 2. 부정 3. 보통 4. 동의 5. 매우 동의	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
B39. 당사는 본사와 유사한 조직문화를 갖고 있습니다.	1. 매우 부정 2. 부정 3. 보통 4. 동의 5. 매우 동의	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
B40. 당사와 본사 간 문화적 차이가 문제가 되었던 사례는 없었습니다.	1. 매우 부정 2. 부정 3. 보통 4. 동의 5. 매우 동의	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
B41. 당사의 공식적인 미래비전은 본사와 유사합니다.	1. 매우 부정 2. 부정 3. 보통 4. 동의 5. 매우 동의	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>

B42. 당사는 본사와 유사한 목표를 공유하고 있습니다.	1. 매우 부정 2. 부정 3. 보통 4. 동의 5. 매우 동의	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
B43. 본사가 시행하고 있는 조직운영 형태는 본사와 유사합니다.	1. 매우 부정 2. 부정 3. 보통 4. 동의 5. 매우 동의	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>

Part C: 역지식이전

각 질문에 대해, 귀사의 상황을 가장 적절히 묘사한 답변을 오른쪽 칼럼에서 선택하여 다음과 같이 표시 (☑) 하여 주십시오.		
C1. 국내 고객에 대한 시장정보와 관련하여, 귀사가 행한 본사로의 지식이전은 얼마나 성공적이었습니까?	1. 매우 조금 2. 조금 3. 보통 4. 많이 5. 매우 많이	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
C2. 국내 경쟁기업에 대한 시장정보와 관련하여, 귀사가 행한 본사로의 지식이전은 얼마나 성공적이었습니까?	1. 매우 조금 2. 조금 3. 보통 4. 많이 5. 매우 많이	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
C3. 국내시장에 있어서의 마케팅 노하우와 관련하여, 귀사가 행한 본사로의 지식이전은 얼마나 성공적이었습니까?	1. 매우 조금 2. 조금 3. 보통 4. 많이 5. 매우 많이	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
C4. 국내시장에 있어서의 유통 노하우와 관련하여, 귀사가 행한 본사로의 지식이전은 얼마나 성공적이었습니까?	1. 매우 조금 2. 조금 3. 보통 4. 많이 5. 매우 많이	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
C5. 국내시장에 있어서의 기술 노하우와 관련하여, 귀사가 행한 본사로의 지식이전은 얼마나 성공적이었습니까?	1. 매우 조금 2. 조금 3. 보통 4. 많이 5. 매우 많이	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
C6. 국내시장에 있어서의 구매 노하우와 관련하여, 귀사가 행한 본사로의 지식이전은 얼마나 성공적이었습니까?	1. 매우 조금 2. 조금 3. 보통 4. 많이 5. 매우 많이	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>

C7. 전체적으로, 귀사가 행한 본사로의 시장정보이전은 얼마나 성공적이었습니까?	1. 매우 조금	<input type="checkbox"/>
	2. 조금	<input type="checkbox"/>
	3. 보통	<input type="checkbox"/>
	4. 많이	<input type="checkbox"/>
	5. 매우 많이	<input type="checkbox"/>

응답자에 대한 아래 정보를 제공하여 주십시오 (선택사항):

성함: ()

직책: ()

연락정보

전화번호: +82 - () - () - ()

팩스 번호: +82 - () - () - ()

이메일: @

도움에 감사드립니다. 만일 본 연구의 요약본을 받으시길 원하시는 경우, 상기 인적 사항을 제공해 주실 것을 부탁드립니다.