

**DETERMINANTS OF FDI ENTRY MODE CHOICE IN KOREA**

By

**Deok -Ki RYU**

**THESIS**

Submitted to

KDI School of Public Policy and Management

In Partial Fulfillment of the Requirements

For the Degree of

**DOCTOR OF DEVELOPMENT POLICY**

**2016**

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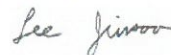
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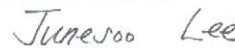
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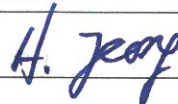
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## **ABSTRACT**

### **DETERMINANTS OF FDI ENTRY MODE CHOICE IN KOREA**

**By**

**Deok -Ki RYU**

The FDI entry mode strategy of MNE is a choice between WOS vs. JV (mode of control) and Greenfield vs. M&A (mode of commitment). This study examines the various determinants of these two kinds of FDI entry mode and the influence based on Eclectic theory. This study was conceived as an initial trial in entry mode study whereby the four FDI motivations are applied as determinants according to several variables from internal transaction data between foreign HQs and Korean subsidiaries. With analyzing the O-L-I advantage variables firstly applied for Korean FDI study, dual entry modes for both inward/outward FDI were comprehensively tested by LOGIT with large data from the manufacturing industry of Korea. Especially, this study explored the moderating effect of several variables and compared both FDI. Also this research attempts to explain the periodic characteristic in inward FDI history and the behavioral differences between SME and large MNE in Korea.

The four FDI motivations are significant in determining WOS/JV mode choice. OLI variables are strongly related with each of the two entry modes respectively in outward Korean FDI. Also the foreign investor's equity plays a significant role in every FDI. Outward Korean MNEs are noticeably more oriented to GF while OLI elements are more directed to M&A, under the large MNEs and SMEs have obviously different preference. In addition, this study proves entry timing, FDI incentive and firm size have a moderating effect in Korean FDI case.

# **I. INTRODUCTION**

## **A. OUTLINE OF FDI ENTRY MODE STUDY**

As one of the strategic viewpoints in the academic research of international business, the FDI (Foreign Direct Investment) entry mode choice is one of the most important and challenging decisions for any firm to enter foreign markets (Gomes-Casseres, 1989; Madhok, 1998; Root, 1994). It is also a substantial factor in determining the success or even survival of the foreign subsidiary of an MNE (Multi-National Enterprise) in international business strategy (Li, 1995). Multinational entry mode selection has been one of the most extensively researched topics in international business. For that reason, abundant research has been conducted until now to explain why MNEs select a particular mode of entry.

Generally, the determination of entry mode choice is broadly classified into three main categories depending on their focus of interest. :

- i) The choice between shared and full control modes (e.g., Hennart 1982, Padmanabhan/Cho 1996, Brouthers/Brouthers 2001) ; i.e., the choice between WOS (Wholly Owned Subsidiary) as full and JV (Joint Venture) as shared control modes of entry.
- ii) The choice between Greenfield operations and acquisitions (e.g., Kogut/Singh 1988, Chang/Rosenzweig 2001, Harzing 2002) : in terms of initial establishment (Greenfield) and acquisition (M&A : Merge & Acquisition) of the ownership.
- iii) The choice between equity and non-equity modes (e.g., Buckley/Casson 1976, Rugman 1981, cited in Rugman/Verbeke 2003) ; the issue of specifying the choice between the export mode without investment and actual FDI mode.



This research focuses on the two different categories stated above. The first part attempts to examine whether multinational firms follow entry mode decision-making regarding their FDI decision into Korea according to the i) above. The second part analyzes the appropriate entry mode choice in terms of the commitment selected ii) above. On the other hand, the third issue relates to whether the investor's equity is involved in the iii) above is not regarded as a boundary of FDI entry mode.

It is known that developed home and host countries were almost an exclusive domain of interest in earlier entry mode studies (e.g., Gatignon/Anderson 1988, Kogut/Singh 1988, Hennart 1991, Kim/Hwang 1992). Until now, FDI entry mode study has been a popular topic for some of very limited countries, including U.S., several European countries, Australia, HK and Japan. More recently transition host economies, given their growing economic significance have attracted greater attention from researchers (e.g., Tse/Pan/Au 1997, Brouthers et.al. 2001, Chen/Hu 2002). Among Asian countries like Singapore, China and Korea, their entry mode study between the WOS and JV or GF vs. M&A has not been sufficiently represented in world class journals even though they designated on the list of top FDI attraction countries in the world. With a strong economic position in the world economy, Korea has been recognized as a good host country to study such FDI strategy.

## **B. OBJECTIVE OF THIS RESEARCH**

### **1. Background of Entry Mode Study**

Previously there were abundant research suggestions based on the traditional Transaction Costs Theory to explain the entry mode behavior of foreign firms (e.g., Delios /Beamish 1999, Brouthers 2002, Chen/Hu 2002). Those trials based on Eclectic Theory or Institutional Theory which is comparatively weak even though those theories have evolved to explain the entry mode more clearly and broadly. In this study, J. H. Dunning's Eclectic Theory was applied for entry mode choice to extend what is known about the relationship between the elements of OLI (Ownership, Location and Internalization advantage) model (Dunning 1993, 1988) and entry-mode selection.

Moreover, the most previous studies for mode of control mainly touched on outward FDI rather than M&A vs. GF so as to focus on the governance strategy. The reason why those preceding studies seldom dealt with inward is that the outward cases were more prominent and the outward acquisition cases were much easier with more varied strategic issues than inward one. The academic research trend for Korea also illustrates that inward FDI study has not comparatively concentrated compared to the outward cases. Therefore, this study is intentionally designed to elaborate on such inward FDI and then compare the two FDI cases involving Korea, and in addition build upon the presently insufficient analysis of GF vs. M&A choice as well.

Also, the past empirical research had primarily focused on the manufacturing sector (Kwon and Konopa, 1993; Kim and Hwang, 1992; Chu and Anderson, 1992; Clegg, 1990; Gomes-

Casseres, 1989; Gatignon and Anderson, 1988; Anderson and Coughlan, 1987; Contractor, 1984; Goodnow and Hansz, 1972; Stopford and Wells, 1972). Based on the original characteristics and background, the above four motivation is basically appropriate elements to analyze the manufacturing firms, with some previous study concentrated on the specific industry sector, or contained a mixture of industries (Kogut and Singh, 1988; Harrigan, 1985; Buckley and Mathew, 1980).

Prior researches demonstrate that various determinants are related to entry modes, the congenital conditions of the firms, and the economic background and cultural difference of the country. Depending on the target countries and the firm's unique condition, as one of popular argument, the FDI experience produces diverse results. Therefore, irrespective of the general strategic viewpoints that are more or less similar across the countries, each host country is required to examine their own specificities and factors.

## **2. Objective of This Study**

This study investigates i) which determinant plays the most significant role in the selection process between the two types of entry mode in inward/outward FDI of Korea, ii) how those determinants' influence has changed over time, and iii) how those results of the selection are differ depending on firm size, (a large MNE or SME). The research background is based on Eclectic Theory and four motivations of FDI.

In this study, the entry mode of both WOS vs. JV and Greenfield vs. M&A was comprehensively analyzed in the context of one single country with the parallel comparisons

between inward and outward FDI taken together. The collected data of inward/outward FDI covers the entire period from the 1970s until recently, which enables the analysis to outline a clear picture of Korean FDI trend very effectively with less sampling bias. And this study targeted the manufacturing industry which has quickly transformed itself from an underdeveloped status several decades ago to a world-top level currently.

Several variables are used from four FDI motivations factors (Market Seeking, resource Seeking, Efficiency Seeking and Strategic Asset Seeking). These motivations were successfully applied as new determinants that indicated the significance of WOS vs. JV mode in the strategic choice. Though these motivations are regarded as the fundamental FDI framework of manufacturing industry, those variables have not been academically examined as an entry modes study until now.

Furthermore, this research mobilized a variety of valuable internal-transaction data between the foreign HQ in the home country and subsidiary in the host country. As part of the academic entry mode study for the first time, the internal transactional indicators used consisted of i) the import ratio of foreign subsidiary from HQ out of total purchasing, ii) the sales ratio of subsidiary in Korea to HQ, iii) the import ratio to purchase from the local Korean market and iv) sales ratio to local Korean market.

From the analysis, certain key characteristics have been identified in inward FDI. For instance, MS motivation did not affect GF vs. M&A mode at any time period in FDI history of Korea. The Korean FDI experience is more oriented to GF mode and associated with WOS mode, results which differ from the other countries' case. Moreover, foreign investor's equity ratio is always a significant factor to inward/outward FDI with preference to GF and WOS in inward

FDI. In outward FDI, the association between those two entry modes and various OLI advantages variables also proved its significance by Korean manufacturing sector's FDI cases. Big MNEs prefer GF mode as to their FDI capability increase while SME prefer M&A. Also, big MNEs are insensitive to cultural distance while SMEs pay attention to cultural distance.

Another value in the FDI entry mode study is that this research demonstrates the moderating effect on the behavioral choice of MNE in Korea's FDI. The LOGIT test uncovers occurrences of several variables which lead to an entry mode switch in specific circumstances. As a main feature of this study, the moderator of entry mode choice is verified; e.g. i) entry timing of inward FDI is important to the subsidiary with high purchasing ratio in Korea, ii) government's incentive towards the Korean subsidiary with high purchasing ratio from HQ, iii) firm size, the cultural distance and investment capability which exhibits significant differences between big MNEs and SMEs.

The structure of this research proceeds as follows. The next chapter (Ch. II) reviews the literature on entry mode choice of FDI and its determinants, from which hypotheses are developed. Chapter III is the descriptive statistics outlining the variations in each categorical characteristic of firms. Generally, analysis will address research methodology and variables, followed by regression results. The first part delves into ownership issues of WOS vs. JV (Ch. IV) and the second part elaborates on the establishment option (GF. vs. M&A) of foreign invested firms in Korea (Ch. V). Additionally, such mode issue will be evaluated on the Korean outbound firms in order to compare then with the inbound cases (Ch. VI). Finally, chapter VII concludes with a note on the limitations of this study and the implications of the findings for future research direction.

## **II. LITERATURE REVIEW**

### **A. THEORY ON FDI ENTRY MODE**

International companies have to find a suitable organizational structure in order to manage foreign investments effectively when they enter foreign markets (Anderson & Gatignon, 1986). In the FDI's perspective, foreign market entry mode choice determines the firm's degree of resource commitment to the foreign market (Hill, Hwang, & Kim, 1990), the risks the firm will bear in the host country (Hill et al., 1990; Hill & Kim, 1988), and the level of control a firm can exercise over its overseas activities (Anderson & Gatignon, 1986). On the other hand, in the middle of the operation, changing an initially chosen entry mode can be costly and time-consuming (Kumar & Subramaniam, 1997). Therefore, the wrong entry mode can have a negative impact the firm's performance (Lu & Beamish, 2001; Nakos & Brouthers, 2002).

There were some well-known academically representative background on the FDI strategy and operation of the foreign facility. Earlier studies by Buckley and Casson (1976) argue that firms would be better off by internalizing their international operations rather than coordinating them through the market mechanism (Coase 1937, Williamson 1991) in the presence of market imperfections. Most of all, Dunning's (1988) eclectic paradigm combines insights from resource-based, institutional and transaction cost theories (Brouthers & Hennart, 2007). Institutional theory suggests that a country's institutional environment affects a firm's scope of action because the environment reflects the "rules of the game" (Brouthers & Hennart, 2007, p. 405) according to how the firms behave. New institutionalism distinguishes between formal and informal institutions

(North, 1990); while informal institutions contain primarily patterns of behavior in a certain culture, formal institutions are determined in political rules or legal decisions (Peng, 2000). Below are details of each theoretical background in terms of entry choice.

### **1. Transaction Cost Theory**

Transaction Cost Theory, so called, Transaction Cost Economics (TCE) has been frequently applied to explain a firm's international strategic behavior in foreign markets. Traditionally, it is the most widely used theoretical perspective in the general research on the international entry mode choice (Brouthers & Hennart, 2007). Firms choose an entry mode that minimizes the transaction costs associated with their international operations (Hennart 1988, Kogut/Singh 1988, Brouthers/Brouthers 2001). This framework deviates from the asset tacitness and partner opportunism premises of the transaction cost framework in prior FDI entry mode studies (e.g., Gatignon & Andersen, 1988; Gomes-Casseres, 1989). The choice between full and shared ownership depends on the relative costs and benefits of the two alternative ownership structures, i.e., joint venture vs. wholly owned subsidiary.

Furthermore, this TC theory-based literature has remained rather silent concerning how and to what degree various ownership structures allow multinational firms to exert control. Such research is also able to account for the influence of different types of ownership by evaluating various forms of ownership (e.g., joint ventures, acquisitions, wholly-owned subsidiaries). Foreign market entry mode perspective in TC theory-grounded work will contribute to explaining how different types of ownership enable firms to exert different levels of control over activities in the host country.

## 2. Eclectic Theory

The eclectic theory developed by J. Dunning is a mixture of three different categorical theories of FDI. This OLI theory, as applied to entry-mode selection states that MNEs will choose the most appropriate form of entry mode into a foreign market by considering their ownership advantages of the firm, the location advantages of the home country, and the internalization advantages of the investor's particular condition.

1) "O" from Ownership advantages:

Ownership (O) advantages are firm-specific competitive advantages that the firm may have and refers to a firm's intangible assets, which are, at least for a while in its exclusive possession and may be transferred within transnational companies via cost advantages resulting in higher incomes or reduced costs (Porter, 1980). Therefore, to be successful in a foreign market, a firm should possess certain characteristics which would allow it tide over the operating costs in the foreign market. The firm has a monopoly over its own specific advantages and by employing them abroad it would result in higher marginal profitability or lower marginal cost than other competitors. (Dunning, 1973, 1980, 1988).

Below are specific advantages of each country that can be divided into three categories:

- a) Monopoly advantages in the form of privileged access to markets through ownership of natural limited resources, patents, trademarks ;
- b) Technology and knowledge broadly defined so as to contain all forms of innovation activities;
- c) Economies of large size such as economies of learning, economies of scale and scope, greater access to financial capital.



These advantages are the property competences or the specific benefits of the company.

Ownership advantages need to be both unique and sustainable in order to provide the firm with a competitive advantage in entry-mode selection (Porter, 1980).

2) “L” from Location advantage:

Location (L) advantages are country-specific factors that related to the market condition under consideration -- market potential and market risk (Root, 1987) – and are available to all firms in that particular market (Dunning, 1988). For example, through better coordination internationally lower cost labor which is achieved thereby resulting in a cost advantage in all markets where the firm's products are sold (Dunning, 1988).

Location advantages of different countries are the key elements to decide who will become host countries for transnational activities. The specific advantages of each country can be divided into three categories :

- a) The economic benefits consist of quantitative and qualitative factors of production, costs of transport, telecommunications, market size etc.
- b) Political advantages: common and specific government policies that affect FDI flows
- c) Social advantages: includes distance between the home and home countries, cultural diversity, attitude towards strangers etc.

3) “I” from Internalization advantage:

The internalization ( I ) advantages are concerned with the costs of choosing a hierarchical mode of operation over an external mode (Dunning, 1993, 1988). The internalizing of international operations raises a cost issue which must be compared with the costs of finding and maintaining an external relationship to take the same functions in the

international market. Williamson (1981) refers to these costs as transaction costs. While it is advocated that these transaction costs must be considered for entry-modes (Contractor, 1990 ; Hennart, 1989 ; Gatignon and Anderson, 1988), they unfortunately cannot be accurately calculated before the international operation has been established (Dunning, 1993 ; Buckley, 1988). Because of this inability to calculate internalization advantage, it is suggested that the motivation for foreign market expansion may influence the entry-mode selection process, despite the perceptible OLI advantages.

Supposing the first two conditions (Ownership-Location) are met, it must be profitable for the company the use of these advantages, in collaboration with at least some factors outside the country of origin (Dunning, 1973, 1980, 1988). This third characteristic (Internalization) of the eclectic paradigm offers a framework for assessing different ways to exploit its powers from the sale of goods and services between the companies. The more these three advantages the multinational firm equipped with, the higher control of ownership (WOS) is preferred. In general, the eclectic theory better explains the high level of control of entry mode due to its basis in internalization and exclusive advantage theory.

### **3. Institutional Theory**

Institutional theory suggests that a country's institutional environment affects a firm's scope of action because the environment reflects the "rules of the game" (Brouthers & Hennart, 2007, p. 405). New institutionalism distinguishes between formal and informal institutions (North, 1990) While informal institutions contain primarily patterns of

behavior in a certain culture, formal institutions are determined by political rules or legal decisions (Peng, 2000). According to new institutional theory, a firm entering a foreign market strives for legitimacy and acceptance by conforming to the host country's conditions and expectations (Yiu & Makino, 2002).

According to extant literature, one way to deal with the institutional challenges that arise in the host country is to diversify risk by operating in multiple markets (Mudambi & Mudambi, 2002). One fundamental question is whether and how the firms can diversify risk in response to challenges that arise from the institutional context, despite their limited resources. Although institutional theory emphasizes the importance of legitimacy and acceptance, with regard to firms' sensitivity to external challenges, the literature focuses on the host country's institutional context, leaving out how formal and informal domestic institutions impact firms' foreign market entry mode choice.

#### **4. Dunning's Four-Motivation Framework**

More attention is being paid to the issue of foreign direct investment, both at national and international levels. There are many theoretical papers that examine the motivations developed by J. Dunning, who has identified four main types of foreign-based MNE activity. In the case of FDI, the basic push factors that cause a firm to invest abroad rather than export or outsource production to national firms must be understood. He categorized mainly four impetuses as below by the combination of each advantage factors of OLI (Ownership-Location-Internationalization) paradigms.

- 1). That designed to satisfy a particular foreign market, or set of foreign markets, viz. *market seeking*, or demand oriented, FDI (MS motivation).
- 2). That designed to gain access to natural resources, e.g. minerals, agricultural products, unskilled labor, viz. *resource seeking*, or supply oriented FDI (RS motivation).
- 3). That designed to promote a more efficient division of labor or specialization of an existing portfolio of foreign and domestic assets by MNEs, i.e. *rationalized or efficiency seeking FDI*. This type of FDI, though related to the first or second kind, is usually sequential to it (ES motivation).
- 4). That designed to protect or augment the existing O specific advantages of the investing firms and/or to reduce those of their competitors, i.e. *strategic asset seeking FDI (SAS motivation)*. (Dunning, 2000)

The motivation perspective emphasizes the driving force of strategic intent behind firms from emerging economies explore the competitive advantages that they currently do not possess (Wright et al., 2005). Additionally, these firms of emerging economy usually have global strategic ambitions with the intent to pursue their internationalization with a global perspective, rather than limiting themselves to the multi-domestic strategic orientation (Rajan & Pangarkar, 2000).

## B. REVIEW ON FDI ENTRY MODE STUDY

### 1. Eclectic Theory with FDI Motivation

Multinational firms lay out specific strategic target motivations with a global dimension, such as preparing for further world-wide expansion (Morck et al., 2008) and improving global competitive position of existing transnational businesses (Rui & Yip, 2008). Preliminary evidence on the influence of motivational factors can be found in a few earlier entry-mode studies (Kim and Hwang, 1992; Erramilli and Rat, 1990).

OLI theory by J. H. Dunning practically synthesized the preceding other theories and added another element of motivation as shown on Tables 2-1 through 2-4, which set out some of the models and hypotheses.

< Table 2-1 > Theory Explanation: O advantage – static O advantages

Theories	1) MS	2) RS	3) ES	4) SAS
Product cycle theory. (Vernon 1966, 1974)	1) MS •Country (largely US) specific resources and capabilities of firms •All asset exploiting FDI •Further hypothesizes that competitive advantages of firms are likely to change as product moves through its cycle			
Industrial organization theories. (Hymer, 1960; Caves 1971, 1974; Dunning 1958, 1993; Teece 1981, 1984)	1) MS •Largely Oa advantages initiated, or protected, by entry and/or mobility barriers to product markets. These include patent protection, and marketing, production and financial scale economies. •All asset exploiting FDI •Little attention paid to asset augmenting FDI  3) ES •Oa advantages based on efficiency of investing firms also described in various empirical studies from Dunning (1958) and, Safarian (1966) onwards			

Internalization theory. (Buckley & Casson, 1976, 1985, 1998a,b; Hennart 1982, 1989; Rugman 1982, 1996)	1)MS <ul style="list-style-type: none"> <li>•Entirely confined to Oa and Ot advantages arising from internalization of intermediate product markets</li> <li>•All asset exploiting FDI</li> <li>•Largely, though not exclusively, a static theory, though some acknowledgment that relative transaction costs of markets and hierarchies may vary as firms seek to exploit dynamic market imperfections</li> </ul>
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<source : Dunning, 2000>

To explain the characteristics of O specific advantages, it is further divided into two categories. Firstly, those which view such advantages as income generating resources and capabilities possessed by a firm, at a given moment of time, so called *static* O advantages. Others are those which treat such advantages as the ability of a firm, to sustain and increase its income generating assets over time, i.e. *dynamic* O advantages. Both kinds of advantage are likely to be context specific, e.g. regarding the industry or country; and related to the kinds of competitive advantages which firms seek to attain or sustain

< Table 2-2 > Theory Explanation ; O advantage – dynamic O advantage

Theories	1) MS	2) RS	3) ES	4) SAS
1. Resource based theory (Wernerfelt. 1984, 1995; Conner, 1991; Helleloid 1992; Montgomery, 1995; Conner & Prahalad, 1996)	1) MS <ul style="list-style-type: none"> <li>•As initially formulated, it identifies and evaluates variables that influence sustainability of competitive advantages of firms. Less attention is given to traditional barriers of entry and more to variables such as specificity, rareness and non-replication of resources, and the capabilities of firms to create and utilize them Mainly concerned with asset exploiting FDI and briefly look into only limited recognition of Ot advantages</li> </ul> 4)SAS <ul style="list-style-type: none"> <li>•FDI designed to augment domestic- based resources and capabilities (Wesson 1993, 1997; Makino, 1998; Dunning, 1996; Chen &amp; Chen, 1999)</li> </ul>			

<p>2. Evolutionary theory. (Nelson &amp; Winter, 1982; Cantwell 1989, 1994; Saviotti &amp; Metcalfe, 1991; Teece et al., 1997)</p>	<p>•A holistic and time related approach, that concentrates on identifying and evaluating dynamic Oa advantages of firms. Basic proposition relates to the dependency path of accumulated competitive advantages, whereby the more efficient firms are in managing these advantages, the more likely that they will have the capability to engage in asset exploiting and asset augmenting FDI.</p>
<p>3. Organizational (management related) theories. (Prahalad &amp; Doz, 1987; Bartlett &amp; Ghoshal, 1989; Porter, 1991; Doz et al., 1997)</p>	<p>•Essentially explain O advantages in terms of ability of managers to devise appropriate organizational structures and techniques to effectively access, coordinate and deploy resources and capabilities across the globe. These theories, in recent years, have especially focused on the cross-border sourcing of intellectual assets and the coordination of these assets with those purchased from within the MNE</p>

<source ; Dunning, 2000>

Over the past two decades, the changes in the world economic situation and knowledge about MNE activity has lead to a *relative* decline in market seeking (MS) and resource-seeking (RS) FDI — both of which are based on the static O advantages of the same MNE — it is useful to explain a major part of first-time FDI, particularly in developing countries (Dunning, 1999). However, one of the key characteristics of the last two decades has been the increasing significance of FDI based on the possession of, or need to acquire, dynamic O advantages. Consequently, efficiency seeking (ES) FDI is only viable if: i) the investing firm is already producing in at least one foreign country and ii) both intermediate and final product including trade are relatively unimpeded by natural or artificial cross -border barriers. Strategic asset seeking (SAS) FDI is dependent on intellectual capital being located in more than one country, and that it is economically preferable for firms to acquire or create these assets outside, rather than within, their home countries.

< Table 2-3 > Theory Explanation : L advantage

Theories	1) MS	2) RS	3) ES	4) SAS
1. Theories related to the process of internationalization. (Anderson & Gatignon, 1986; Cavusgil, 1980; Forsgren, 1989; Johanson & Vahlne 1977,1990; Luostarinen, 1979; Vernon, 1966; Welch & Luostarinen, 1988)	1) MS			
	<ul style="list-style-type: none"> <li>•Mainly MS and RS, using traditional locational variables, but also several firm specific variables and transaction costs</li> <li>•Emphasis on role of psychic distance, particularly in exploiting accumulated knowledge based O advantages (Daniels, 1971: Johanson &amp; Vahlne 1977, 1990)</li> </ul>			
	4)SAS			
	<ul style="list-style-type: none"> <li>•Some attention given to fold as a learning activity</li> </ul>			
2. Agglomeration theories. (Audretsch, 1998; Enright 1991, 1998; Forsgren1989; Krugman 1991, 1993; Malmberg et al., 1996; Porter 1994, 1996; Storper1995; Cantwell & Piscitello, 1997)	1) MS			
	<ul style="list-style-type: none"> <li>•Some clustering of, products for the convenience of , consumers, including industrial consumers</li> <li>•Economies of scale and scope</li> </ul>			
	2)RS			
	<ul style="list-style-type: none"> <li>•Supply related clusters, based on static external economies, e.g. pooled labor markets</li> <li>•Economies of scale and scope</li> </ul>			
	4)SAS			
	<ul style="list-style-type: none"> <li>•Supply related clusters based on asset augmenting activities, local accumulation of knowledge, and exchange of information and learning experiences</li> </ul>			
3. Knowledge enhancing (dynamic) theories of location. (Dunning, 1997; Kogut & Zander, 1994; Kuemmerle, 1999; Porter 1994, 1998; Chen & Chen, 1998, 1999)	1) MS			
	<ul style="list-style-type: none"> <li>•See also SAS column, for 1-7 above. More specifically, dynamic theories are directed to explaining locational strategy in terms of sustaining and promoting location specific advantages in a world of uncertainty, learning and continuous innovation and upgrading of products. Applies especially to research and development activity of all kinds of FDI. The need to exploit dynamic locational advantage is especially pronounced in high technology sectors</li> </ul>			
	4)SAS			
	<ul style="list-style-type: none"> <li>•Theory is that firms will invest in those countries which offer the greatest opportunities accumulated for upgrading their existing core competencies, and that such a locational strategy is path dependent</li> </ul>			

<source: Dunning, 2000>



< Table 2-4 > Theory Explanation : I advantage

Theories	1) MS	2) RS	3) ES	4) SAS
<p>1. Orthodox Internalization Theory</p> <p>i. Resource or productivity enhancing (Caves, 1996; Dunning, 1993)</p> <p>ii. Cost reduction (Anderson &amp; Gatignon, 1986; Aoki, Gustafson &amp; Williamson, 1990; Buckley &amp; Casson 1976, 1981, 1985,</p> <p>iii. Risk reduction (Vernon, 1983)</p>	<p>1) MS</p> <ul style="list-style-type: none"> <li>•To capture coordinating and transactional benefits of common governance of related activities; to benefit (mainly through M &amp; As), from innovating, production or marketing scale/scope economies</li> <li>•To reduce transaction and coordinating costs at arm's length markets and/or non-equity contractual relations. Such costs include opportunism and shirking, and those designed to protect the reputation of the contractor. Most empirical work relates to entry modes. See, for example, Anderson and Gatignon (1986)</li> <li>•To reduce organizational and related risks implicit in (ii) above</li> </ul>			
<p>2. Dynamic Internalization Theory. (Buckley &amp; Casson, 1998a; Ghoshal, Hahn &amp; Moran, 1997)</p>				<p>4)SAS</p> <ul style="list-style-type: none"> <li>•To tap into learning and experience related assets and to speed up the innovation process. To capture the advantages of Schumpeterian integration and the common governance of R&amp;D related activities</li> </ul>
<p>3. Agency Theory. (Eisenhardt, 1989; Jensen &amp; Meckling, 1976; Strong &amp; Waterson, 1987)</p>	<p>1) MS</p> <ul style="list-style-type: none"> <li>•Like internalization theory, but primarily deals with reducing risks of external agents behaving against the interests of the principals</li> <li>•To reduce moral hazard and adverse selection</li> </ul>			
<p>4. Market Power Theories. (Cowling &amp; Sugden, 1987; Hymer, 1960, 1976)</p>	<p>1) MS</p> <ul style="list-style-type: none"> <li>•Growth by M and As intended to increase market power, rather than to upgrade efficiency</li> </ul>			
<p>5. Knowledge Acquisition and Sharing Theories. (Antonelli, 1998; Kogut &amp; Zander, 1994; Makino, 1998; Teece et al., 1997)</p>				<p>4)SAS</p> <ul style="list-style-type: none"> <li>•To augment existing intellectual assets, thereby increasing competitive prowess</li> <li>•To capture synergies of knowledge creation and augmenting activities</li> </ul>

<source: Dunning, 2000>

## 2. Prior Study on Entry Mode Choice

The eclectic paradigm further asserts that the precise configuration of any particular company and the response of the company to that configuration is strongly contextual. Particularly, it will reflect these points, i) the economic features of the country, ii) political features of the home country, iii) the host country they are seeking to invest, iv) the industry and the nature of the value added activity in which the firms are engaged, v) the characteristics of the individual investing firms, vi) their objectives and strategies in pursuing these objectives. The previous literature studied about the entry mode started from TCE as described in the below table 2-5.

< Table 2-5 > TCE Theory and previous case study (1980s-2010s)

Study by (published)	Year	Theory	Home country	Host country	Industry
Erramilli and Rao (JM)	1993	TCE	US	Various	Service firms
Burgel and Murray (JIM)	2000	TCE / Stage Organization.Capa	UK	Various	Service firms (tech)
Shrader (AMJ)	2001	TCE	US	Various	Manufacturing firms
Brouthers and Nakos (RT&P)	2004	TCE	Greece/ Netherland	C.E. Europe	Mixed
Cheng (IJCM)	2008	TCE/Stage/Org.Cap Bargaining power	Taiwan	E.Asia, ASEAN, NAFTA, EU	Manufacturing firms
Brouthers et al. (JMS)	2008	TCE/Real option theory	Germany/ Netherland	C.E. Europe	Mixed
Maelburger et al. (JIBS)	2012	TCE	Germany	Various	Mixed

<source: Laufs et. al., 2014>

The background theory has evolved from TCE and OLI theory in the past, and the OLI theory also has expanded diversified theories as comprehensive literatures which afford the entry mode between the WOS vs. JV. According to main feature of theory, each three advantage elements (Ownership, Location and Internalization) which affect the decision of mode of control shows the significant result with WOS respectively (Brouthers et. al., 1996). Table 2-6 shows the related literatures of Eclectic theory concerning entry mode.

< Table 2-6 > Eclectic Theory and previous case study (1980s-2010s)

Study by (published)	Year	Theory	Home country	Host country	Industry
Brouthers et al. (IBR)	1996	OLI	US	Various	US Service firms (software)
Shi et al. (APBR)	2001	OLI	CHN	HK	Manufacturing firms
Nakos and Brouthers (ET&P)	2002	OLI	Greece	C.E. Europe	Mixed
Pinho (IMR)	2007	OLI	Portugal	Various	Mixed

<source: Laufs et. al., 2014>

The motivations of HK's firms invested in China show that the SMEs for MS FDI choose JV and ES FDI prefer WOS while FDI experience has no affection to choose the entry mode decision (Shi, et.al.,2001). Actually, this is a contradictory according to Cheng et. al. of TCE theory above, who insist that FDI experience has a significant factor in the Taiwanese case to choose WOS. Additionally, a firm's capability to innovate international strategy is also associated with WOS choice like in the Spanish case study (Ripolles et.al., 2010). Table 2-7 shows other theory or mixed theory based literatures.

< Table 2-7 > Other theories and previous case study (1980s-2010s)

Study by (published)	Year	Theory	Home country	Host country	Industry
Zain and Ng (TIBR)	2006	Network theory	Malaysia	Various	Service firms (software)
Cheng and Yu (IBR)	2008	Institutional theory/Stage	Taiwan	S.E. Asia/ China	Manufacturing firms
Schwens et al (JMS)	2011	Institutional theory	Germany	Various	Mixed
Prashantham (BJM)	2011	Social capability	India	Various	Service firms (software)

<source ; Laufs et. al., 2014>

In case of Korea, there are scant papers published on the topic of inward FDI entry mode. A majority of available literature focused on outward FDI of Korean firms while only three conducted on inward FDI by MNE into Korea according to the same topic. The below table 2-8 shows the three representative papers to be the key papers of this study.

< Table 2-8 > previous case study for inward FDI in Korea (1980s-2010s)

Study by (published)	Entry mode	Theory	Home country	Host country	Industry and sample
Choe, Soon Kyu & Chang Dao Jin (ITA, 2004)	GF vs. M&A	N.A.	various	Korea	All industry firms (216 firms which capital exceed \$200,000, at the time of 1999)
Sydney J. Gray & Young Ok Kim. (MIR, 2008)	WOS vs. JV	Extended -TCE	Various	Korea	All industry firms (228 firms which capital exceed \$100,000, at the time of 2002)
Park Nan Joo et. al. (Journal of Korea Trade, 2014)	WOS vs. JV	Non-theory based	Various	Korea	All industry firms (104 big MNE, at the time of 2012) Analyzed by GEE method

Basically, the above researches explored on entry mode and MNE's managerial performance because their data range was not enough to analyze the various dimensions of entry mode strategies. According to the prior research, R&D intensity was significant causal relation with JV while cultural distance was related with WOS. (Sydney et. el., 2008), though it was insisted that those cultural distance was associated with JV by institutional theory. However, in mode of commitment study, R&D intensity and FDI experience have a positive association with M&A (Choe et.al., 2004).

With regards to the performances of foreign firms by the entry timing differed significantly before and after the AFC (Asian Financial Crisis) in the same mode and M&A firms have overall better performance results in Korea. However, according the other study related with entry mode, performance of foreign invested firms of Korea come up with the result that contradictory to Sydney et. al who argue for no relation with mode of control while Choe et.al. 's study suggest otherwise.

### **III. DESCRIPTIVE STATISTICS OF INWARD FDI**

#### **A. DATA COLLECTION**

The data base of foreign invested firms of MOTIE (Ministry of Trade Industry and Energy), contains total 17,200 foreign firms registered as of 30 June 2009. According to FIPA (Foreign Investment Promotion Act) of Korea, a firm that invests minimum \$100,000 and holds a minimum foreigner's share of 10% are designated as Foreign Invested firm. However, this study's target sample is those whose invested capital exceeds more than \$500,000. Because, small invested capital implies a small business entity operated by personal basis or just initiated by a feasibility study for future operations rendering them inappropriate for study on entry mode. Therefore, in order to gain the normal study of managerial strategy of the firms, these small investment size firms need to be excluded in order to analyze normally engaged MNEs in inward FDI operations. According to this principle, among 17,200 firms, 3,014 foreign firms who delivered investment amount exceeding \$500,000 with minimum foreigner's share of 10% are the target population of this study.

With the support of Korean government, the survey was conducted by an independent contractor to approach the entire FDI sectors in Korea. With the broad managerial issues, the developed questionnaire in Korean was designed for a wide range of internal facts where we asked respondents to provide much information not only about their FDI entry mode and FDI motivations but also the financial and strategic details between their HQ and Korean subsidiary. The questionnaire contains a large number of questions about the firm's management details, including motivation, entry mode, internal transaction between HQ and

subsidiary including sourcing of material and sales of product, as well as R&D activities, FDI experiences, FDI incentive and IPA involvement of Korean government.

From the entire population, total 1,001 firms replied with the response rate of 33.2% which is comparatively high rate. The below table 3-1 shows the detail result.

< Table 3-1 > Surveyed MNEs in Korea

Industry sector	Total MNE		Target MNE (population)		Target MNE (sample)		B/A	C/B
	Number	Total invested amount (A)	Number	Total invested amount (B)	Number	Total invested amount (C)		
<b>Whole industry</b>	<b>17,238</b>	<b>714</b>	<b>3,014</b>	<b>621</b>	<b>1,001</b>	<b>352</b>	<b>86.97</b>	<b>59.90</b>
Manufacturing	3,728	324	1,343	285	639	194	87.96	68.07
Service	13,087	217	1,405	185	235	86	85.25	46.48
Finance	423	172	266	151	127	92	87.79	60.92

As shown B/A on Table 3-1, the 3,014 firms whose invested amounts exceeding \$500,000 represents 86.97% of the whole registered foreign firms while those who invested amounts more than \$100,000 which represent the character of the whole population. As a result, among the responded 1,001 firms, a total of 639 manufacturing firms were selected for the analysis of Study 1, which is to check WOS vs. JV and GF vs. M&A mode choice option. Finally, in total 624 firms are coded as healthy data.

The statistical analysis was checked by SPSS ver. 18.0 program for statistical analysis from correlation check to causal effect analysis which mainly used the binary logistic regression (LOGIT) as the dependent variables are constructed by two nominal scales in every analysis.

## B. DESCRIPTIVE STATISTICS

From the collected data, basic information is proved by the descriptive statistics. With regards to the issue of equity ratio, the foreigner's ratio from 0 % to 95% is included in Joint Venture while more than 95% is in WOS (Gatignon & Anderson, 1988). This is because the very insignificant share within 5% is assumed to be a minor commercial share that does not affect any ownership or management right which does not mean JV as partnership. In this regards, the result shows that 524 companies are under WOS while 472 companies are JV with foreign share below 95%. Both WOS and JV cases are more or less equally collected. In this aspect of establishment mode, Greenfield cases are 411 firms while 518 companies are M&A. The details of each category are shown as below.

### 1. FDI Motivation into Korea

< Table 3-2 > Overall motivation of MNE into Korea

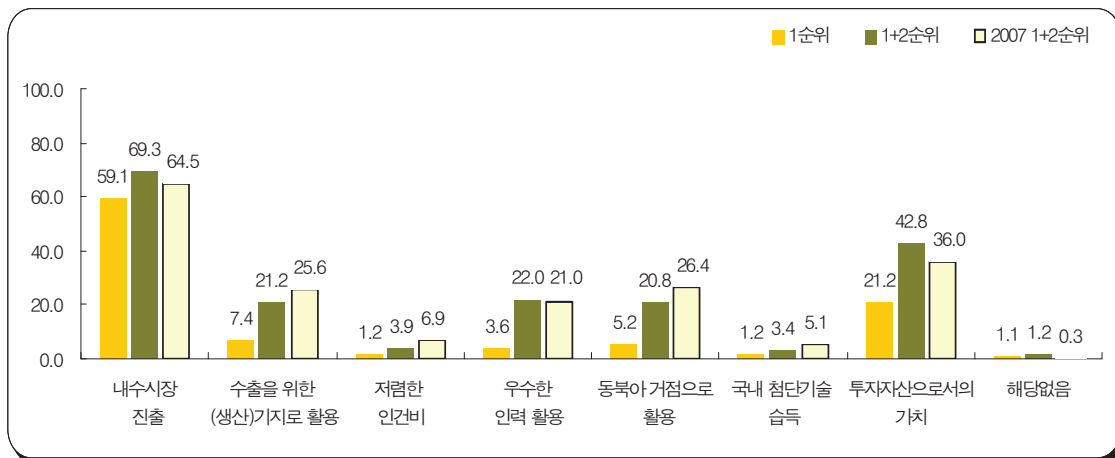
Category	Respon- sed	For domestic sales	As an export base	Low labor cost	Good labor force	As a hub of NE Asia	Acquire high tech.	To acquire asset	No response	
<b>Total</b>	<b>1,001</b>	<b>59.1</b>	<b>7.4</b>	<b>1.2</b>	<b>3.6</b>	<b>5.2</b>	<b>1.2</b>	<b>21.2</b>	<b>1.1</b>	
<b>Industry</b>	Manufacturing	639	59.9	10.2	1.7	3.3	5.5	1.9	17.1	0.5
	Service	235	51.5	3.8	0.4	5.1	7.2	0.0	30.6	1.3
	Finance	127	69.3	0.0	0.0	2.4	0.0	0.0	24.4	3.9
<b>Equity Ratio</b>	JV (~ 50%)	211	24.2	8.1	0.5	4.3	5.7	2.4	53.6	1.4
	JV(50~95%)	261	57.9	8.4	2.3	4.6	6.1	1.9	18.8	0.0
	WOS(95%~)	524	74.0	6.7	1.0	2.9	4.6	0.2	9.2	1.5
	No reply	5	40.0	0.0	0.0	0.0	0.0	20.0	40.0	0.0



Table 3-2 shows the fundamental of MNE and their strategic motivation for entering Korea including their own entry mode choice of WOS vs. JV. The more various relationships between four FDI motivations and the proportion of the WOS vs. JV choice will be presented after the parametric analysis in the next chapter.

Graph 3-1 also present the above motivation in the form of a bar chart on the main driving factors of whole investment cases in Korea. Domestic sales motivation (Market Seeking) occupied 59.1%, followed by acquiring asset(Strategic Asset Seeking, 21.2%) and export & production base (Efficiency Seeking, 7.4%).

< Graph 3-1 > Overall motivation of MNE into Korea



Moreover, FDI motivation seems different according to the industry category. In the case of manufacturing sector, MS (59.9%), SAS(17.1%), RS(12.8%) and ES(10.2%) are the major factors while service sector shows MS (51.5%), SAS(30.6%), ES(7.2%) RS(5.1%) and finance sector shows MS (69.3%), SAS(24.4%). Therefore, the manufacturing industry is the most appropriate target to analyze academically with 4 motivations according to the field situation.

## 2. Firm Size and Equity Structure of the Inward FDI

The distribution of target MNEs are defined in table 3-3 in terms of firm size by their turnover and table 3-4 shows the firm size in terms of the number of labor force.

< Table 3-3 > Firm size as to turnover of MNE in Korea

Category		responses	~10 mil.	10~50 mil.	50 ~ 100 mil.	100 mil. ~	No reply
<b>Total</b>		<b>1,001</b>	<b>25.4</b>	<b>33.1</b>	<b>12.1</b>	<b>28.7</b>	<b>0.8</b>
<b>Industry</b>	Manufacturing	639	21.0	34.3	13.8	30.5	0.5
	Service	235	38.7	33.6	10.6	16.6	0.4
	Finance	127	22.8	26.0	6.3	41.7	3.1
<b>Equity Ratio</b>	JV (~ 50%)	211	32.2	28.4	15.2	24.2	0.0
	JV(50~95%)	261	24.1	33.3	11.1	31.0	0.4
	WOS(95%~)	524	23.1	34.9	11.5	29.2	1.3
	No reply	5	40.0	20.0	0.0	40.0	0.0

< Table 3-4 > Firm size as to number of employee of MNE in Korea

Category		responses	~50 people	50~150people	150 people ~	No reply	Remarks
<b>Total</b>		<b>1,001</b>	<b>37.9</b>	<b>28.7</b>	<b>32.3</b>	<b>1.2</b>	
<b>Industry</b>	Manufacturing	639	32.1	30.4	36.9	0.6	
	Service	235	48.1	23.0	27.2	1.7	
	Finance	127	48.0	30.7	18.1	3.1	
<b>Equity Ratio</b>	JV (~ 50%)	211	37.9	24.6	36.0	1.4	
	JV(50~95%)	261	33.0	27.2	38.7	1.1	
	WOS(95%~)	524	40.3	31.3	27.3	1.1	
	No reply	5	40.0	0.0	60.0	0.0	

Small and medium-sized enterprises (SMEs), as opposed to large MNEs, have generally different characteristics this will be likely to influence their foreign market entry mode choice in terms of the commitment level to the foreign market, how they deal with risks in the host country, and the controllability of foreign market activities. Therefore, it is required to check how managerial behavior including each entry mode type are diversified by firm size, by turnover, and employee numbers

### 3. FDI Incentive and IPA Involvement

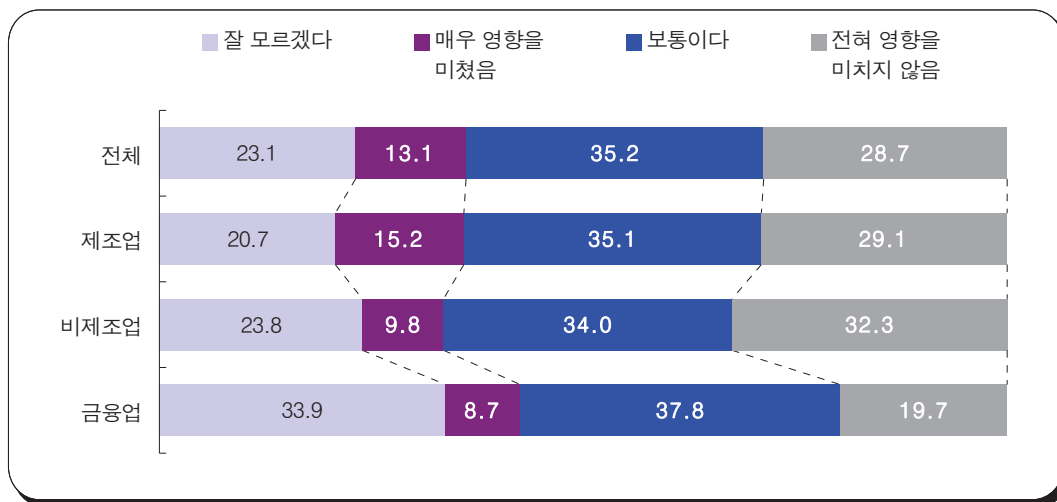
When MNE considers entering a new country, they customarily contact the host country's government to get efficient guidance as well as FDI incentive for their financial benefit. Table 3-5 shows the degree of satisfaction with the incentive system in Korea when they communicated with the Korean government for their process of FDI. From the result, large portion of responses were in the middle position and more of the others are comparatively unsatisfied as marked 1.

< Table 3-5 > Degree of affection of incentive of Korea (by 7 scale)

Category		Response	1	2	3	4	5	6	7	N.A.
<b>Total</b>		<b>1,001</b>	<b>16.3</b>	<b>6.9</b>	<b>5.5</b>	<b>35.2</b>	<b>7.0</b>	<b>4.4</b>	<b>1.7</b>	<b>23.1</b>
<b>Industry</b>	Manufacturing	639	15.0	8.0	6.1	35.1	8.3	4.7	2.2	20.7
	Service	235	22.1	5.5	4.7	34.0	4.3	4.7	0.9	23.8
	Finance	127	11.8	3.9	3.9	37.8	5.5	2.4	0.8	33.9
<b>Equity Ratio</b>	JV (~ 50%)	211	13.7	5.2	5.2	34.1	8.5	2.8	0.9	29.4
	JV(50~95%)	261	13.4	6.5	6.1	37.5	6.5	6.1	1.5	22.2
	WOS(95%~)	524	18.7	7.8	5.2	34.2	6.7	4.2	2.1	21.2
	No reply	5	20.0	0.0	20.0	60.0	0.0	0.0	0.0	0.0

To what extent does the incentive affect their decision was the question asked by Likert 7 scale. The graph 3-2 shows the categorical result which indicate the generally oriented less effect on their decision making. It revealed that the manufacturing sector has comparatively evenly distributed answers. That is also one reason why the manufacturing industry is a good target to evaluate the moderating effect of incentive in this study.

< Graph 3-2 > Degree of satisfaction of incentive by the category



In order to enjoy the administrative support of Korean government, MNE normally make contact with KOTRA as a central IPA and local IPA as well. When foreign firms evaluate the IPA's activity, the result is a little more oriented to the satisfactory side including the middle point. (1: very unsatisfied, 7: very satisfied).

< Table 3-6 > Degree of satisfaction of IPA of Korea (7 scale)

Category	Response	1	2	3	4	5	6	7	No response	Average
%	1,038	0.9	3.1	8.7	51.2	16.0	9.8	2.5	7.9	3.72

#### 4. Prior FDI Experience

As to the question of whether they had already invested in other countries before or after they implemented FDI into Korea, generally around half of them answered positive answers which signifies that many of them already had operations in neighboring countries, e.g., China, Japan and ASEAN as more than 40%. From the data, it was found that very few cases which have only single FDI experience into Korea.

< Table 3-7 > Other FDI experience

Category		Response	China	Japan	ASEAN	Other Asia	ROW	No FDI
<b>Total</b>		<b>1,001</b>	<b>54.8</b>	<b>46.1</b>	<b>43.7</b>	<b>21.8</b>	<b>27.5</b>	<b>1.4</b>
<b>Industry</b>	Manufacturing	639	59.9	46.9	44.9	21.9	25.5	0.8
	Service	235	46.0	41.7	36.2	19.1	30.2	1.7
	Finance	127	45.7	49.6	51.2	26.0	32.3	3.9
<b>Equity Ratio</b>	JV (~ 50%)	211	29.9	25.1	24.2	11.8	46.9	2.4
	JV(50~95%)	261	53.3	37.2	36.0	19.5	29.1	0.8
	WOS(95%~)	524	65.8	59.2	55.5	26.9	18.5	1.3
	No reply	5	40.0	20.0	20.0	20.0	60.0	0.0

#### 5. Industry of Manufacturing Firms

The above were the result of whole respondent sample of all 1,001 firms. In this study, the main statistical analysis will only concentrate on the manufacturing firms because the characteristics and collected data of manufacturing are able to explain four FDI motivations more precisely as well as the characteristics of the eclectic FDI theories including three OLI advantages.

The table 3-8 below gives the detailed composition of each industries along with their invested amounts. The biggest portion of industry into Korea in total FDI is concentrated in the electronics sector (10.9%) followed by chemical (10.0%) machinery (9.3%). It may be reflect the message that these 3 industry occupies almost half of the whole manufacturing sector's inward FDI.

< Table 3-8 > MNE of manufacturing sector

Industry	Number of firms		FDI amount (delivered)	
	Number	Ratio (%)	Amount (US\$ 1,000)	Ratio (%)
Total	639	63.8	19,352,738	51.95
Food, beverage	36	3.6	1,908,208	5.12
Garment/clothe	23	2.3	348,340	0.94
Paper	8	0.8	491,324	1.32
Petroleum /refinery	6	0.6	553,599	1.49
Chemicals	100	10.0	3,110,309	8.35
Medical/optical	57	5.7	412,553	1.11
Rubber / plastic	22	2.2	1,114,559	2.99
Non-metal mining	22	2.2	2,277,334	6.11
Primary metal	14	1.4	556,183	1.49
Metal processing	37	3.7	319,290	0.86
Electronic	109	10.9	4,071,068	10.93
Electric / component	30	3.0	505,211	1.36
Machinery	93	9.3	2,106,145	5.65
Automobile	57	5.7	1,059,707	2.84
The rest of manufacturing	25	2.5	518,908	1.39

## **IV. WOS AND JV IN ETNRY MODE CHOICE**

### **A. RESEARCH METHODOLOGY**

#### **1. Hypothesis**

Foreign market entry mode choice determines the level of resource commitment, level of risk, and level of control when a firm performs in its foreign market activities (Anderson & Gatignon, 1986; Hill et al., 1990). In the aspect of firm's governance, the level of resource commitment required in a joint venture type explains the type of firm's governance (i.e., minority, majority, or equity joint venture) (Hill et al., 1990). Also, entry modes of MNE varies depending upon the levels of control over multinational market activities (Agarwal & Ramaswami, 1992; Hill et al., 1990), as the origin of governance came from the firm's level of responsibility for operational management and strategic decision making in the market (Anderson & Gatignon, 1986).

The primary research question of this paper is which type of entry mode of control was taken by the invested MNEs in Korea according to their initial four FDI motivations. How do those motivations influence the MNE to decide the entry mode selection under those conditions and strategies in Korea when the MNEs enter. In addition, the same questions will be applied in relation with three OLI advantages (Ownership, Location, Internalization) of the Eclectic theory. From this research questions, the following several hypotheses are developed.

The table 4-1 displays the previous research, the indications of the relevant research questions and hypothesis which this study has as references. Other studies, such as Erramilli (1991),

distinguish between full and shared control modes, focusing only on the firm's level of control in the host market.

< Table 4-1 > Research questions and findings from prior study

<u>Study (Year)</u>	<u>Research Questions</u>	<u>Major Research Focus &amp; Major Findings</u>
Shi et al. 2001	What factors influence small Hong Kong manufacturing firms' choice of investment entry modes into Mainland China? (Wholly owned subsidiary versus joint venture)	<ul style="list-style-type: none"> <li>- Strategic variables: Hong Kong SMEs following an export-oriented strategy prefer WOS to JV, while firms following a market-seeking strategy prefer JV</li> <li>- Effects of firm-specific variables are mixed: International experience does not seem to affect the selection of FDI entry mode, firms with no or little host country experience prefer WOS to JV, firms with a relationship in China prefer JV to WOS</li> <li>- TCE-variables: no significant effects</li> </ul>
Shrader 2001	Application of TCE to explore factors moderating the relationship between collaboration and performance in foreign markets among a sample of international new ventures	<ul style="list-style-type: none"> <li>- R&amp;D intensity and advertising intensity are significant moderators of this relationship; however they were not significantly related to the use or nonuse of collaboration</li> </ul>
Nakos and Brouthers 2002	Determination if Dunning's OLI framework is applicable to SME entry mode selection	<ul style="list-style-type: none"> <li>- Dunning's eclectic framework did a good job of predicting SME entry mode selection in CEE markets (85%)</li> <li>- However, not all of the OLI factors appeared to be important for SMEs (Ownership: International experience was not significant predictor)</li> </ul>
Cheng 2008	Examination of the determinants of the choice of ownership-based entry mode strategy for SMEs in international markets	<ul style="list-style-type: none"> <li>- Equity joint ventures may be the favored entry mode for less experienced SMEs to reduce cultural barriers</li> </ul>



### **1.1. Market Seeking Motivation**

Theories related to existence of complementary assets indicate the presence of related activities which help lower transport costs and promote joint economies in innovation, production and marketing (Teece, 1992; Teece et al., 1997; Chen & Chen, 1998, 1999). With types of market seeking motivation specifically, OLI theory suggests that firm will increase their control to minimize their risk exposures, which include exchange, political and economic risks. The following hypothesis is thus proposed:

*Hypothesis 1.* The greater the degree of market seeking motivation possessed by MNE entered into Korea, the greater association with a high control entry mode.  
(WOS type of subsidiary is preferred in entry mode)

### **1.2. Resource Seeking Motivation**

Supply oriented variables are specified, e.g. availability, quality and price of natural resources, transportation costs and artificial barriers to trade (Isard, 1956, Lloyd & Dicken, 1990). There is a general consensus in the literature that firms equipped with high levels of proprietary assets prefer a wholly-owned subsidiary (WOS) to a joint venture (JV) among available FDI entry strategies (Guillen 2003). Also, the complexities of proprietary assets are positively associated with high control modes of entry to support the following hypothesis.

*Hypothesis 2.* The greater the degree of resource seeking motivation possessed by MNE entered into Korea, the greater association with a high control entry mode.  
(WOS type of subsidiary is preferred in entry mode)

### **1.3. Efficiency Seeking Motivation**

Traditional location theories, especially related to comparative advantages of supply oriented variables, immobile assets, e.g. labor, land and infrastructure (Lloyd & Dicken, 1990). Furthermore, according the Efficiency Related Theories (Caves 1982, 1996 ; Lie, 1998; Teece 1981, 1984) emphasized MNE's viewpoint to capture scale related production economies and to raise dynamic technical efficiency through shared knowledge, learning experiences and management expertise. The following hypothesis is thus proposed.

***Hypothesis 3.*** The greater the degree of efficiency seeking motivation possessed by MNE entered into Korea, the greater association with a high control entry mode.  
(WOS type of subsidiary is preferred in entry mode)

### **1.4. Strategic Asset Seeking Motivation**

Strategic intent can have an impact on the decisions on the choice of a FDI entry mode. Both WOS and JV modes can be adopted by a firm in order to acquire desired strategic assets overseas (Deng, 2007). However, the more aggressive mode (i.e. WOS) is practically preferred by emerging economy firms (Luo & Tung, 2007) and JV operation is considered less effective as an entry mode for the purpose of acquiring strategic assets (Rui & Yip, 2008). Furthermore, a WOS entry mode is also superior to the JV when the investing firm pursues global strategic motivations in its FDI, as a high level of control is generally required to ensure a high level of coordination between headquarters and foreign subsidiaries, or among the entire global business network of the firm (Kim & Hwang, 1992). Based on the above discussions, the following hypothesis is proposed

**Hypothesis 4.** The greater the degree of strategic asset seeking motivation possessed by MNE entered into Korea, the greater association with a high control entry mode.  
(WOS type of subsidiary is preferred in entry mode)

### **1.5. Moderating Effect of Entry Timing**

Historically, the remarkable expansion of FDI emerged in the mid-1980s with the developed countries' intention to exploit the emerging markets in the world and aggressively increase their trade and investment volume. Subsequently, the Asian financial crisis was the disastrous impetus for Korea to not only change the fundamentals of the domestic economy but also to improve the transparency for foreign investors who want to merge with local firms. This was done by modifying the financial and accounting systems, providing reliable financial statements, to deliver higher-level information to the investors quickly. (Haggard et. al., 2003). The below hypotheses was developed accordingly.

**Hypothesis 5.** By the entry timing into Korea, each motivation affect to the binary mode choice significantly.

**Hypothesis 5-1.** By the entry timing into Korea, the degree of market seeking motivation possessed by MNE affect to the high control entry mode significantly.

**Hypothesis 5-2.** By the entry timing into Korea, the degree of resource seeking motivation possessed by MNE affect to the high control entry mode significantly.

**Hypothesis 5-3.** By the entry timing into Korea, the degree of efficiency seeking motivation possessed by MNE affect to the high control entry mode significantly.

**Hypothesis 5-4.** By the entry timing into Korea, the degree of strategic asset seeking motivation possessed by MNE affect to the high control entry mode significantly.

### **1.6. OLI advantage variables**

In terms of Ownership Advantage, a FDI firms still face both internal and external constraints of various forms, in transferring knowledge to their overseas subsidiaries (Rugman/Verbeke 2003), Some firms are better able to utilize location advantages than other competitors, so as to enhance their competitive advantage within the new market in spite of cultural or geographical distance. Moreover, they can transfer their firm-specific assets across borders more easily through internalization rather than through the market mechanism (Buckley/Casson 1976). Therefore, separately from the study 1 with regards to the motivations, these OLI elements are used to test the effect of mode of control of such MNEs in the study 2. The following hypotheses was developed accordingly.

**Hypothesis 6.** The greater the degree of Ownership advantage possessed by MNE entered into Korea, the greater association with a high control entry mode. (WOS type of subsidiary is preferred in entry mode)

**Hypothesis 7.** The lesser the degree of Location advantage possessed by MNE entered into Korea, the greater association with a high control entry mode. (If the distance is far, WOS type of subsidiary is preferred in entry mode)

**Hypothesis 8.** The greater the degree of Internalization advantage possessed by MNE entered into Korea, the greater association with a high control entry mode. (WOS type of subsidiary is preferred in entry mode)

### **1.7. Moderating Effect of subsidiary firm size**

As already insisted by prior literature, the firm size is one of the key indicators in the strategic decision making. An MNE that establishes a big Korean subsidiary is an indication that the HQ has obviously strong strategy to allocate abundant internal resources and a sizable labor force with long feasibility study period towards Korean market. Also, if such SME started small scale initially and built up to a big company, this is a result caused by systematic resource management of MNE over a long time period. In this regards, big MNE and SME fundamentally have gap of resources to choose the different entry mode to have moderating effect. Therefore, subsidiary firm size is considerable to be a moderator of OLI elements The below hypotheses was developed accordingly.

***Hypothesis 9.*** By the subsidiary size when MNE come into Korea, each OLI element affects to the binary mode choice significantly.

***Hypothesis 9-1.*** By the subsidiary size when MNE come into Korea, Ownership advantage affects to the binary mode choice significantly.

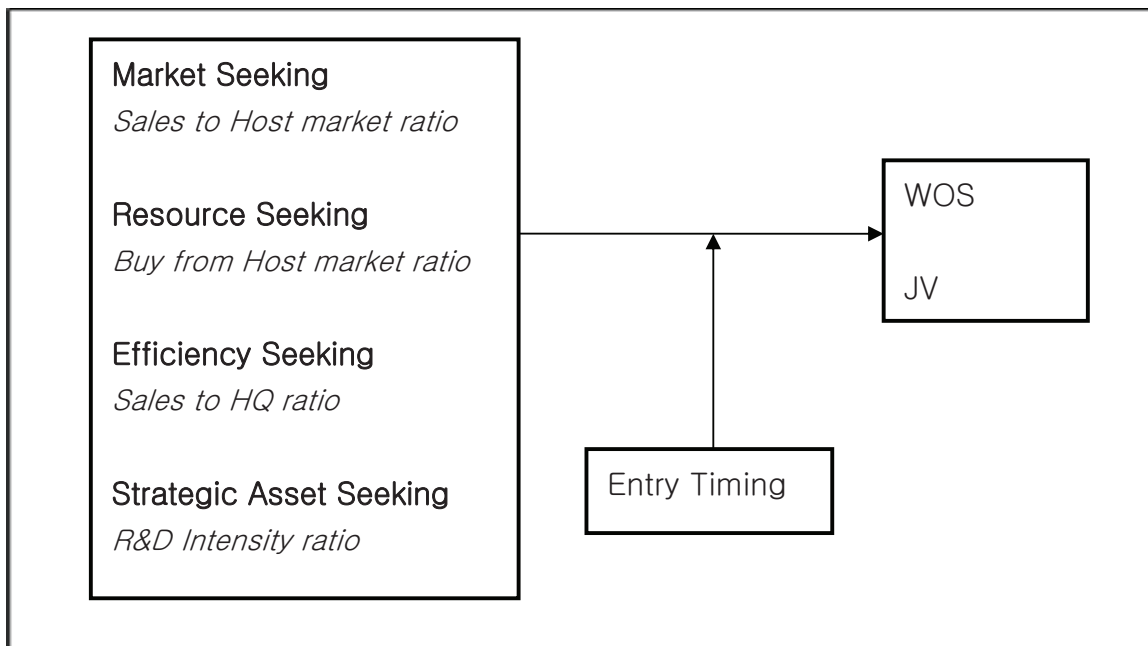
***Hypothesis 9-2.*** By the subsidiary size when MNE come into Korea, Location advantage affects to the binary mode choice significantly.

***Hypothesis 9-3.*** By the subsidiary size when MNE come into Korea, Internalization advantage affects to the binary mode choice significantly

## 2. Research Model

In this research, dependent variable consisted of the two nominal variables, the choice of WOS entry mode over that of JV entry mode. The binary logistic regression (LOGIT) was employed to test the causal relation of the above hypotheses to estimate the probability that one event occurs rather than another. The regression equation and research structure modeled as a function of each independent variables and moderator variable as follows on Figure 4-1. As independent variables of four motivations of FDI, the internal transaction ratio between foreign HQ and Korean subsidiary was deployed for MS, RS and ES elements, and subsidiary's R&D level allocated by HQ was used for SAS motivation.

< Figure 4-1 > Research Model (based on 4 Motivation) - Study 1

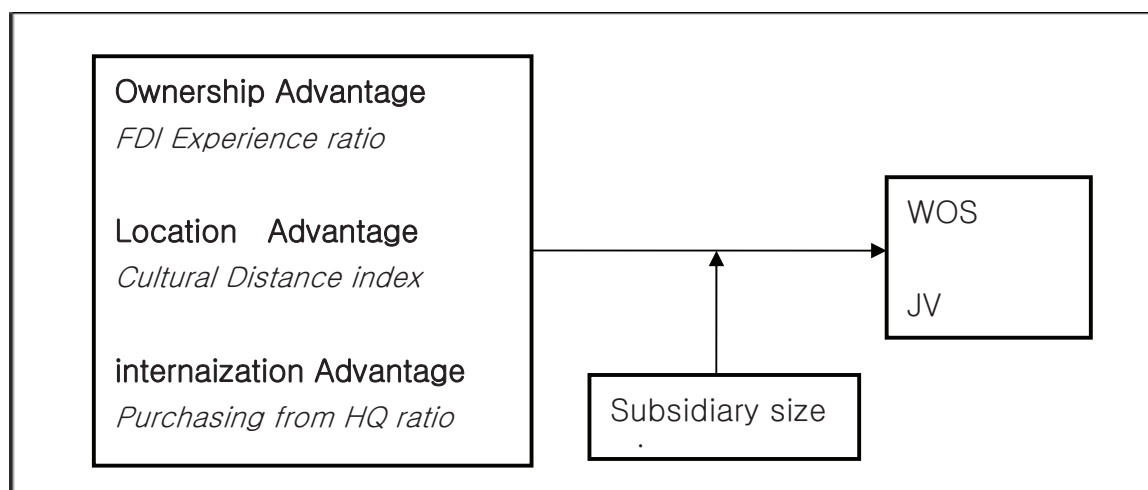


$$\log(\pi/1-\pi) = \alpha + \beta_1 \text{ hostSALES} + \beta_2 \text{ hostBUY} + \beta_3 \text{ HQexport} + \beta_4 \text{ RNDlevel} + \beta_5 \text{ entryTIME* hostSALES} + \beta_6 \text{ entryTIME* hostBUYS} + \beta_7 \text{ entryTIME* HQexport} + \beta_8 \text{ entryTIME* RNDlevel} + e$$

In the above equation,  $\pi$  is the probability of WOS being chosen as FDI entry (coded as 0), accordingly  $(1-\pi)$  is the probability of JV being chosen (coded as 1). The log odds follow a function of the independent variables with the parameters being estimated using maximum likelihood (Cui et. al., 2009).

In study 2, three OLI elements are deployed to check the affection to WOS vs. JV mode. FDI experience (O.a), Cultural distance (L.a) was used as to the prior studies, and the purchasing volume from the HQ to foreign subsidiary (I.a) was employed as one of internal transaction information. Additionally, the strategy for the investor, how big subsidiary company they would establish and manage with their large resources from HQ is dependent on choosing the level of control to acquire the management right. Thus, the study 2 is verified as to figure 4-2.

< Figure 4-2 > Research Model (based on Eclectic Theory) - study 2



$$\log(\pi/1-\pi) = \alpha + \beta_1 \text{FDIexpe} + \beta_2 \text{cultDIST} + \beta_3 \text{HQbuy} + \beta_4 \text{SubSIZE*FDIexpe} + \beta_5 \text{SubSIZE*cultDIST} + \beta_6 \text{SubSIZE*HQbuy} + e$$

### **3. Variables and measurement**

#### **3.1 Dependent Variable**

The dependent variable in this paper represents the dichotomous choice of FDI entry mode between a WOS and a JV option. Foreign HQ's share of 10% to 95% is included in JV category, while more than 95% is in the WOS because this minority equity is conventionally based on contractual condition or agency structure. No inconsistency was found between the respondent indicated values and percentage converted values. Therefore, WOS was coded as "0" and JV as "1" in this study.

#### **3.2 Independent Variables**

##### 1) Market seeking motivation (MS)

From the previous research, it was observed that the higher the level of marketing capability the firm has in international investment, the greater governance is preferred or sole management right (Kogut & Chang, 1991; S.H. Yoon, 2007; B.K.Kim et al., 2013). As shown from the descriptive statistics result in the previous chapter, more than half of respondents pursuit MS in Korea as the biggest point among four motivations up to now due to the continuous economic & market growth.

To measure market seeking motivation, domestic sales ratio was used as proxy of such motivation which means the sales ratio to Korean domestic market out of total sales. The figures generally indicate that the MNE entered Korea to achieve Korean local market initiative shows the low figures with less export sales orientation.



## 2) Resource seeking motivation (RS)

Recently, a number of MNEs strategically tried to purchase new synthesized materials, technically concentrated components in Korea, particularly in IT, chemical and mechanics due to Korea's advanced technological level. This trend has increased as Korean firms' technology becomes more sophisticated and remarkably improved in the past and would be accelerated in the future as well.

To measure resource seeking motivation, domestic purchase ratio was used as proxy of such motivation which means the purchasing ratio from the Korean domestic market out of total purchasing volume. This means that the MNE entered Korea to achieve bargaining power in the market with related information and vendor control in their procurement with less import oriented.

## 3) Efficiency seeking motivation (ES)

Regarding to the production capability and entry mode study, high level of production elasticity prefer high control power of governance (H.M. Chen, 1994). In spite of Korea's high labor cost, due to its highly qualified labor force, efficiency is derived from the economy of scale or economy of scope in many of specific manufacturing industries of Korea.

To measure efficiency seeking motivation, export ratio to headquarter as of subsidiary (product retrocession rate) was used as proxy for such motivation. This means the sell-back ratio into their HQ who placed the production order to the Korean subsidiary is the indication for the value added production of their goods. This illustrates that the MNE entered Korea with aspiration of achieving efficient activity which is more efficient than its home country or the other host country with technology or managerial disciplines

#### 4) Strategic asset seeking motivation (SAS)

In order to secure the unique proprietary asset of a manufacturing firm, the R&D capability is one of the most representative strategic assets because such R&D level is able to utilize the knowledge and technology more exclusively than those who do not possess which eventually leads to own more control of foreign subsidiary (Y.R.Park et al. 1988). By the Dynamic Internalization Theory, MNE try to capture R&D activity which in international market is regarded as strategic asset seeking motivation (Ghoshal, et. al,1997; Buckley & Casson, 1998)

To measure strategic asset seeking motivation, R&D level of Korean subsidiary is used as proxy of SAS motivation which reveals how much the subsidiary values R&D in Korea. The degree was evaluated on the basis of their establishment of official R&D center, make up R&D budget every year, have R&D labor force and finally whether they contracted technical licensing with Korean domestic company. This indicates that such MNE entered Korea for the purpose of capitalizing on technology as a strategic asset which may possibly be lacking in their home country. In this study, several questions were in the survey regarding whether it have been fulfilled, 'Licensing from domestic firms in Korea' ' R&D labor force' 'R&D budget' and 'R&D laboratory' which comes from the similar method applied from Brouthers et. al.(2002), and J.H. Lee, Y.S. Jeon (2004) 's research.

#### 5) Entry timing in the FDI history : moderator

The FDI pattern possibly tends to change as to the development life cycle of FDI record among the abundant MNE entered into Korea. For example, the economic figure show different pattern before and after 1988 World Olympic Games as a first turning point. Additionally, a serious historic momentum to change the entire economic bases of Korea

combined with the most of Korean economic facts, Asian Financial Crisis was identified as a second turning point (Choe, et.al. 2004). Post financial crisis, many MNEs typically approached to M&A very aggressively to merge the local companies in some newly emerging market including Korea (K.Singh et.al, 2000)

The measuring of entry history was screened by the establishment date of the firm in Korea, and coded by the era of these two historic progress, e.g. before 1988 Olympic Game (=1), before Asian Financial Crisis (=2) and after the AFC until now (=3). Therefore, by dividing these three different periods, the analysis is supposed to show different results by the moderating effect.

#### 6) Ownership Advantage

A high-commitment mode by the establishment of a WOS is able to reduce the risk of unintended knowledge diffusion from the firm-specific technology. Accumulated international capability in the history of MNE is also a practically available asset to reduce the risk from the foreign market. In this regards, FDI Experience which is popular variable in the prior literatures was taken as a variable to represent ownership advantage.

#### 7) Location Advantage

The cultural difference is the most practical issue consisted of several dimensions. New institutional theory suggests that a country's institutional environment consists of the three elements e.g., regulatory, cognitive and normative dimensions (Scott, 1995). The regulatory dimension refers to the rules & laws responsible for the society's stability. The cognitive dimension implies the cognitive structures in society that are normally taken for granted.

Finally, the normative dimension encompasses the society's social values, culture and norms (Yiu & Makino, 2002).

In this study, cultural distance is used as a proxy to location advantage as a same methodology in the prior literatures of entry mode. The national cultural dimensions put forward by Hofstede (1980), CCC (1987), and Hofstede and Bond (1988) are used to compute the aggregate cultural distance index.

#### 8) Internalization Advantage

According to the theory, internalization is the fundamental factor to drive MNEs to overseas as initially put forward, without time (t) dimension, and essentially a financial variant according to the internalization theory (Aliber 1971). Strategic decision to make an internal production to foreign subsidiary for HQ which is typical case in MNE's vertical operation. To define this internal information, the purchasing ratio from the HQ will be used as if those firms have less localized order in the host country.

#### 9) Subsidiary firm's size : moderator

If a firm puts highly assertive assets in a certain host country, the mode of control would possibly be affected. This refers to relative size of investment of foreign HQ how the HQ allocated their own resources to foreign market to establish the overseas operation. Therefore, the subsidiary size in terms of firm size has a very important impact on the entry mode selection (Brouthers, et.al. 2003). In this study, the number of employee is equivalent to an invested volume as a significant strategy, it is testified how does the subsidiary size impacts the decision of entry mode of control.

## B. ANALYSIS AND RESULT

### 1. Analysis of Study 1

#### 1.1 Causal Relationship

Before running the logistic regression, a correlation analysis was conducted to gain a preliminary understanding of the relationship between two entry mode and the independent variables which is shown as Table 4-2. While the binary logistic regressions do not need to check any multicollinearity among the independent variables, the correlation shows almost half of independent variables have a strong correlation to each other to expect the good state's causal effect and explain each firm's motivation logically.

< Table 4-2 > Correlation (Pearson) between four motivations and WOS vs. JV – Study 1

	wosJV	HOSTsales	HOSTbuy	HQexport	RnDLevel	Entered
wosJV	1					
HOSTsales	-.205**	1				
HOSTbuy	.365**	-.132**	1			
HQexport	.022	-.491**	.079	1		
RnDLevel	.351**	-.216**	.339**	.046	1	
Enter time	.067	-.048	.067	.019	-.128**	1

Cf. : \*At the significance level of 0.05 , \*\*At the significance level of 0.01

The analysis to test whether firms selecting theoretically and contextually predicted entry modes performed for any difference than firms whose entry mode choices were not predicted by the model. For the purpose of this study, WOS is treated as a baseline case with a value of one. A positive regression coefficient means that the independent variable increases the

probability of choosing an alternative mode (i.e., JV) while reducing the probability of choosing the baseline mode (i.e., WOS). In contrast, a negative coefficient decreases the predicted probability of selecting a JV over a WOS. (Cui, et.al. 2009)

The results of the binary logistic regression (LOGIT) are provided in Table 4-3. The total number of observations became 624 firms by deleting the missing cases of some variables. The correction rate also indicates significant explanatory power improved from 54.3% to 70.1%. The “Cox and Snell R-square” and “Nagelkerke R-square” measures also demonstrate the good fit (Grey et.al, 2008). As it is already understood, a positive regression coefficient (bi) means that an increase in its associated variable will increase the probability of JV, while a negative regression coefficient (bi) means that an increase in its associated variable will increase the probability of WOS.

< Table 4-3 > LOGIT result between four motivations and WOS vs. JV – Study 1

	Variables	Result		Remarks	
		Coeff(B)	Wald S.	Mode	Explanations
Strategic variables	HostSales	-0.01***	12.8	WOS	MS : very strongly positive to WOS
	Hostbuy	0.01***	18.2	JV	RS : very strongly positive to JV
	HQsales	-0.01**	4.4	WOS	ES : strongly positive to WOS
	RnDLevel	0.466***	43.3	JV	SAS : very strongly positive to JV
Control Variable	EmployVol	-0.16**	4.0	WOS	CV : strongly positive to WOS
constant	constant	-30.67	2.4		
Goodness to Fit	Cox,Snell R <sup>2</sup>	0.186			
	Nagelkerke R <sup>2</sup>	0.249			
	Chi-square	16.44			
	Correct Ratio	0.701			

Cf. : \* At the significance level < 0.1, \*\* At the level < 0.05, \*\*\*At the level < 0.01

First of all, all these four motivation are statistically significant to the entry mode choice.

The result present that two independent variable of *hostbuy* (which represent RS) and *RnDlevel* (represent SAS) are positively associated with the choice of JVs over WOS which is contrary to Hypothesis 2 and 4. It defines that the degree of Market Seeking and Efficiency Seeking motivation is positively associated with the choice of WOS by the statistical significance at the level of 0.05 in case of ES motivation, and at the level of  $p < 0.01$  in case of MS.

On the other hand, the other two *hostsale* (represent MS) and *HQsale*(represent ES) are positively associated with the choice of WOS mode which support Hypothesis 1 and 3. The Resource Seeking and Strategic Asset Seeking motivation is positively associated with JV both at the level of  $p < 0.01$  which proves that JV preferred in case of resource and strategic asset pursuing strategy when the MNE enter into Korea.,

## **1.2 Relationship by the Entry Timing**

The table 4-4 indicates to what extent each four motivations are related with WOS vs. JV by dividing the three entry timing. MS motivation is very significantly related with WOS providing that it has no strong relationship with WOS before the 88 Olympic Games as an initial period, however, shows a very strong preference to WOS until the time of AFC and after AFC as a third period as well. RS motivation keeps a very strong association with JV all through the periods of Korean FDI records. Therefore, the MNEs for want of material and components from Korea have preferred JV as a consistent mode strategy.

< Table 4-4 > Four motivation's trend by Entry time – Study 1

Variables	Original result		Entry time =1		Entry time =2		Entry time =3	
	Coeff(B)	Wald S.	Coeff(B)	Wald S.	Coeff(B)	Wald S.	Coeff(B)	Wald S.
HostSales	-0.01***	12.8	-0.01	0.6	-0.02***	6.5	-0.01**	6.1
Hostbuy	0.01***	18.2	0.03***	12.9	0.02***	13.9	0.01***	17.9
HQsales	-0.01**	4.4	-0.03*	2.7	0.01	0.1	-0.01*	2.9
RnDLevel	0.466***	43.3	0.56***	10.1	0.23	2.2	0.44***	20.9
EmployVol	-0.16**	4.0	-0.39*	3.1	0.12	0.4	-0.24**	5.5
Constant	-30.67	2.4	-0.45	0.1	-1.51	4.1	0.17	0.1
Cox,Snell R <sup>2</sup>	0.186		0.286		0.207		0.184	
Nagelker R <sup>2</sup>	0.249		0.383		0.305		0.245	
Chi-square	16.443		33.406		41.90		68.31	
Correct Ratio	0.701		0.758		0.757		0.718	

Cf. : \* At the significance level < 0.1, \*\* At the level < 0.05 , \*\*\*At the level < 0.01

In the other hand, ES motivation has taken weak associational relationship with WOS even showing no causal relationship in the period 2 (Olympic Game ~ AFC). This is understood that Korea was not the appropriate country to actualize the Efficiency Seeking motivation in the whole period.

SAS motivation explains very meaningful trend that MNEs invested into Korea for want of a very active technical licensing in period 1 because Korean firms had very strong demand to acquire the advanced technology from such MNEs. During the entry time 2, Korean firms developed their own technology by their internal resources and caliber which showed no influence to JV mode on a second period. However, R&D intensity became the key factor in period 3 again which many MNEs approach to Korea to learn advanced technology from the Korean firms to the contrary as the most of Korean firms already accumulated highly improved technology during the past two periods.



### 1.3 Relationship by the R&D Intensity

Among the four motivation variables, R&D Intensity was very popular variable which is attested by the abundant former research. Therefore, this study try to provide more details on the subordinate test how the R&D level affect to the WOS mode at each level. The table 4-5 shows the impact of each variable related to entry mode and the degree of R&D activity of firms. The details shows that in case of the firm who completely do not maintain any R&D in Korea, MS motivated firms are very strongly related with WOS mode while RS firms have strong preference to establish JV with Korean local companies as their concerns are on materials and components rather than governance or management itself. Additionally, the firms who return to their product to HQ prefer to choose WOS by keeping their Korean subsidiaries the highest level of R&D. The big subsidiary firms in Korea generally seem to operate middle range of R&D level and prefer to choose WOS mode

< Table 4-5 > Relation with entry mode and motivations by R&D Level – Study 1

Variables	original	RnD=0	RnD=1	RnD=2	RnD=3	RnD=4
HostSales	-0.01***	-0.018***	-0.001	-0.008	-0.024*	-0.009
Hostbuy	0.01***	0.023***	0.011	0.018***	0.005	0.011
HQsales	-0.01**	-0.008	0.019	-0.016	-0.021	-0.028**
RnDLevel	0.466***	-	-	-	-	-
EmployVol	-0.16**	-0.176	0.215	-0.067	-0.723***	-0.076
ENTERtime	-30.67	0.409	0.364	0.257	0.131	-0.208
Cox,Snell R <sup>2</sup>	0.186	0.165	0.067	0.069	0.177	0.085
Nagelker R <sup>2</sup>	0.249	0.249	0.090	0.094	0.243	0.119
Chi-square	16.443	45.7	3.7	9.9	14.6	8.75
Correct Ratio	0.701	0.787	0.642	0.623	0.693	0.694

Cf. : \* At the significance level < 0.1, \*\* At the level < 0.05, \*\*\*At the level < 0.01

## 2. Analysis of Study 2

In order to check the same entry mode from the other viewpoint together with different variables, the three OLI advantage elements were tested independently in study 2. The same as Study 1, a correlation analysis was conducted to gain a preliminary understanding of the relationship between entry mode and the independent variables as to Table 4-6. The result shows almost half of independent variables have a strong correlation with each other and dependent variable to expect the better causal effect and logical explanation. The Pearson's chart deliver that FDI Experience and HQ purchasing ratio have a very significant correlation status with dependent variable, as well as cultural distance and subsidiary size have a little significant figures.

< Table 4-6 > Correlation (Pearson) between OLI advantages and WOS vs. JV – Study 2

	FDIexperi	distance	HQbuy	EmployVol	wosJV
FDIexperienc	1				
Cult.distance	-.067	1			
HQbuy	.192**	-.049	1		
EmployVol	.102*	-.021	-.127**	1	
wosJV	-.242**	-.084*	-.365**	.086*	1

Cf. : \*At the significance level of 0.05 , \*\*At the significance level of 0.01

The following procedure including the Goodness-to fit and etc. were carried out the same way as the Study 1. The results of the logistic regression analysis are provided in Table 4-7. The regression model shows normal explanatory status with the “Cox and Snell R-square” and “Nagelkerke R-square” measures also demonstrate the good fit with an fair classified ratio (from 54.3% to 68.7%). The same as before, WOS is treated as a baseline case with a value of one which means a positive regression coefficient means that the independent

variable increases the probability of choosing an alternative mode (i.e., JV) while reducing the probability of choosing the baseline mode (i.e., WOS). As a control variable, Firm size was included to define whether it affected the entry mode choice. The firm indicated means the established subsidiary in Korea by measuring it size by employment volume in this study.

< Table 4-7 > LOGIT result between OLI advantages and WOS vs. JV – Study 2

	Variables	Result		Remarks	
		Coeff(B)	Wald	Mode	Explanations
Strategic variables	FDI experience	-0.51***	30.7	WOS	Oa : very strongly positive to WOS
	Cultural distance	-0.16**	5.7	WOS	La : strongly positive to WOS
	HQ buy	0.02***	64.8	JV	Ia : very strongly positive to JV
Control Vari.	EmployVol	0.1	2.3		
constant	constant	-0.23	0.57		
Goodness to Fit	Cox,Snell R <sup>2</sup>	0.179			
	Nagelkerke R <sup>2</sup>	0.239			
	Chi-square	9.474			
	Correct Ratio	0.687			

Cf. : \* At the significance level < 0.1, \*\* At the level < 0.05 , \*\*\*At the level < 0.01

The result is understood that an independent variable of *HQbuy* (represent Internalization Adv.) are positively associated with the choice of JVs over WOS at the level of  $p < 0.01$  which is opposed to Hypothesis 8 proving that JV preferred when the MNE enter into Korea. Meanwhile, *FDIexperience* (represent Ownership Adv.) and *Cultural distance* (represent Location Adv.) are positively associated with the choice of WOS mode which support Hypothesis 6 and 7 with the statistically significant, at the level of  $p < 0.01$  in case of FDI experience, and at the level of 0.05 in case of cultural distance. In conclusion, all these OLI elements are statistically significant. However, the subsidiary size (*EmployVolume*) itself is

not related with this entry mode. From this basis, the moderating effect of firm size is to be checked which pattern of entry time could affect the choice of entry mode.

In the other hand, the table 4-8 shows the periodic trend of each strategic variable which is meaningful in terms of historic character of inward FDI. In the initial period (Entry time=1), it seems that most of MNE's FDI experience was not sufficient to emphasize the WOS mode. However, the phenomenon has become more obvious to choose WOS mode after the internationalization period (Entry time =2) towards the emerging market as a world trend and even stronger after AFC (Entry time=3).

< Table 4-8 > Variables' change by Entry time – Study 2

Variables	Original result		Entry time =1		Entry time =2		Entry time =3	
	Coeff(B)	Wald S.	Coeff(B)	Wald S.	Coeff(B)	Wald S.	Coeff(B)	Wald S.
FDI experien	-0.51***	30.7	-0.03	0.02	-0.32*	2.81	-0.51***	17.23
Cul. distance	-0.16**	5.7	-0.39**	4.49	-0.35**	5.43	-0.14	2.32
HQ buy	0.02***	64.8	-0.04***	16.15	-0.02***	8.90	-0.02***	32.86
EmployVol	0.1*	2.3	-0.01	0.01	0.37***	6.23	0.06	0.52
Constant	-0.23	0.57	2.11	5.264	-0.02	0.07	1.54	14.14
Cox,Snell R <sup>2</sup>	0.179		0.246		0.145		0.190	
Nagelker R <sup>2</sup>	0.239		0.330		0.213		0.254	
Chi-square	9.474		28.02		28.26		71.05	
Correct Ratio	0.687		0.727		0.751		0.674	

Cf. : \* At the significance level < 0.1, \*\* At the level < 0.05 , \*\*\*At the level < 0.01

In case of cultural distance, past time was probably more sensitive to choose WOS than the current period because Korea was one of high country risk countries in the past (Entry time=1). However, such preference was not found in the latter period meaning that cultural distance was not a major factor on the mode choice any longer in entry time 3. *HQbuy*

representing the internal transaction ratio has been consistently strong robust throughout the whole periods which means vertical FDI always positioned to WOS mode. Additionally, employment volume of subsidiary firm representing firm size shows the fluctuating significance by the entry timing. Implying That big subsidiary firms wholly owned by foreign MNEs were mainly established after the 1988 Seoul Olympic Games until the AFC period.

### **3. Moderator Effect of Variables**

From the viewpoint of MNE who entered Korea several decades ago, Korea had high country risk with immature market condition and underdeveloped consumers. However, as the general technology improves and several high tech industries obtained the high position in the world, Korea was no longer included in the low performance market. Therefore, such economic situations change by time series could affect the MNE's decision of entry mode in four motivation aspect. The entry time series is able to be settled as period 1 from 1970s until 1988 Seoul Olympic Game, period 2 until AFC (Asian Financial Crisis) and period 3 for the post era of AFC until the IFC occasion.

For the detailed explanation of moderator's role, the Table 4-9 delivers the more concrete result defined its moderating effect by the periodical characteristics of inward FDI motivation. New interaction variables were born by multiplying each four motivation variables and entry time. Thereafter, these interaction terms are tested against each original variable to deliver any significant affection into the dependent variables (WOS vs. JV).

< Table 4-9 > Moderator effect of Entry time – Study 1

Independent variables		Models (dependent variable: choice between WOS and JV)				
		(1)	(2)	(3)	(4)	(5)
Strategies						
Strategic Variables	HostSales	-0.01***	-0.02	-0.01***	-0.02	-0.01***
	Hostbuy	0.01***	0.02***	0.03***	0.02***	0.02***
	HQsales	-0.01**	-0.01**	-0.01**	-0.01**	-0.01**
	RnDLevel	0.466***	0.44***	0.44***	0.44***	0.66***
Interactions with moderator						
Interaction variables	entryTIME	-0.01**	0.07	0.59**	-0.07	0.36*
	entryTIME* hostSALES		0.01			
	entryTIME* hostBUY			-0.01**		
	entryTIME* HQexport				0.01	
	entryTIME* RNDlevel					-0.10
EmployVol (control var.)		-0.16**	-0.18**	-0.18**	-0.18**	-0.18**
Constant		-30.67	-0.46	-1.77	-0.46	-30.67
Observation (n)		624	624	624	624	624
R-squared (Nagelker R <sup>2</sup> )		0.25	0.29	0.30	0.29	0.29

Cf. : \* At the significance level < 0.1, \*\* At the level < 0.05 , \*\*\*At the level < 0.01

From the above test, the variable of *hostBUY* displays the significant moderating effect on entry time, under positively associated with the choice of JVs as already defined. In case of R&D intensity level, invested MNEs in Korea have no perceptible effect which does not corresponds to the prior study of outward FDI of USA's manufacturing firms (Shrader et.al 2001). As a conclusion, the firms with high purchasing ratio from the Korean market has a higher possibility to be changed into the other mode depending on the period of past entry timing.

Regarding the OLI variables, subsidiary firm's size was tested as a moderator according to the hypothesis 9. New interaction variables were born by multiplying each three OLI variables and entry time. On the below Table 4-10, the result shows that none of these three OLI advantage elements have any moderating effect on subsidiary's size. This reveals that if the degree of either FDI experience or cultural distance does not affect the probability to choose the WOS which is opposite to the prior study of Tatoglu et.al. 1988. Therefore, the hypothesis 9 is rejected.

< Table 4-10 > Moderator effect of subsidiary size – Study 2

Independent variables		Models (dependent variable: choice between WOS and JV)			
		(1) Original	(2)	(3)	(4)
Strategies					
Strategic Varia.	FDIexperience	-0.51***	-0.62***	-0.43***	-0.43***
	Cultural Distance	-0.16**	-0.21***	0.22*	-0.21***
	HQbuy	0.02***	-0.02***	-0.02***	-0.02***
Interactions with moderator					
Inter- action varia..	EmployVol	0.10*	0.04	0.14	0.13*
	EmployVol *FDIexperi		0.08		
	EmployVol * Cultr Dist			0.01	
	EmployVol * HQbuy				0.01
Entry Time (control var.)		0.17	0.17	0.17	0.17
Constant		-0.23	1.0	0.77	0.78
Observation (n)		624	624	624	624
R-squared (Nagelker R <sup>2</sup> )		0.24	0.25	0.25	0.25

Cf. : \* At the significance level < 0.1, \*\* At the level < 0.05 , \*\*\*At the level < 0.01

## **C. RESULTS OF ANALYSIS**

### **1. Result and Findings**

The results suggest the strategic behavior framework and reveal the similarities and differences between MNE's in their choice of FDI entry mode in Korea. The analysis generally supports the prior literature's results consistent with other countries' case while providing more detailed and cogent explanation.

In the FDI motivation, the four motivation elements proved the existence of a very strong relationship with entry of control meaning that they are chosen as good variables to analyze the entry mode academically. MS motivation has a causal relationship with WOS in Korean case while it has relationship with JV in H.K.'s investment case to China (Shi et.al. 2001). In case of ES motivation, both Korean case and H.K.'s case were commonly showed to choose WOS. However, R&D intensity as a SAS motivation is positively related with JV in Korea which is the same result with previous study for Korea by Sydney et.al. at the same significance level.

With respect to entry mode of WOS related with three elements of advantage, FDI experience as a Ownership Advantage, cultural distance as a Location advantage, are related positively with WOS significantly with the same result as found in prior study of Brouther, et. al. They analyzed study for US case of the OLI framework itself proving that all of OLI advantages are significantly associated with WOS. According to Nakos, et. al.(2002), international experience (O.a) was not a significant variable in the US SME' case suggesting the opposite mode from the prior study. This study of Korea's inward FDI also produced results consistent



with prior studies in Taiwan (Cheng, 2008) and in another case from the US (Shrader, 2001). However, only *HQ purchasing ratio* as Internalization Adv. indicates that the positive relation with JV differs significantly from the other prior studies.

In particular, the assumption was supported that entry timing plays the role of strong moderator towards purchasing ratio of host subsidiary in terms of RS motivation. Other variables from OLI advantages do not impact the WOS vs. JV respectively so, ultimately, that it has no moderating effect.

## **2. Conclusion of Analysis**

In this chapter, several variables are tested with mode of control by dividing the two kinds of study from four motivations and three OLI advantages which is the main theoretical scheme of J. H. Dunning. All variables from four motivation and OLI advantages are notably associated with WOS vs. JV mode. The moderator effect was successfully proved in the case of the four FDI motivation frameworks. The moderator variables were discovered as a remarkable record which had not been tried in previous entry model study of Korea and also corresponded to the prior case study of US firms (Shrader, 2001).

## **V. GREENFIELD AND M&A IN ENTRY MODE CHOICE**

### **A. RESEARCH METHODOLOGY**

#### **1. Hypothesis**

In this chapter, Eclectic theory based OLI advantages related with entry mode of Greenfield vs. M&A will be reviewed together with four motivations' variables which mostly influence to manufacturing industry. With references to the prior study, foreign market entry mode choice determines the risk level to which the firm is exposed in the international environment (Hill et al., 1990). The more resources the firm commits, the greater the risk of losing valuable resources in the case that the foreign market engagement fails. Theories of risk diversification and risks of strategic asset of FDI relate to the inappropriate timing, especially for M&A, and insufficient knowledge about the assets being acquired. For example, a firm that undertakes a costly Greenfield investment in the host country has a greater risk of losing significant resources than does a firm that establishes a licensing agreement with a partner in the same host country. Based on the above discussions, the following hypothesis is proposed.

##### **1.1 Ownership advantage**

Referred to this OLI paradigm, it states that firms choose the most appropriate entry mode into an international market by weighting the advantages. Mainly the capability to organize Ownership advantages arise from presence of investing firms in countries with, i) different economic & political system, ii) cultural regimes including ability to access, iii) harness and integrate differences in distribution of natural and created assets, iv) of organizational and managerial experience. The following hypothesis is thus proposed:

**Hypothesis 1.** The greater the degree of ownership advantage possessed by MNE entered into Korea, the greater association with a high commitment entry mode.

(Greenfield type of subsidiary is preferred in entry mode ; GF)

### **1.2 Location advantage**

According to the previous research, cultural distance is the decisive factor influencing the ownership which means the further away the home country is located, the less ownership is important to the invested firms because such foreign firms have less knowledge and information on cultural background. The following hypothesis is thus proposed:

**Hypothesis 2.** The greater the degree of location advantage possessed by MNE entered into Korea, the greater association with a high commitment entry mode.

(Greenfield type of subsidiary is preferred in entry mode ; GF)

### **1.3 Internalization advantage**

By the transaction cost theory, Internalization advantages are the benefits a firm obtains by choosing a high-commitment entry mode rather than internationalizing through partnership arrangements (Dunning, 1988). The following hypothesis is thus proposed:

**Hypothesis 3.** The greater the degree of internalization advantage possessed by MNE entered into Korea, the greater the association with a high commitment entry mode.

(the Greenfield type of subsidiary is preferred in entry mode ; GF)

### **1.4 Incentive System**

Incentive systems are mostly related to oligopolistic behavior and product cycle. (Graham 1975, 1998; Knicker-bocker, 1973; Vernon, 1974), some forms of oligopolistic behavior may apply to all types of international business, although incentives and pressures are likely to be context specific. Especially, theories related to government's incentives, fiscal and other incentives leads to increase the demand for products of MNEs and mainly incentives promote innovation-driven alliances by upgrading of existing O advantages of investing firms (Loree & Guisinger, 1995; UN, 1996a). The following hypothesis is thus proposed:

***Hypothesis 4.*** By the government incentive, each advantage affect to the binary mode choice significantly.

***Hypothesis 4-1.*** By the satisfied degree of the government incentive, O- Advantage by MNE affect to the high commitment entry mode significantly.

***Hypothesis 4-2.*** By, the satisfied degree of the government incentive L- Advantage by MNE affect to the high commitment entry mode significantly.

***Hypothesis 4-3.*** . By, the satisfied degree of the government incentive I- Advantage by MNE affect to the high commitment entry mode significantly.

### **1.5 IPA's Involvement**

As a position of host country, the most of government involve in the attraction of foreign investment with all of the legal regimes and administrative activity. IPA (Investment Promotion Agency) undertakes their unique role to guide the investor and provide numerous administrative benefits based on national and local basis. Presently, their roles and impact is bound to affect MNE's decision sometimes because IPA normally contributes more serious competition. Former studies have found that a country's governance quality affects foreign

firms' willingness to enter (Gani, 2007; Globerman & Shapiro, 2003;Slagen et.al.,2009) .

Thus, the following hypothesis is practically proposed:

***Hypothesis 5.*** By the IPA involvement, each advantage affect to the binary mode choice significantly.

***Hypothesis 5-1.*** By the degree of the IPA involvement, O- Advantage by MNE affect to the high commitment entry mode significantly.

***Hypothesis 5-2.*** By the degree of the IPA involvement, L- Advantage by MNE affect to the high commitment entry mode significantly.

***Hypothesis 5-3.*** By the degree of the IPA involvement, I- Advantage by MNE affect to the high commitment entry mode significantly.

### **1.6 Other hypotheses as to the mixed theory**

Internalization theory and transaction cost theory explain the variety of FDI behavior of international firms. Capital Imperfections theory and oligopolistic reaction theory better describe the large size of independent type and competitive structure of MNEs. Those theories drove some of diversified resource strategy of big MNEs investment, which are preferred by M&A. The choice between GF vs. M&A possibly depend on how much of internal capital and resources allocated to foreign subsidiary, e.g., investment amount, volume of human resource, either tangible and intangible assets internally possessed, etc.

Moreover, the investment execution period may reflect the main characteristics of those times in international economy. For an example, most of the economic indicators have dramatic turning point before/after the Asian Financial Crisis, by delivering prominently different

figures (Choe et. al,2004). From these backgrounds, the following several hypotheses are suggested.

**Hypothesis 6.** The greater the degree of firm size possessed by MNE entered into Korea, the greater association with a high commitment entry mode. (Greenfield type of subsidiary is preferred in entry mode ; GF)

**Hypothesis 7.** The greater the degree of invested amount possessed by MNE entered into Korea, the greater association with a high commitment entry mode.  
(Greenfield type of subsidiary is preferred in entry mode ; GF)

**Hypothesis 8.** The more recent timing of investment was executed by MNE into Korea, the greater association with a high commitment entry mode. (Greenfield type of subsidiary is preferred in entry mode ; GF)

### **1.7 Four Motivation Hypothesis**

When MNE pursues global strategic motivation in its FDI entry mode as a high level of control also play a greater role in choosing appropriate entry mode among available FDI entry strategies. This could be between HQ and foreign subsidiary in terms of the complexities of proprietary assets, and MNE's viewpoint to capture scale related production economies, technical efficiency through shared knowledge, learning experiences and management expertise. Based on the above discussions, the following hypothesis is proposed.

**Hypothesis 9.** The greater the degree of market seeking motivation possessed by MNE entered into Korea, the greater association with a high commitment entry mode. (Greenfield type of subsidiary is preferred in entry mode ; GF)

**Hypothesis 10.** The greater the degree of resource seeking motivation possessed by MNE entered into Korea, the greater association with a high commitment entry mode. (Greenfield type of subsidiary is preferred in entry mode ; GF)

**Hypothesis 11.** The greater the degree of efficiency seeking motivation possessed by MNE entered into Korea, the greater association with a high commitment entry mode. (Greenfield type of subsidiary is preferred in entry mode ; GF)

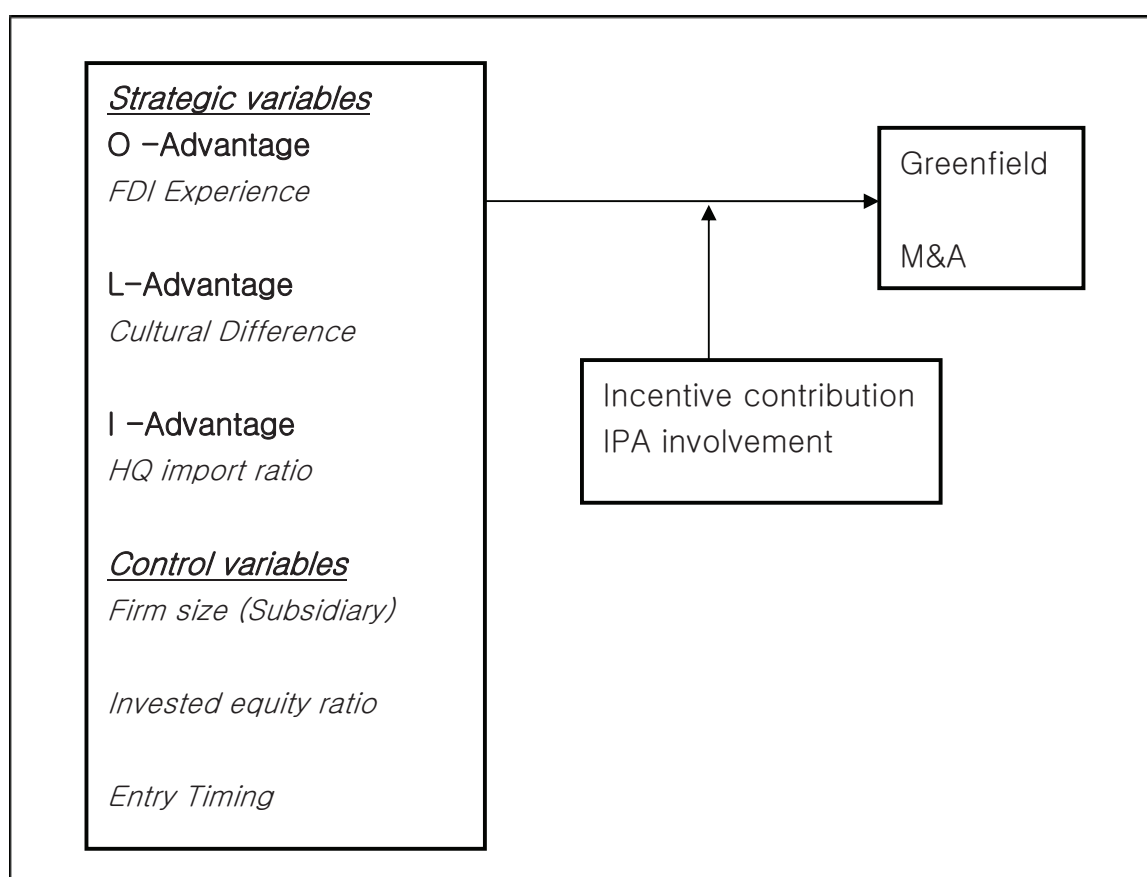
**Hypothesis 12.** The greater the degree of strategic asset seeking motivation possessed by MNE entered into Korea, the greater association with a high commitment entry mode. (Greenfield type of subsidiary is preferred in entry mode ; GF)

## **2. Research Model**

In this study, binomial logistic regression was used to test these hypotheses which estimate the probability between the choice of GF entry mode over that of M&A entry mode. Study 3 presents that the probability of a foreign invested firm choosing a GF or M&A mode are able to be described as a function of each independent variables. Figure 5-1 shows the basic model of causal effect between the three specific OLI advantage elements and entry mode choice as

well as moderating effect of two moderator variables. This analysis targeted the manufacturing firms invested to Korea which include the most industrial fields. In this equation,  $\pi$  is the probability of Greenfield being chosen as FDI entry mode (coded as 0), accordingly  $(1-\pi)$  is the probability of M&A (coded as 1). The same case, follow a function of the independent variables with the parameters which are estimated using maximum likelihood .

< Figure 5-1 > Research Model (based on Eclectic Theory) – study 3

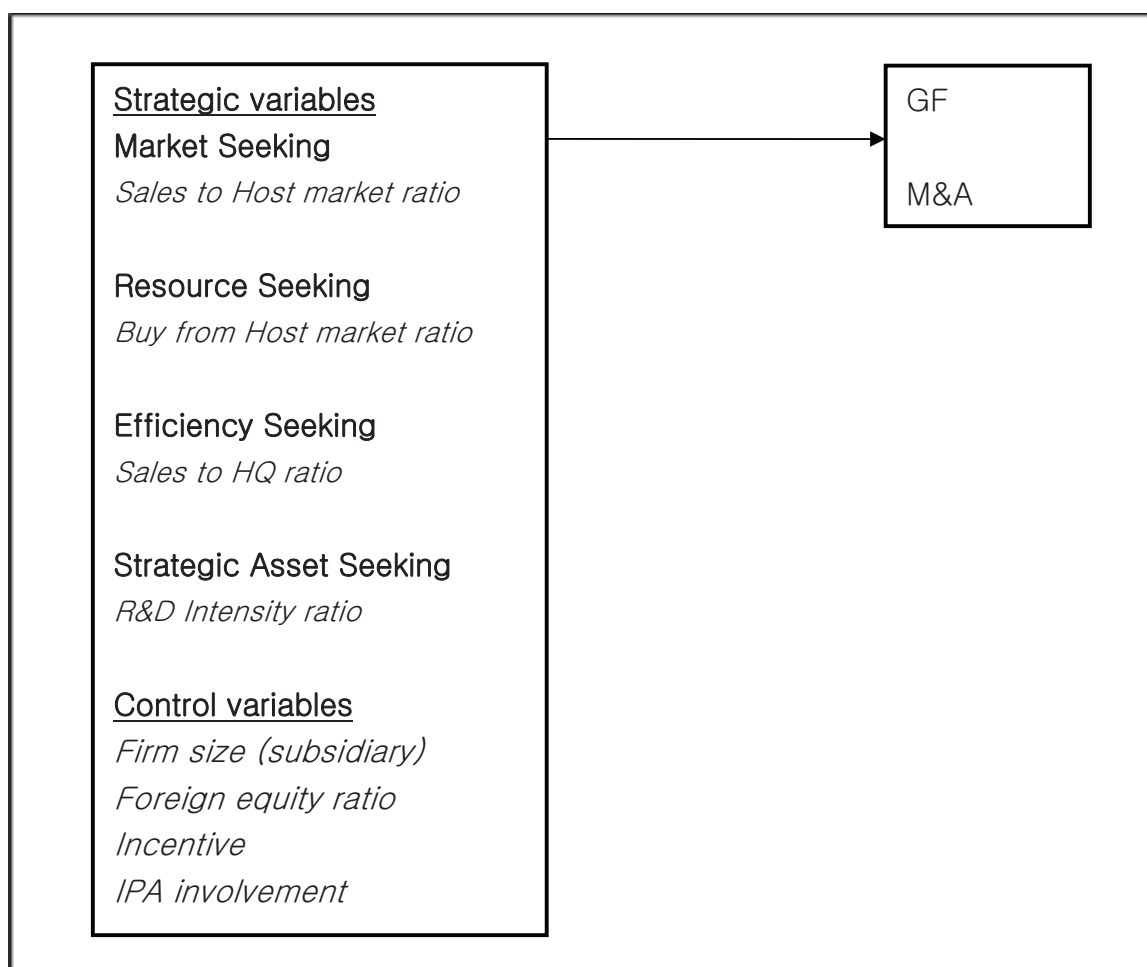


$$\log(\pi/1-\pi) = \alpha + \beta_1 \text{ FDIexperience} + \beta_2 \text{ distance} + \beta_3 \text{ HQbuy} + \beta_4 \text{ incentive* FDIexperience} \\ + \beta_5 \text{ incentive* distance} + \beta_6 \text{ incentive*HQbuy} + \beta_7 \text{ goodIPA*FDIexperien} \\ + \beta_8 \text{ goodIPA*distance} + \beta_9 \text{ goodIPA*HQbuy} + e$$



In addition to the Study 3 which the variables derived from OLI paradigm, four FDI motivational variables are essentially need to understand the behavioral aspect of MNEs in Korea as main objective of this research. Accordingly, in the study 4, four elements are utilized to check the GF vs. M&A mode.

< Figure 5-2 > Research Model - study 4



$$\log(\pi/1-\pi) = \alpha + \beta_1 \text{ hostSALES} + \beta_2 \text{ hostBUY} + \beta_3 \text{ HQexport} + \beta_4 \text{ RNDlevel} + \beta_5 \text{ entryTIME* hostSALES} + \beta_6 \text{ entryTIME* hostBUYS} + \beta_7 \text{ entryTIME* HQexport} + \beta_8 \text{ entryTIME* RNDlevel} + e$$

### **3. Variables and measurement**

#### **3.1 Dependent Variable**

In this chapter, the analysis will be focused on the issue of GF vs. M&A. GF investment means that foreign MNE establish the legally new entity from the registering process and declare transmitted foreign currency amount to the Korean government as an initial capital subscription. Meanwhile, in case of M&A, the MNE contract with existing Korean firm to transfer the current equity in accordance to the current stock value evaluation. In practice, M&A do not normally register with the Korean government until such MNE finish their own execution and host government also generally exclude from the attraction target. Therefore, the incentive system and IPA involvement are possibly very less related with M&A which is opposite to the GF case. For the binary dependent variables, GF is coded as 0 and M&A as 1 in the following analysis.

#### **3.2 Independent Variables**

##### 1) O- advantage : FDI experience

These ownership advantages are consistent with firm's international experience, firm size, their ability to differentiate their product or service, the adaptability of the product or service, the service intensity and the technology intensity of their offerings (Dunning, 1993).

To measure ownership advantage, FDI experience was used as proxy of such advantage which indicates the international experience as a MNE. From the prior descriptive analysis, it seems that a number of invested firms have invested not only in Korea but also previously in neighboring or other Asian countries.

## 2) L- advantage : Cultural distance

The prior researches suggest that culture is one of the important factors of location advantage when the firm decides the entry mode either in terms of eclectic theory and institutional aspect. The measuring of location advantages include i) sales demand and potential demand, ii) differences or similarity in culture, iii) economic, legal, political and trade policies, iv) similarity of market infrastructures and, v) the availability of lower production costs (Dunning, 1993). To measure locational advantage, national cultural distance the same as the previous chapter was used to capture the cultural context in which a firm operates.

## 3) I- advantage : Internal transaction of resources

As the powerful data used in this research which contain the internal transaction situation between the HQ and subsidiary, it is possible to use the actual internalization indicator. To measure Internalization advantage of invested MNEs in Korea, purchasing ratio from the headquarter as of Korean subsidiary was used to explain how much extent the imported items of raw materials or components occupy out of total procurement. If the ratio shows high value, it means those MNE have highly integrated vertical FDI strategy.

## 4) Incentive system

Incentive system and its legal regimes containing various financial and monetary benefits are hardly evaluated even though host country has each particular conditions and systems. Therefore, the degree depends upon how much the investor feel satisfaction towards the host country's incentive regardless of how much grant or cutoffs are allowed to the beneficiary. To measure what extent the host country's incentive contribute to the decision of FDI choice, the degree of satisfaction for the incentive is used as it was asked on the survey.

#### 5) IPA involvement

In Korea, KOTRA has a role as a central IPA and each provincial government also induce the foreign investments as a local IPA. In this research, the survey was asked to what extent such IPA involved and contributed to the new investors decision to choose Korea as a FDI target country and how much they are satisfied with IPA's role by the Likert 7 scale point about their role, attitude and contribution as well as overall satisfaction. This degree of satisfaction by the respondents was used to analyze the model as coded as *goodIPA* and the tendency shows very moderate trend as to the survey result.

#### 6) Firm size (subsidiary)

MNE's investment shows different strategic and behavioral choice as to such MNE is globally big conglomerate or SME, as well as how long such firms has been expanding until that time. This variable checks whether it is able to affect indirectly the entry mode of MNE entered into Korea as their behavior is differentiated depending on the big multinational enterprise or SME. To measure the effect of firm size, the total number of employee was used as proxy of such element. According the Korean regulation, big firm is regarded when the total employee's number exceed 300 peoples, otherwise it is included to SME in Korea.

#### 7) Equity ratio of foreign investor

Equity ratio issues mainly focused as one of the most important issue in establishing the business entity as already shown in the prior literatures. Following this point, foreign equity ratio is utilized as such data collected precisely by this survey.

To measure how much extent does the equity of MNE affect to the decision of GF or M&A, the actual percentage of each firms was described.

#### 8) Entry timing

As same as the previous chapter, MNE entered into Korea with different mode of choice by the economic pattern depending on i) before and after 1988 Seoul Olympic Game (code=1),, ii) until so called Asian Financial Crisis (AFC) occurs (from 1989-1998) (code=2), iii) the rest of times(code=3). To measure entry history by each firm's establishment date, by dividing these three different periods, the results are supposed to be differently delivered.

#### 9) Four motivations (MS, RS, ES and SAS)

As same as the previous chapter, these variables will be tested to the GF vs. M&A mode. These measurements of internal transaction is applied. i) Market Seeking motivation ; domestic sales ratio to sell to Korean market out of total sales volume of subsidiary in Korea. ii) Resource Seeking motivation : domestic purchasing ratio to buy from Korean market out of total purchasing volume of subsidiary in Korea, iii) Efficiency Seeking : product export percentage to their HQ, iv) Strategic Asset Seeking : R&D level of technical development activity and its intensity.

#### 10) control variables

Firm size of subsidiary established in Korea delivers useful information on how much resources MNE put forwards in the FDI. The equity ratio of foreign investor gives an important relationship to define the entry mode whether to construct on greenfield or merge the existing firm. Furthermore, entry timing also reflect the diversified or upgraded investment pattern into Korea through the three entry time zone.

## B. ANALYSIS AND RESULT

### 1. Analysis of Study 3

By doing the same analytical method as the prior chapter, Pearson correlation table checks the relationship among the independent variables and control variables. In this table, there are several correlations among the variables each other at the significance level of 0.05\* and 0.01\*\*. FDI experience and internal purchasing ratio from HQ (coded as HQBUY) is possibly supposed to be defined for the prominent causal effect with GF entry mode over that of M&A entry mode. The Table 5-1 demonstrates the details.

<Table 5-1> Correlation (Pearson) between OLI advantages and GF vs. M&A – Study 3

	GF MnA	FDI experience	Distance	HQ buy	Employ Vol	Foreign ratio	Entered TIME	Incentive	Good IPA
GFMnA	1								
FDI experience	-.205**	1							
distance	-.016	-.067	1						
HQbuy	-.286**	.192**	-.049	1					
Employ Vol	.101*	.102*	-.021	-.127**	1				
Foreign ratio	-.417**	.324**	.051	.353**	-.056	1			
Entered TIME	.113**	-.154**	.007	-.033	-.251**	-.105**	1		
Incentive	-.053	-.085*	.007	-.055	.200**	-.079*	-.047	1	.
Good IPA	-.004	-.041	-.007	.050	.076	-.023	.022	.173**	1

Cf. : \*At the significance level of 0.05 , \*\*At the significance level of 0.01

The results of the logistic regression analysis are provided in Table 5-2. The total number of observations is 624 after excluding all the missing cases without coding. The LOGIT model shows the “Cox and Snell R-square” and “Nagelkerke R-square” measures also demonstrate the good fit. Moreover, the classification accuracy of the model defines slightly greater (70.5

percent) than the chance rate (54.8 percent), with an improvement rate of 15.7 percent which is regarded as improved range.

< Table 5-2 > LOGIT result between OLI advantages and GF vs. M&A – Study 3

	Variables	Result		Remarks	
		Coeff(B)	Wald	Mode	Explanations
Strategic variables	FDI experience	-0.23**	5.16	GF	Oa : strongly positive to GF
	Cultural distance	-0.01	0.01	GF	La : no affection
	HOST buy	-0.01***	10.94	GF	Ia : very strongly positive to GF
Control Variables.	EmployVol	0.21***	8.2	M&A	very strongly positive to M&A
	Foreign ratio	-0.29***	56.74	GF	very strongly positive to GF
	Incentive	-0.20***	10.12	GF	very strongly positive to GF
	IPA involvement	-0.01	0.03	GF	no affection
	Entry time	0.29**	5.41	M&A	strongly positive to M&A
constant	constant	2.60	16.12		
Goodness to Fit	Cox,Snell R <sup>2</sup>	0.221			
	Nagelkerke R <sup>2</sup>	0.295			
	Chi-square	5.036			
	Correct Ratio	0.705			

Cf. : \* At the significance level < 0.1, \*\* At the level < 0.05 , \*\*\*At the level < 0.01

According to the results of the causal effect, the model delivers meaningful information for identifying the associational relation as follows. *FDI experience* which represent Ownership advantage has a positively associated with Greenfield entry mode significantly at the level of  $p < 0.05$  (Dikova, et. al. 2007), while *Cultural distance* (represent Location Adv.) does not have any causal influence to the entry mode choice. Therefore, it is understood that a MNE who had an abundant FDI experience, they prefer to choose GF mode rather than M&A when

entering Korea. Lastly, *HQbuy* (represent Internalization Adv.) is strongly and positively associated with the choice of GF over M&A.

On the other hand, subsidiary firm size demonstrates a positive and very significant relationship with M&A which is contrary to Hypothesis 6, with the message that MNE operate the big firm with a big employment volume normally share capital with Korean local companies. Foreign investor's equity ratio is also strongly associated with GF which means WOS firms prefer to set up the greenfield company rather than merge the existing firms. Entering time is associated with M&A which means the frequency of M&A increase as it comes to recent period which correspond to the actual field situation of inward FDI record in Korea. Lastly, incentive system is deeply related at the level of  $p < 0.01$  with GF because Korean incentive system is mainly concentrated to attract the GF FDI while IPA activity has no affection to GF even Korean IPA operate very aggressive attraction on behalf of host government.

The above characteristic also demonstrates by the time series table analyzed by each subordinate test of entry timing as to Table 5-4. Basically, the similar result to the previous WOS vs. JV study proves that FDI experience notice the significant relation with GF in recent period and cultural distance do not affect to choose the entry mode in Korea. *HQbuy* remarkably associated with GF from the time of 88 Olympic Games meaning that vertical FDI started to choose to GF when they come into Korea after Korean firm's technological level improves more than at certain level. With regards to the host government activity, incentive began to affect just after the 88 Olympic Games and became more significant after the AFC period while IPA's involvement has no affection to the entry GF mode during the whole periods.



< Table 5-4 > OLI variables' change to GF vs. M&A by Entry time – Study 3

Variables	Original result		Entry time =1		Entry time =2		Entry time =3	
	Coeff(B)	Wald S.	Coeff(B)	Wald S.	Coeff(B)	Wald S.	Coeff(B)	Wald S.
FDI experie.	-0.23***	5.16	-0.02	0.01	-0.01	0.01	-0.37***	7.36
Cul. distance	-0.01	0.01	-0.29*	2.70	0.05	0.17	-0.04	0.18
HOST buy	-0.01***	10.94	0.01	2.05	-0.01***	7.56	-0.01***	9.25
EmployVol	0.21***	8.2	-0.03	0.03	0.16	1.37	0.30***	8.59
Foreign ratio	-0.29***	56.74	-0.03***	9.29	-0.03***	10.73	-0.03***	27.454
Incentive	-0.20***	10.12	-0.14	0.64	-0.21*	3.18	-0.23***	6.53
IPA involve	-0.01	0.03	-0.07	0.16	0.02	0.03	-0.01	0.01
Constant	2.60	16.12	3.98	8.81	2.24	4.05	3.56	21.04
Cox,Snell R <sup>2</sup>	0.221		0.172		0.164		0.252	
Nagelker R <sup>2</sup>	0.295		0.231		0.224		0.345	
Chi-square	5.036		18.686		32.521		98.044	
Correct Ratio	0.705		0.717		0.691		0.733	

Cf. : \* At the significance level < 0.1, \*\* At the level < 0.05 , \*\*\*At the level < 0.01

## 2. Analysis of Study 4

Following the same analytical method as to prior part, the association between the four FDI motivations and entry mode of GF vs. M&A was tested. Pearson correlation on Table 5-5 delivers the relationship among the independent variables and entry mode. The result shows several correlations among the variables at the significance level of 0.05\* and 0.01\*\*. ES (*Hostbuy*) and SAS (*R&Dlevel*) are supposed to be the obvious relationship with entry mode of commitment.

< Table 5-5 > Correlation (Pearson) between four motivation and GF vs. M&A – Study 4

	GF MnA	HOST sales	HOST buy	HQ export	RnD Level	Employ Vol	Foreign ratio	Incen tive	Good IPA
GFMnA	1								
HOSTsales	-.098*	1							
HOSTbuy	.286**	-.132**	1						
HQexport	-.059	-.491**	.079	1					
RnDLevel	.264**	-.216**	.339**	.046	1				
EmployVol	.101*	-.059	.175**	-.047	.492**	1			
foreignratio	-.417**	.204**	-.342**	.043	-.336**	-.056	1		
incentive	-.053	-.049	.067	.016	.124**	.200**	-.079*	1	
goodIPA	-.004	.002	-.032	-.035	.018	.076	-.023	.173**	1

Cf. : \*At the significance level of 0.05 , \*\*At the significance level of 0.01

The results of the logistic regression analysis are provided in Table 5-6. The goodness-to-fit in the table shows the two kinds R-square as the good fit. Moreover, the classification accuracy of the model is 70.5 percent which has enough explanatory power.

The results of the causal effect deliver meaningful information to define the associational relation as follows. *HOSTbuy* (represent Resource Seeking) associated with M&A entry mode very significantly and positively at the level of  $p < 0.01$ , which delivers that a MNE who penetrated into Korean market for want of resources prefer to choose M&A mode rather than GF. *R&Dlevel* (represent Strategic Asset Seeking) also very strongly associated with the choice of M&A. However, *HOSTsales* (represent MS) have no causal influence to the entry mode choice by delivering that MNE entered into Korea for the local sales do not stick to any type of entry mode. Also, *HQsales* (represent Efficiency Seeking) is little positively associated with the choice of GFs over M&A

< Table 5-6 > LOGIT result between four motivation and GF vs. M&A – Study 4

	Variables	Result		Remarks	
		Coeff(B)	Wald	Mode	Explanations
Strategic variables	HOSTsales	-0.01	0.40	GF	MS : no affection
	HOSTbuy	0.01***	11.17	M&A	RS : very strongly positive to M&A
	HQsales	-0.01*	2.57	GF	ES : little positive to GF
	R&Dlevel	0.16**	4.94	M&A	SAS : strongly positive to M&A
Control Variables.	EmployVol	0.03	0.14	M&A	:no affection
	Foreign ratio	-0.03***	0.01	GF	very strongly positive to GF
	Incentive	-0.19***	8.85	GF	very strongly positive to GF
	IPA involvement	0.01	0.01		no affection
constant	constant	2.60	16.12		
Goodness to Fit	Cox,Snell R <sup>2</sup>	0.217			
	Nagelkerke R <sup>2</sup>	0.290			
	Chi-square	151.053			
	Correct Ratio	0.705			

Cf. : \* At the significance level < 0.1, \*\* At the level < 0.05 , \*\*\*At the level < 0.01

On the other hand, subsidiary firm size and IPA's involvement demonstrate no relationship with entry mode, with the message that MNE normally operate the big local firm with a big employment volume without consideration of entry mode and IPA's role seriously at all. However, foreign investor's equity ratio and incentive allowance are strongly associated with GF which means high foreign equity firms including WOS prefer to set up the GF company rather than merge the existing firms. The same as previous study, incentive system deeply concede with GF due to the fundamentals of Korean incentive system targeting the GF FDI.

Furthermore, the relationship between the four motivations and GF vs. M&A provide the different result based on the time zones. MS investment has no significant affection to choose

the entry mode throughout the past period. ES investment in Korea was obvious to choose GF only during the period 2, meaning that MNEs for high efficiency invested during this period. RS and SAS investment became prominent only recently in period 3 as Korea's R&D level including new materials and high functional components improves technologically on top ranking in the world. Firm size of Korean subsidiary has no affection to the entry mode at any times in the past while foreign ratio shows very significant relations in the whole period. The incentive system became effective from the second period when the Korean incentive system was legalized in the entry time 2. IPA has no affection to the entry mode at all throughout the periods. The details are shown on Table 5-7 as below.

< Table 5-7 > four motivation variables' change by Entry time – Study 4

Variables	Original result		Entry time =1		Entry time =2		Entry time =3	
	Coeff(B)	Wald S.	Coeff(B)	Wald S.	Coeff(B)	Wald S.	Coeff(B)	Wald S.
HostSales	-0.01	0.40	0.01	0.35	-0.01	2.05	0.01	0.01
Hostbuy	0.01***	11.17	-0.01	0.05	0.01	1.2	0.01***	11.3
HQsales	-0.01*	2.57	0.01	0.42	-0.02**	3.85	-0.01*	0.60
RnDLevel	0.16**	4.94	0.03	0.01	0.09	0.33	0.27***	6.35
EmployVol	0.03	0.14	-0.07	0.13	0.13	0.63	0.09	0.63
Foreign ratio	-0.23***	0.01	-0.03***	9.21	-0.02***	8.11	-0.03***	28.46
Incentive	-0.19***	8.85	-0.15	0.73	-0.22**	3.53	-0.19**	4.21
IPA involve	0.01	0.01	-0.05	0.11	-0.02	0.02	-0.02	0.05
Constant	2.60	16.12	3.20	4.49	2.65	4.53	2.29	8.23
Cox,Snell R <sup>2</sup>	0.217		0.134		0.153		0.256	
Nagelker R <sup>2</sup>	0.290		0.179		0.209		0.350	
Chi-square	151.053		14.194		30.069		99.848	
Correct Ratio	0.705		0.636		0.718		0.748	

Cf. : \* At the significance level < 0.1, \*\* At the level < 0.05, \*\*\*At the level < 0.01

### 3. Moderator Effect Analysis

In the Study 3, three OLI advantage variables' causal effects were mainly checked to GF vs. M&A. Regarding the administrative policy of Korean government, the Korean incentive system and IPA activity are deeply concerned to the GF mode on the process of FDI inducement activity. For testing this interrelated structure, those two moderators were applied consecutively by creating the new interaction terms like in the previous chapter. For SPSS testing, new interaction variables were born by multiplying between two moderators and each three OLI variables. And, those of interaction terms are tested against to each original variable to have any significance into the dependent variables (GF vs. M&A).

< Table 5-8 > Moderator effect of incentive – Study 3

Independent variables		Models (dependent variable: choice between WOS and JV)			
		(1) Original	(2)	(3)	(4)
Strategies					
Strategic Variables	FDIexperience	-0.23***	-0.55**	-0.40***	-0.41***
	Cultural Distance	-0.01	-0.06	0.01	-0.04
	HQbuy	-0.01***	-0.01***	-0.01***	-0.01***
Interactions with moderator					
Interaction variables	incentive	-0.20***	-0.23	-0.11	-0.27***
	incentive * FDIexperi		0.04		
	incentive * Cultr Dist			-0.02	
	incentive * HQbuy				0.01***
EmployVolume (control var.)		0.21***	0.17***	0.18***	0.16***
Constant		2.60	1.75	1.32	1.35
Observation (n)		624	624	624	624
R-squared (Nagelker R <sup>2</sup> )		0.29	0.16	0.16	0.18

Cf. : \* At the significance level < 0.1, \*\* At the level < 0.05, \*\*\*At the level < 0.01

For checking the moderating effect in the incentive system of inward FDI attraction, each of these three OLI aspects were checked whether to affect MNE's decision on the entry mode of commitment. Only *HQbuy* variable shows significant moderating effect with entry mode which accept the hypothesis 4. This means that vertically integrated FDI whose majority purchasing transferred from their HQ into the host country so as to produce second-half out of the whole process or HQ provide the high percentage of materials and components would have probability to choose GF mode by the incentive benefit. On the other hand, MNE's degree of international experience or cultural distance does not change their choice of GF vs. M&A in Korea. As Korea is not a high risk country with unfamiliar or abnormal business environment to be influenced by cultural difference or international experience and they also enjoy government incentives.

With regards to the moderating effect of IPA's involvement, the procedure was executed the same as above according to the hypothesis 5. From the result below table 5-9, any of those three OLI elements have no significant moderating effect on IPA involvement to choose the entry mode. This fact provide an implication that Korean IPA's activity do not affect in the issue of changing the GF mode to M&A mode regardless of the other factors, i) how MNE have strong previous FDI experience and internalization degree, ii) how far such MNE come from in terms of cultural distance, iii) how strongly Korean subsidiary were aligned with foreign HQ to produce the value added activity in Korea. As a same categorical FDI attraction policy of government, Korean IPA's affection to the entry mode choice decision seems comparatively weaker than the incentive system even both policy consist the quality of government experience and its important strategy (Nieson, et.al. 2011, Demirbag, et.al. 2009).

< Table 5-9 > Moderator effect of IPA involvement – Study 3

Independent variables		Models (dependent variable: choice between WOS and JV)			
		(1) Original	(2)	(3)	(4)
Strategies					
Strategic Var	FDIexperience	-0.23***	-0.66**	-0.36***	-0.36***
	Cultural Distance	-0.01	-0.03	0.01	-0.03
	HQbuy	-0.01***	-0.01***	-0.01***	-0.01
Interactions with moderator					
Inter- action var.	IPAInvolvement	0.20***	-0.12	0.02	-0.01
	IPAInvolve*FDIexperi		0.06		
	IPAInvolve* Cultr Dist			-0.01	
	IPAInvolve* HQbuy				0.01
R&D level (control var.)		0.21***	0.28***	0.28***	0.28***
Constant		-0.23	1.23	0.63	0.76
Observation (n)		624	624	624	624
R-squared (Nagelker R <sup>2</sup> )		0.24	0.18	0.18	0.18

Cf. : \* At the significance level < 0.1, \*\* At the level < 0.05 , \*\*\*At the level < 0.01

## C. RESULTS OF ANALYSIS

### 1. Result and Findings

Entry mode towards GF vs. M&A according to three elements of advantage was reviewed according to the Eclectic paradigm. Specifically, FDI experience representing Ownership Advantage and purchasing ratio from HQ representing Internalization Adv. are related positively with GF mode significantly while cultural distance is insignificant to entry mode choice according to inward FDI of Korea. However, FDI experience produced a contradictory result in this analysis because the prior study by Choe et.al 2004, found significant relation with M&A. This is understood because such study reviewed the data collected in 2003 and concentrated the comparison just for several years before/after AFC. This research also reveals that no affection until entry time 2 which correspond to their study, and then, significance to GF was shown only in entry time 3.

In the aspect of four FDI motivations, MS investment is shown as no relation with this entry mode throughout the whole FDI period of Korea which is reverse of Orthodox Internalization Theory (Caves, 1996; Dunning, 1993) and Market Power Theory (Cowling et. al. 1987) which insist MS motivation is mainly related with M&A. In the other hands, RS and SAS investment are significantly related with M&A mode in inward FDI of Korea while ES motivation shows completely no affection to the entry mode choice.

Moreover, entry timing is significant to choose the M&A overtime which support the result of Choe et.al. 2004. This is the contradictory phenomenon from some of advanced European countries caused by the difference of economic maturity phase since Swedish MNE's entry



timing was proved with GF (Zejan 1990). As one of host government quality, incentive affect to GF mode in recent period since it was legislated at the beginning of entry time 2 in Korea, and delivers moderating effect towards the subsidiary firm's local procurement. IPA activity has no affection either to entry mode choice and moderating effect. Foreign investor's equity ratio maintains quite strong effect to GF all the period as a prominent characteristic of Korean inward FDI.

## **2. Conclusion of Analysis**

By analyzing GF vs. M&A entry mode, the whole entry mode cases of inward FDI were tested empirically to find out the actual strategies in the FDI history of Korea. As a key finding of this chapter, mode of control and mode of commitment were closely related to each other in Korea's inward FDI than high foreign equity-rate firms which prefer GF over to M&A with high statistical association in Korea. Also another proven fact is that the Korean incentive system has a moderating effect in cases where MNE's internal transaction ratio has a high degree of vertical FDI when they invested in Korea.

In terms of the four motivations, the conclusion shows that GF vs. M&A mode was associated with approximately half of the motivation variables while the prior study of WOS vs. JV has a full association with all variables of four motivations.

## **VI. ENTRY MODE (GREENFIELD vs. M&A) IN OUTWARD FDI**

### **A. RESEARCH METHODOLOGY**

#### **1. Objective and data**

As a very comprehensive FDI study of Korea, the previous two chapters analyzed the entry mode of WOS vs. JV and GF vs. M&A in Korean inward FDI. In this chapter, based on OLI advantages variables, dual entry mode choice is analyzed either toward WOS vs. JV and GF vs. M&A consecutively. Moderating effect of firm size was performed with the detail subordinate test by two groups of firm size. In addition, the comparison of inward and outward FDI cases demonstrates to search out the strategic similarity and behavioral difference between the foreign investors in Korea and Korean investors in international market. Abundant FDI Entry mode studies were for the outward cases as mentioned earlier in this paper. Hence, the outward FDI case of Korea and other countries' outward cases are to match parallel comparison to understand the difference among the countries by the same characteristic frame.

The outward FDI data containing the various FDI firms was collected from the dataset of EXIM Bank Korea which has annually registered and revised. Especially, this large dataset provide the information in detail of WOS vs. JV mode and GF vs. M&A of each outbound firm for the several decades from 1970s to 2015. The criteria of outward FDI firms indicates minimum 10% share of overseas subsidiary with minimum invested amount of \$100,000 according to the regulation of Korean government which correspond to inward FDI case in the previous study. Korea has totally 62,089 cases of accumulated outward FDI with total

amount of \$308,877 mil. until 2015. Among this whole FDI firms, the manufacturing sector contains 17,017 firms which exceed invested amount over \$100,000. For the exact bilateral comparison for the manufacturing industry, the same criteria of minimum \$500,000 of investment amount were applied. Accordingly, the effective sample size of 10,777 firms (from 1981 to 2015) was eventually collected and coded to execute the same LOGIT regression by the SPSS ver. 18 to test the same hypotheses. The below table 6-1 refers the other countries' cases which the outward FDI were analyzed by the national data from the government bureau in order to study the entry mode of their MNEs.

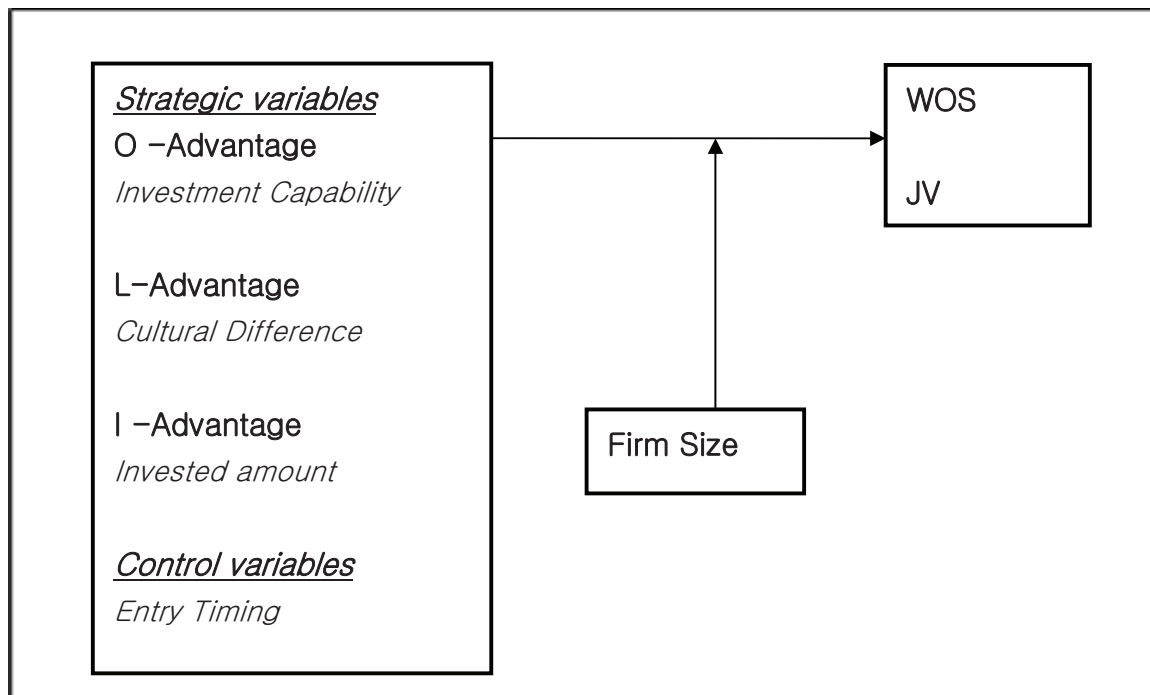
< Table 6-1 > previous case study for outward FDI (1980s-2010s)

Study by (published)	Entry mode	Data	Home country	Host country	Variables and Results
Nielson Bo, et.al (Journal of world business, 2011)	WOS vs. JV	165 firms registered in Swiss stock market	EU countries	Various 88 nations	FDI experience ; signify. to WOS Cultural distance : no affection Firm size : no affection Host government : no affection
Chang, et. al. (IBR, 2014)	WOS vs. JV	TEJ (stock market) 1,237 firms	Taiwan	Various 13 nations	FDI experience ; signify. to WOS R&D level ; significant. to JV Host government : sig to WOS
Demirbag et.al. (JWB, 2009)	WOS vs. JV	GDBE Government agency registered data	Turkey	CEE	R&D level : signify. to JV Cultural distance : no affection Subsidiary size : sig. to WOS Host government : sig. to WOS

## 2. Research Model

In this study 5, the OLI variables are deployed to define the association with the WOS vs. JV entry mode in outward FDI and to compare with study 2 in the previous chapter. Additionally, by the two levels of firm size of Korean HQ, and the moderating effect is performed to understand how strongly HQ firm size affect to the control two entry mode type in outward FDI. FDI capability replaces FDI experience, and invested amount replace R&D intensity indicating internal resource allocation. The research model shown as Figure 6-1, follows the same as the previous methodologies by targeting of manufacturing firms of Korea.

< Figure 6-1 > Research Model - study 5



$$\log(\pi/1-\pi) = \alpha + \beta_1 \text{ INvcapa} + \beta_2 \text{ CULdist} + \beta_3 \text{ INVamnt} + \beta_4 \text{ SHARErate} + \beta_5 \text{ Timing} + \beta_6$$

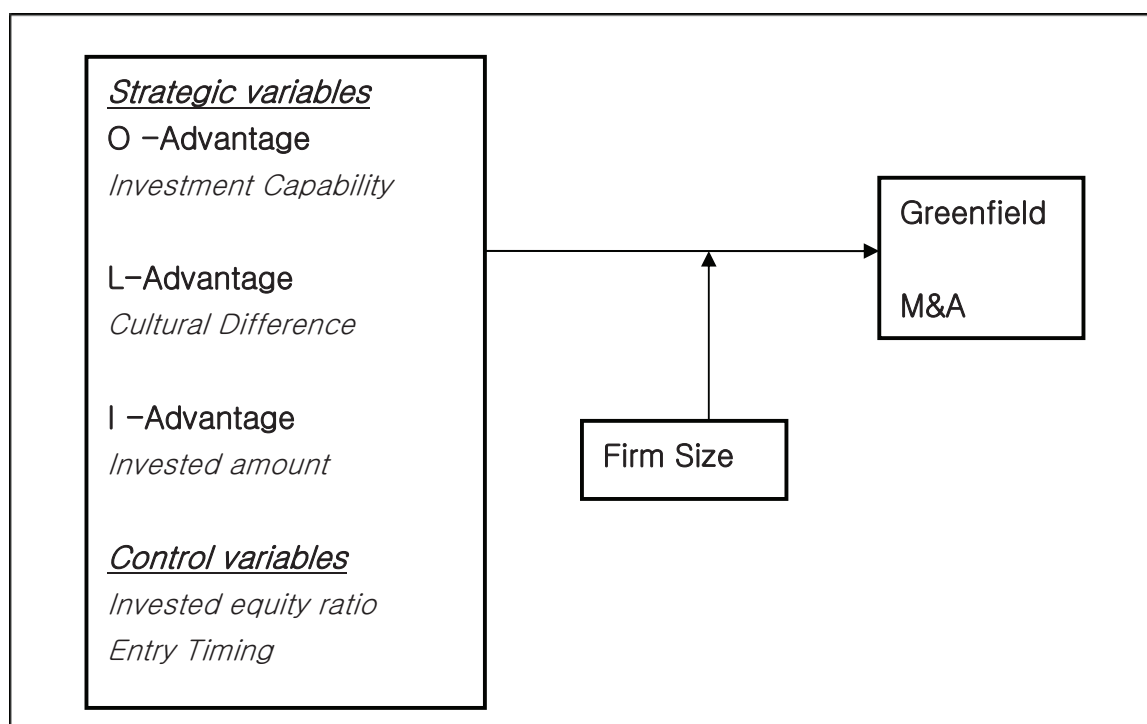
$$\text{ INvcapa*AMNT} + \beta_7 \text{ CULdist*AMNT} + \beta_8 \text{ INVamnt*AMNT}$$

$$+ \beta_9 \text{ SHARErate*AMNT} + \beta_{10} \text{ Timing*AMNT} + e$$

In this equation,  $\pi$  is the probability of WOS being chosen as FDI entry (coded as 0), accordingly  $(1-\pi)$  is the probability of JV being chosen (coded as 1).

Finally, the study 6 estimates the probability to choose the GF entry mode over that of M&A of a foreign invested firm in preference. As function of each independent variable, Figure 6-2 shows the basic model of causal effect between the three specific advantages and entry mode choice with the same variables as study 5. FDI capability and invested amount are replaced while cultural distance remained as to the prior study.

< Figure 6-2 > Research Model – study 6



$$\log(\pi/1-\pi) = \alpha + \beta_1 \text{INVcapa} + \beta_2 \text{CULdist} + \beta_3 \text{INVamnt} + \beta_4 \text{SHARErate} + \beta_5 \text{Timing} \\ + \beta_6 \text{INVcapa*AMNT} + \beta_7 \text{CULdist*AMNT} + \beta_8 \text{INVamnt*AMNT} \\ + \beta_9 \text{SHARErate*AMNT} + \beta_{10} \text{Timing*AMNT} + e$$

### 3. Hypothesis and variables

In this chapter, some strategic variables from OLI theory and several control variables selected to analyze Korean FDI entry mode of the manufacturing sector. Following the above discussions in the prior part, the hypothesis is proposed.

#### 1.1 Ownership advantage

Generally, ownership advantages indicates the entire caliber of MNE in international market which include own accumulated experience in foreign countries, firm size to afford the investment finance and their ability to differentiate their product or service, as well as the service intensity and the technology intensity of their offerings according the Dunning's theory.

In addition, some of the other examples of ownership advantages may contain unique products or services which are not easily duplicated by the other competitors, or the company's various kinds of possession of financial and experiential resources which provide a method for entry Multi-nationality, organizational and risk diversification theories. (Vernon 1973, 1983; Rugman, 1979; Kogut 1983, 1985; Kogut & Kulatilaka, 1994; Doz et al., 1997; Rangan, 1998)

**Hypothesis 1.** The greater the degree of ownership advantages are possessed by MNE go abroad from Korea, the greater association with a high control entry mode decided. (WOS type of subsidiary is preferred in entry mode).

**Hypothesis 1-1.** The greater the degree of ownership advantages are possessed by MNE go abroad from Korea, the greater association with a high commitment entry mode decided. (Greenfield type of subsidiary is preferred in entry mode ; GF)

To measure ownership advantage, Investment capability was used as proxy by the prior literature review consisted of the degree mixed elements of firm's financial size and labor force size, and alignment with Korean partner firms to prepare for the FDI project.

## **1.2 Location advantage**

Theories related to spatially specific logistics externally links with economy of scale for production and transportation costs (Florida, 1995; Scott 1996; Storper & Scott, 1995). Such transaction costs have hypothesized to drive MNE's activities to reduce overall costs and to maximize benefits of inter-related innovation and learning activities.

According to the previous research, cultural distance was assumed as the substantial factor to affect the ownership which means the Korean firms choose a specific entry mode in far-distance target country by the reason that such Korean MNEs have less knowledge about the host country's cultural circumstances. Hence, the following hypothesis is proposed:

**Hypothesis 2.** The lesser the degree of location advantages are possessed by MNE go abroad from Korea, the greater association with a high control entry mode.  
(If the distance is far, WOS type of subsidiary is preferred in entry mode)

**Hypothesis 2-1.** The greater the degree of location advantages are possessed by MNE go abroad from Korea, the greater association with a high commitment entry mode. (Greenfield type of subsidiary is preferred in entry mode ; GF).

To measure locational advantage, cultural distance index by Hofstede (1980) was used to capture the cultural context in which a firm operates.

### **1.3 Internalization advantage**

Internalization advantage is the strategic benefits of FDI in global production organization. Capital Imperfections theory argue that firms from a certain home countries with strong exchange rates, or which discount capital at higher rates of interest will be tempted to invest, often by M&A, in countries which are economically weaker, because a sizable investment abroad requires substantial fusions of capital and managerial resources for considerable commitment from the parent firm (Johanson & Vahlne, 1990).

*Hypothesis 3.* The greater the degree of internalization advantages is possessed by MNE from Korea, the greater association with a high control entry mode.  
(WOS type of subsidiary is preferred in entry mode)

*Hypothesis 3-1.* The greater the degree of internalization advantages is possessed by MNE from Korea, the greater the association with a high commitment entry mode.  
(the Greenfield type of subsidiary is preferred in entry mode ; GF)

To measure Internalization advantage of Korean firms, invested amount from the Korean headquarter was used (Chang et.al.,2014).

### **1.4 Firm size (HQ)**

The strategic activity is differentiated by the firm size of investor, and such MNE's size is conventionally categorized by the e.g. big company or SME including personal firms,



indicating the result how long time such firm has been build up until that time. In this regards, size of firm is very essentially required variable in every study referenced to affect entry mode selection (Brother, et.al. 2003)

***Hypothesis 4.*** The degree of firm size by MNE from Korea moderates the association with a high control entry mode.

***Hypothesis 4-1.*** The degree of firm size by MNE from Korea moderate the association with a high commitment entry mode.

To define the firm size, according to Korean regulation, the total number of employee was used as proxy, which is divided by employee size of 300 peoples.

### **1.5 Equity ratio of foreign investor**

In the previous study, investor's equity ratio issues were focused as the most important issue in establishing the business entity as already shown in the prior literatures. Regarding the strategic choice on Greenfield vs. M&A, Exchange rate theory (Aliber, 1971; Cushman, 1985; Froot & Stein, 1991; Blonigen, 1997; Rangan, 1998) assume exchange rates in terms of, i) suitably discounted for risk, ii) capture most of the differences in cross-border locational costs, iii) and also expectations of investors about the future course of exchange rates. This variable is only applied GF vs. M&A particularly for timing of M&A, which is not relevant to the entry mode of WOS vs. JV as they rolled the same issue.

**Hypothesis 5.** The greater the degree of equity rate of subsidiary possess by MNE from Korea, the greater association with a high control entry mode.

(WOS type of subsidiary is preferred in entry mode)

**Hypothesis 5-1.** The greater the degree of equity rate of subsidiary possess by MNE go from Korea, the greater association with a high commitment entry mode.

(Greenfield type of subsidiary is preferred in entry mode ; GF)

To measure to what degree does the equity of MNE impacts the decision only to GF or M&A, the actual percentage of Korean investor's equity in each firms was used.

## **1.6 Entry timing**

In this chapter, entry timing is more precisely categorized as Korea firms engage outward FDI with different mode of choice by the economic pattern, i) from 1981~until 1988 Seoul Olympic Game, ii) Seoul Olympic Games ~ before Asian Financial crisis (1989-1996), iii) from AFC and within its recovery period (1997 ~ 2000), iv) ~ before IFC (International Financial Crisis), from 2001 until 2008, v) 2009 ~ 2015, the rest of times. To measure entry of each firm, the above five period was counted and these historic progress was coded,

**Hypothesis 6.** The more recent timing of investment was executed by MNE from Korea, the greater association with a high control entry mode.

(WOS type of subsidiary is preferred in entry mode)

**Hypothesis 6-1.** The more recent timing of investment was executed by MNE into Korea, the greater association with a high commitment entry mode. (Greenfield type of

subsidiary is preferred in entry mode ; GF)

### **1.7 Dependent Variable**

Regarding the strategic choice on dependent variables, those two kinds of modes were applied consecutively by nominal scales, WOS vs. JV in study 5 and Greenfield vs. M&A in study 6 by the same independent variables' conditions. The other theoretical background is the same as the previous chapter.

## B. ANALYSIS AND RESULT

### 1. Analysis of Study 5

Following the above discussion, OLI variables are cross-checked with the WOS vs. JV at first. The analysis result of the WOS vs. JV is provided in Table 6-2. The regression model shows the “Cox and Snell R-square” and “Nagelkerke R-square” as a fair level and the good fit. Moreover, the correct accuracy of the model is 63.1% as in a fair range.

< Table 6-2 > LOGIT result between OLI advantages and WOS vs. JV – Study 5

	Variables	Result		Remarks	
		Coeff(B)	Wald	Mode	Explanations
Strategic variables	Invest capability	1.03***	1,454	JV	Oa : very strongly positive to JV
	Cultural distance	-0.10***	45.73	WOS	La : very strongly positive to WOS
	Invested amount	-0.66***	612.9	WOS	Ia : very strongly positive to WOS
Control Var.	Entry time	-0.16***	9.60	WOS	very strongly positive to WOS
constant	constant	6.065	0.15		
Goodness to Fit	Cox,Snell R <sup>2</sup>	0.117			
	Nagelkerke R <sup>2</sup>	0.156			
	Chi-square	56.221			
	Correct Ratio	0.631			

Cf. : \* At the significance level < 0.1, \*\* At the level < 0.05 , \*\*\*At the level < 0.01

The causal effects of the logistic regression analysis provide the information for identifying all associational point of the whole variables. Investment capability, cultural distance, invested amount and entry timing are all strongly associated with the dependent entry mode significantly. *Invest capability* shows a positive and very significant relationship with JV

mode. The other variables, e.g. *Cultural distance, invested amount and entry timing* have significant relationship with WOS mode.

## 2. Analysis of Study 6

This study 6 is to test the OLI variables towards the GF vs. M&A modes as per hypothesized. The result of the analysis is shown on Table 6-3. The total number of observations is coded as 10,777 cases. The “Cox and Snell R-square” shows 0.036 and “Nagelkerke R-square” have 0.069 which is fair to the good fit. The classification ratio of the model keeps a high level of 88.9% implying a very strong explanatory power.

< Table 6-3 > LOGIT result between OLI advantages and GF vs. M&A – Study 6

	Variables	Result		Remarks	
		Coeff(B)	Wald	Mode	Explanations
Strategic variables	Invest capability	0.22***	42.38	M&A	Oa : very strongly positive to M&A
	Cultural distance	0.05***	6.25	M&A	La : very strongly positive to M&A
	Invested amount	0.12***	11.82	M&A	Ia : very strongly positive to M&A
Control Variables.	Foreign ratio	-0.16***	56.14	GF	very strongly positive to GF
	Entry time	0.02	0.06		no affection
constant	constant	-163.60	48.72		
Goodness to Fit	Cox,Snell R <sup>2</sup>	0.036			
	Nagelkerke R <sup>2</sup>	0.069			
	Chi-square	18.337			
	Correct Ratio	0.889			

Cf. : \* At the significance level < 0.1, \*\* At the level < 0.05 , \*\*\*At the level < 0.01

The results of the logistic regression analysis provide meaningful information that the whole independent variables are identified as significant associational relation with GF vs. M&A. All of OLI elements of *Invest capability*, *Cultural distance* and *Invested amount (logAmnt)* have positively associated with M&A entry mode significantly at the level of  $p < 0.01$ . Moreover, *foreign equity ratio* of Korean investor is positively associated with GF entry mode significantly at the level of  $p < 0.01$ , and *entry timing* does not have any affection to the entry mode choice. Therefore, OLI advantages on the Korean outward FDI predominantly has preferred M&A mode in the actual field history of Korean FDI. In addition, entry timing has not affected the entry mode choice differently from the study 1 and 2 in the previous chapter. In this regards, the following subordinate test is to define the effect by the firm size for the outward FDI of Korea.

### **3. Moderator Effect Analysis**

Study 5 and 6 are commonly required to check if they have any moderating effect by the category of firm size, big MNE or SME according to the Korean rule. The hypothesis request which variables affect the prediction of entry choice by their behavioral difference based on firm size. For this purpose, firm size as a moderator was applied with WOS mode issue and GF mode issue consecutively with each of interaction terms. The LOGIT test results are provided on table 6-4 and table 6-5 shows each subordinate test result of specific subgroup of big MNE and SME.

< Table 6-4 > Moderator effect of firm size to WOS vs. JV to – Study 5

Independent variables		Models (dependent variable: choice between WOS and JV)			
		(1) Original	(2)	(3)	(4)
Strategies					
Strategic Variables	Invest capability	34.82	35.16	34.87	34.47
	Cultural Distance	-0.07***	-0.07***	0.12*	-0.07***
	Invested amount	-0.42***	-0.41***	-0.42***	-1.57***
Interactions with moderator					
Interaction variables	Firm Size	-34.43***	-34.32	-34.32	-35.43
	Firm Size *inv capa		-0.10		
	Firm Size * Cultr Dist			-0.08	
	Firm Size * InvestAmount				0.46***
Entry Time (control var.)		-0.24***	-0.24***	-0.24***	-0.25***
Constant		1.3	0.83	0.92	4.60
Observation (n)		10,777	10,777	10,777	10,777
R-squared (Nagelker R <sup>2</sup> )		0.31	0.31	0.31	0.32

Cf. : \* At the significance level < 0.1, \*\* At the level < 0.05 , \*\*\*At the level < 0.01

With respect to the moderating effect of firm size towards WOS vs. JV, firm size has comparatively strong moderating effect on invested amount. Therefore, even the overall preference is on the preference of WOS, firm size is able to affect to choose the other type of entry mode. This also correspond to the prior literature if investment volume is large relatively to the parent company, the HQ is less likely to possess all assets required to the entry (Delois and Beamish, 1999).

Table 6-5 shows the detail specificity of the firm size. The behavioral difference between big MNE and SME are verified in terms of FDI capability and investment amount. If SME is equipped with enough experience and knowledge capacity prefer to choose JV and prefer to

choose WOS only when they put big amount of capital in outward FDI. However, big MNEs have no particular preference in every aspect of OLI advantages. In conclusion, Korean SMEs seems sensitive to risk management while big MNEs more likely to execute under their own strategic circumstances regardless of entry mode in outward FDI.

< Table 6-5 > Variables' change by firm size on WOS vs. JV – Study 5

Variables	Original result		SME =1		Big MNE =2	
	Coeff(B)	Wald S.	Coeff(B)	Wald S.	Coeff(B)	Wald S.
Invest capability	1.03***	1,454	7.20***	1,016.6	17.25	866.9
Cultural. distance	-0.10***	45.73	-0.06	0.49	0.06	0.17
Invested amount	-0.66***	612.9	-1.10***	21.27	0.01	0.15
Entry time	-0.16***	9.60	0.04	0.16	0.11	0.44
Cox,Snell R <sup>2</sup>	0.117		0.703		0.729	
Nagelker R <sup>2</sup>	0.156		0.937		0.977	
Chi-square	56.221		7,326.4		7,425.3	
Correct Ratio	0.631		0.991		0.996	

Cf. : \* At the significance level < 0.1, \*\* At the level < 0.05 , \*\*\*At the level < 0.01

The table 6-6 shows the moderating effect of each OLI variables towards GF vs. M&A of study 6. Investment capability and cultural distance reveals very strong moderating effect of interaction moderator with significant level at the  $p < 0.01$ . This means that the MNE's mode choice varied depending on the investment capability which does not necessarily insist single type between GF and M&A mode. Even though Korean MNE has an excellent organization with enough knowledge and financial capacity to carry out big FDI, SME prefer to choose M&A entry mode. In case of cultural distance, when Korean firm enter culturally unknown country, even though the overall entry mode prefer M&A, it many change to GF depend on the firm size, e.g., big MNE with big resources may prefer GF. Moreover, cultural distance



restriction is probably changed by big firm's decision whatever they have abundant international experience and resources. However, investment amount towards outward FDI have no influence to moderating role among the Korean MNEs.

< Table 6-6 > Moderator effect of firm size to GF vs. M&A – Study 6

Independent variables		Models (dependent variable: choice between WOS and JV)			
		(1) Original	(2)	(3)	(4)
Strategies					
Strategic Variables	Invest capability	0.15***	1.04***	0.15***	0.15***
	Cultural Distance	0.05***	0.05**	0.32***	0.05***
	Invested amount	0.12***	0.13***	0.12***	0.14
Interactions with moderator					
Interaction variables	Firm Size	0.12	0.91***	0.35***	0.15
	Firm Size *Inv capa		-0.35***		
	Firm Size * Cultr Dist			-.011***	
	Firm Size * InvestAmount				-0.1
Foreign Share rate (control variable)		-0.14***	-0.15***	-0.14***	-0.15***
Entry Time (control variable.)		0.53***	0.53***	0.53***	0.53***
Constant		-4.70	-6.56	-5.22	-4.74
Observation (n)		10,777	10,777	10,777	10,777
R-squared (Nagelker R <sup>2</sup> )		0.06	0.07	0.07	0.06

Cf. : \* At the significance level < 0.1, \*\* At the level < 0.05 , \*\*\*At the level < 0.01

From the bellow Table 6-7, it is defined that Korean big MNEs prefer to choose GF while SMEs choose M&A mode even when their capability is enough. When Korean companies invest into culturally long distant country, big MNEs seems to prefer GF while SMEs prefer M&A because of risk avoidance. With regards to the investment amount, the result delivers the same logic as the previous literatures that firms attempt to large GF mode may be

concerned about the shortage of financial or managerial resources (Hennart, 1991). On the other hand, Korean investor's high equity ratio is strongly associated with GF explaining that high control level of FDI prefers to set up GF investment. Both SME and big MNEs prefer M&A as it comes to recent period which means no significant affection in the past.

< Table 6-7 > OLI variables' change by firm size on GF vs. M&A– Study 6

Variables	Original result		SME =1		Big MNE =2	
	Coeff(B)	Wald S.	Coeff(B)	Wald S.	Coeff(B)	Wald S.
Invest capability	0.22**	42.38	0.53***	36.19	-0.06	0.53
Cultural. distance	0.05***	6.25	0.14***	17.67	-0.01	0.08
Invested amount	0.12***	11.82	-0.08	0.67	0.01*	1.74
Foreign ratio	-0.16***	56.14	-0.20***	26.89	-0.15***	18.76
Entry time	0.02	0.06	0.44***	90.67	0.51***	142.22
Cox,Snell R <sup>2</sup>	0.036		0.027		0.033	
Nagelker R <sup>2</sup>	0.069		0.053		0.058	
Chi-square	18.337		166.712		188.125	
Correct Ratio	0.889		0.881		0.858	

Cf. : \* At the significance level < 0.1, \*\* At the level < 0.05 , \*\*\*At the level < 0.01

## **C. RESULTS OF ANALYSIS**

### **1. Result and Findings**

In this section in order to analyze the outward FDI, the same variables as inward case are matched to compare both FDI cases in Korea. Basically, related with Eclectic Theory, all of OLI advantage elements are significantly associated with each of those two types of entry modes according to Korean FDI. This result of outward FDI analysis is supported by the various periodic and large data that have a variety of cases. The most typical mode is M&A mode regardless of entry timing which shows no connection with the entry mode. With regards to mode of control, WOS is the overall choice in Korea only except for investment capability which is significant to JV. As a key finding, it was also proven that mode of control is strongly associated with mode of commitment in Korea which means WOS or any high equity ratio of FDI prefer GF investment in outward FDI case.

Furthermore, firm size (Korean HQ) shows as moderator effect of firm size on investment capability and cultural distance when having to choosing the GF vs. M&A mode. While they execute FDI, Korean SMEs and big MNEs demonstrate partly behavioral difference to choose the WOS vs. JV. Korean SMEs prefer to choose M&A irrespective of their investment capability and big investment amount, differently from big MNEs. Also, SMEs prefer to establish JV even if they are equipped with enough investment capability while big MNEs do not share this concern. On the other hand, big Korean MNEs seem somewhat insensitive to the choice of any particular mode involving instances where they enjoy high investment capability or abundant investment resources. Neither cultural distance nor entry time affects their mode choice between WOS vs. JV.

## 2. Comparison of Inward/Outward FDI

In case of inward FDI of Korea in manufacturing industry, WOS vs. JV have almost even occupancy in both inward and outward FDI. However, outward FDI case shows imbalanced record as to shown on Table 6-8. Among the JV of outward FDI, approximately one third of cases are jointed with each other among the Korean partners who already aligned consortium or partnership before they execute outgoing FDI abroad. From this point, it is understood that roughly 65% of Korean firms decide to secure management right for their control in overseas FDI which is remarkably higher than other MNEs inward case into Korea (54%). This is also understood that Korean firms prefer to avoid partnership with local partners who are unknown, undefined and culturally different rather than try to find the partnering target in host market, which is fundamentally based from common Korean business characteristics.

< Table 6-8 > comparison of entry mode and both FDI cases

Mode of entry	WOS vs. JV		GF vs. M&A	
	WOS	JV	GF	M&A
Inward FDI (total 624 firms)	340 (54%)	284 (46%)	283 (45%)	341 (55%)
Outward FDI (total 10,777 firms)	5,111 (47%)	5,666*(53%)	9,536 (87%)	1,421 (13%)
Remarks	* Out of 5,666 firms, joint business with Korean local partner firms are 1,947 firms which occupies 34%			

Furthermore, the comparison of both FDI suggests the behavioral similarities and differences between the foreign MNEs and Korean MNEs. The first comparison performed for mode of control, in the aspect of entry mode of WOS vs. JV. FDI experience and cultural distance have the common result to prefer the WOS mode in either in/out cases. FDI capability to

organize the international business shows to choose WOS in case of inward while JV for outward FDI. This result may be originated from the grouping bias because a number of Korean MNEs by partnering with the other Korean local firms were coded as JV. Even though they have no local partners at all, this fact seems to lead overestimated effect eventually to be associated with JV. The details are shown on table 6-9 as bellows.

< Table 6-9 > Comparison of inward/outward FDI to WOS vs. JV

Variables	Entry Mode (this research)		Entry Mode (previous research)	
	Inward FDI	Outward FDI	Inward FDI	Outward FDI
FDI experience	WOS		No effect (Shi, 2001) No effect (Nakos, 2002)	WOS (Cheng, 2008 ) WOS (Shrader,2001) WOS (Kuo, 2012) WOS (Chang, 2004) JV (Nielson, 2011)
Cultural distance	WOS	WOS	WOS (Sydney, 2008)	WOS (Brouther,1996) No affection(Nielson,) No affection(Demirbag)
FDI capability	WOS	JV		WOS (Ripolles 2010)
Invested amount		WOS		WOS (Brouther,1996) WOS(Demirbag, 2009)
Invested timing		WOS		
R&D Intensity	JV		JV (Sydney,2008) WOS (Kim, 1992)	WOS(Anderson,1986) WOS (Eramilli,1991) JV (Chang,2014) JV (Demirbag,2009)
Firm Size	WOS			No affection (Nielson)

In the aspect of commitment mode, FDI experience is strongly associated with GF in inward FDI even though the prior studies put weight on M&A in the past or no impact to choose the entry mode (Kang, 1993). Cultural distance strongly related with M&A in case of outward FDI while no influence on inward FDI. Korean MNE's capability to organize FDI including

the degree of how much financial resource allocated is related with the choice of M&A in both cases. The above details of comparison are shown on the table 6-10 as below.

< Table 6-10 > Comparison of inward/outward FDI to GF vs. M&A

Variables	Entry Mode (this research)		Entry Mode (previous research)	
	Inward FDI	Outward FDI	Inward FDI	Outward FDI
FDI experience	GF		M&A (Choe,2004)	No effect (Kang, 1993) M&A (Zejan,2990)
Cultural distance	No effect	M&A		
FDI capability	M&A	M&A	M&A (Caves,1991, US)	No effect (Kang 1993)
Invested amount		M&A	M&A(Cave, 1986)	
Invested timing	M&A	No effect		GF(Zejan,1990, Sweden)
R&D intensity	M&A		M&A(Choe, 2004)	M&A (Kang,1993)

## **VII. CONCLUSION**

### **A. CONTRIBUTION & IMPLICATIONS**

#### **1. Contribution of this study**

This comprehensive research aimed to establish which determinants affect the two kinds of entry modes and to compare inward and outward FDI of Korea. The value of this research is based not only on the expansion of research cases involving Korea's inward FDI as a high scarcity of cases but also to improve the accuracy of such analysis. By using large-sized data set of Korea and covering a longer history of both FDI types, this study can be differentiated from other previous studies which mostly executed with the use of comparatively smaller sized surveys, resulting in sampling bias.

To define the strategic motivations of FDI more precisely, four FDI motivations were used as determinant variables for the first time in academic entry mode choice study in Korea. Importantly, all of those variables are significantly associated with WOS vs. JV mode in inward FDI of Korea suggesting that those four variables are theoretical indicators to explain the FDI entry mode.

As an important theoretical characteristic of FDI, several internal transaction indicators were used as proxy variables for the first time in academic entry mode choice study. All of these variables are fully corresponded to four FDI motivations. For example, Korean subsidiary's purchasing ratio from HQ to Korea, product retrocession ratio to HQ from the Korean subsidiary, local purchasing ratio and local sales ratio in Korea as a host country.

As a differentiated value, this study found out moderating effects of entry mode by the LOGIT analysis. Basically, entry timing, incentive, and firm size are powerful moderators of Korean FDI. Inward FDI established two moderators: entry time towards firm of high purchasing ratio in host market and Korean incentive system towards the firm of high purchasing ratio from HQ. In the outward FDI, firm size towards cultural distance and investment capability were the main moderators. As a host government activity, IPA's role and subsidiary size has no impact on the inward FDI without the moderating effect.

Equity ratio of foreign investor is proved as significant determinants to any entry modes in any directional FDI which means it has commonly influential association with each WOS mode, GF mode as well as inward and outward FDI. Additionally, for the relationship between two entry modes WOS and GF, the association finally proved WOS is significantly related with GF in Korean FDI case.

In particular, Korean MNEs' strategy is asymmetrically oriented to GF which occupy 87% of the total while all of three OLI elements have significant association with M&A. This means even the majority of MNEs perform GF investment and a minority of highly qualified investors affording OLI advantages have maintained M&A mode.

With respect to the most popular argument currently, FDI experience, in case of inward FDI of Korea, GF and WOS mode despite research from other countries, in this instance reveals no affection to inward FDI. On the firm size issue, SME prefer to choose M&A and JV which is opposite to Korean big MNE whose pattern is different from overall result of Korea. In conclusion, Korean SME's strategic character is generally more similar to other country's prior study.



## **2. Implications and Policy Suggestions**

This academic research offers several implications for the public policy and development policy on the classical theoretic basis. In the process of practical FDI inducement, host government systems of FDI incentive and IPA activity focused on attracting GF investment, shows a higher degree of M&A in inward case of Korea. This means that M&A is propounded as a fundamental & recent FDI trend in Korea. This common phenomenon in both inward/outward FDI delivers the message to the host government. Prior to attracting big FDI, host countries including developing countries, should foster local firms in advance. Such domestic economic maturity serves to provide abundant FDI opportunity to the foreign investors as half of FDI comes from M&A and its weightage is likely to grow overtime.

In terms of host government experience, Korean incentive system has either significant effect and moderating power to entry mode while government's IPA activity does not affect the entry mode or moderating effect. Consequently, the two schemes seem to expose a remarkable gap in Korean FDI attraction policy. It is desirable that IPA's activity be recommended for modification to better conform to the incentive for unidirectional effectiveness.

In the field of development policy as the study of entry mode choice progressed, Korea was a developing country several decades ago which became a developed country, by undergoing considerable improvements of various determinants in each phase. Four motivation frameworks can explain relevantly developing economy's FDI with entry mode strategy. Though entry mode choice widely reflects various conditions of the economy, the same methodology of this study deserves to be applied for each developing country's FDI research.

## **B. LIMITATIONS & IMPLICATION**

### **1. Limitations of This Study**

This analysis tried to explore the theoretical phenomenon in the inward FDI inducement of Korea by using large historical field data. Even comparison of the different status before/after the AFC as one of the big momentum in the international economics was undertaken. However, this analysis did not include more current issues after AFC. In this context, by adding up more surveys of recent years, it is recommended to compare the FDI entry mode before/after the IFC (International Financial Crisis) which will provide more diversified strategic FDI information.

In this study, several strategic moderators were revealed by the systematic moderating test and only several trials are limited to prove the moderator effect. To find more new moderators, a wider multidimensional approach is required. In order to understand the specific behavioral differences between big MNE and SME, it is necessary to focus on each Korean SME's entry mode strategy and comparing it with that of big MNE.

In case of outward FDI, such four motivations were excluded from the survey and as a result the exact comparison was unavailable to prove between Inward/outward. Additionally, the two different surveys for inward/outward FDI were limited in the regards that they did not match for the exact comparison. For example, FDI experience and R&D intensity were shown without matching both sides of FDI. This suggests the need for further study on the entry mode study.

## **2. Suggestions and Future Directions**

Even though Korea is ranked among the leading world economies, the record of inward FDI inducement remains at a remarkably lower volume than its outward FDI. As previously mentioned, these kinds of entry mode studies have been popular only in some advanced countries. The expansion towards some neighboring countries in Asia or developing countries utilizing similar research methodology is highly recommended, mainly for any big FDI inducement countries.

Also, to define the basic picture of binary behavioral mode, LOGIT was used as a tool in this study. Besides the binary decision-making analysis model for dividing some focus groups, other supplementary tools (ANOVA or OLS regression, etc.) are highly useful to find out the most probable elements to affect those entry modes.

Furthermore, it is recommended not only to find out the determinants but also to diversify FDI issue link with other managerial strategic points for other future projects. The future projects can explore various FDI issues by analyzing the relevant strategic outcomes in management, performance, employment impact, and spillover effect, etc.

This study is designed to evaluate how FDI theory model fit into the behavioral strategy in the field of Korea's FDI. Overtime the strategic determinants change. Therefore, more practical variables are essentially required to explain the most recent strategy of MNE's activity as well as additional moderating variables.

## BIBLIOGRAPHY

Anderson, E., & Gatignon, H. (1986). Modes of foreign entry: A transaction cost analysis and propositions. *Journal of International Business Studies*, 17(3), 1–26.

Brouthers, K. D. (2002)., Entry mode choice of SMEs in central and eastern Europe  
*Entrepreneurship: Theory and Practice*, 27(1), 47–63.

Brouthers, K. D./Brouthers, L. E., Explaining the National Cultural Distance Paradox,  
*Journal of International Business Studies*, 32, 1, 2001, pp. 177–189.

Brouthers, K. D., & Hennart, J.-F. (2007). Boundaries of the firm: Insights from international entry mode research. *Journal of Management*, 33(3), 395–425.

Buckley, P./Casson, M., *The Future of Multinational Enterprise*, London: McMillan 1976.

Chang, E./Taylor, M. S., Control in Multinational Corporations (MNCs): The Case of Korean Manufacturing

Chang, S.-J. and Rosenzweig, P., “The Choice of entry mode in sequential foreign direct investment”, *Strategic Management Journal*, 22, 2001, pp.747-776. #10

Chen, H./Hu, M. Y., An Analysis of Determinants of Entry Mode and its Impact on Performance, *International Business Review*, 11, 2, 2002, pp. 193–210.

Choe S.K. and Jin C.D. , Entry Mode and Performance of Inward FDI in Korea : Acquisition vs. Greenfield Investment, *International Trade Journal*, 29, 6, 2004, pp47-69

Dunning, J. H. (1993)., *Multinational enterprises and the global economy*. Wokingham, Berkshire: Addison Wesley.

Dunning, J. H. (1980). Towards an eclectic theory of international production: some empirical tests. *Journal of International Business Studies*, 11 (1), 9–31.

Dunning, J. H. (1988). The eclectic paradigm of international production: A restatement and some possible extensions. *Journal of International Business Studies*, 19(1), 1–31.

Ekrem Tatoglu & Keith W. Glaister, Determinants of foreign direct investment in Turkey, *Thunderbird International Business Review*, Vol.40, 3, 1998, pp 279-314

Gatignon, H./Anderson, E., The Multinational Corporation's Degree of Control over Foreign Subsidiaries: An Empirical Test of a Transaction Cost Explanation, *Journal of Law Economics and Organization*, 4, 2, 1988, pp. 305–336.

Gomes-Casseres, B.(1989). "Ownership Structure of Foreign Subsidiaries: The Theory and Evidence," *Journal of Economic Behavior and Organization*, 11(1), 1-25.

Gray Sidney J. and Kim Youngok, The Impact of Entry Mode Choice on Foreign Affiliate Performance: The Case of Foreign MNEs in South Korea, *Management International Review* vol. 48, 2008/2, pp. 165

Guillen, M. F., Experience, Imitation, and the Sequence of Foreign Entry: Wholly Owned and Joint-Venture Manufacturing by South Korean Firms and Business Groups in China, 1987–1995, *Journal of International Business Studies*, 34, 2, 2003, pp. 185–198.

Kogut, B./Singh, H., The Effect of National Culture on the Choice of Entry Mode, *Journal of International Business Studies*, 19, 3, 1988, pp. 411–432.

Haggard S., W.Lim and E.Kim(eds), Economic Crisis and Corporate Restructuring in Korea, Cambridge , U.K. : *Cambridge University Press*, 2003

Harzing, A. W. K., Acquisitions versus Greenfield Investments: International Strategy and Management of Entry Modes, *Strategic Management Journal*, 23, 3, 2002, pp. 211–227.

Hennart, J.-F., The Transaction Costs Theory of Joint Ventures: An Empirical Study of Japanese Subsidiaries in the United States, *Management Science*, 37, 4, 1991, pp. 483–497.

Hill, C. W. L./Hwang, P./Kim, W. C., An Eclectic Theory of the Choice of International Entry Mode, *Strategic Management Journal*, 11, 2, 1990, pp. 117–128. mir vol. 48, 2008/2 187

Hill, C. W. L., & Kim, W. C. (1988). Searching for a dynamic theory of the multinational enterprise: A transaction cost model. *Strategic Management Journal*, 9, 93–104.

Horst, Raff, Michael Ryan and Frank Stahler, The choice of market entry mode: Greenfield investment, M&A and joint venture, *International Review of Economics & Finance*, 18,1, 2009, pp.3-10.

Kim, W. C./Hwang, P., Global Strategy and Multinationals' Entry Mode Choice, *Journal of International Business Studies*, 23, 1, 1992, pp. 29–54.

Kumar, V., & Subramaniam, V. (1997)., A contingency framework for the mode of entry decision. *Journal of World Business*, 32(1), 53–72.

Lu, J. W., & Beamish, P. W. (2001), The internationalization and performance of SMEs. *Strategic Management Journal*, 22(6–7), 565–586.

Melia', M. R., Pe' rez, A. B., & Dobo' n, S. R. (2010)., The influence of innovation orientation on the internationalization of SMEs in the service sector. *The Service Industries Journal*, 30(5), 777–791.

North, D. C. (1990)., Institutions, institutional change and economic performance. Cambridge: Cambridge University Press.

Pan, Y., Tse, D. K. & Au, K. Y.(1997), "How MNCs Choose Entry Mode and Form Alliances: The China Experience," *Journal of International Business Studies*, 28(4), 779-805.

Padmanabhan, P./Cho, K. R., Ownership Strategy for a Foreign Affiliate: An Empirical Investigation of Japanese Firms, *Management International Review*, 36, 1, 1996, pp. 45–65.

Peng, M. W./Wang, D., Innovation Capability and Foreign Direct Investment: Toward a Learning Option Perspective, *Management International Review*, 40, 1, 2000, pp. 79–93.

Porter, M. E. (1980). *Competitive strategy: Techniques for analyzing industries and competitors*. New York: The Free Press.

Ripolle' s, M., Blesa, A., & Monferrer, D. (2012)., Factors enhancing the choice of higher resource commitment entry modes in international new ventures. *International Business Review*, 21(4), 648–666.

Root, F., *Entry Strategies for International Markets*, Lexington: D. C. Heath 1987.  
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Rugman, A. M./Verbeke, A., Extending the Theory of the Multinational Enterprise: Internalization and Strategic Management Perspectives, *Journal of International Business Studies*, 34, 2, 2003, pp. 125–137.

Singh K. & G.S. Yip, “Strategic lessons from the Asian crisis” *Long Range Planning*, Vol.33, 2000, pp.706-729.

Thomas Müller, Analyzing Modes of Foreign Entry: Greenfield Investment versus Acquisition, *Review of International Economics*, Vol.15, 1, 2007, pp 93-111

Tatogulu, Ekrem & Glaister, Keith, (1998), Determinants of Foreign Direct Investment in Turkey, *Thunderbird International Business Review*, Vol. 40, 3, pp279-314.

Williamson, O. E. (1991). Comparative economic organization: The analysis of discrete structural alternatives. *Administrative Science Quarterly*, 36(2), 269–296.

Yiu, D., & Makino, S. (2002). The choice between joint venture and wholly owned subsidiary: An institutional perspective. *Organization Science*, 13(6), 667–683.

강태구, “한국제조기업의 대중국 투자지분에 따른 성과 결정 요인의 실증분석”, *국제경영연구*1, 2005.3, pp.83-106.

강태구. 김재주(2007), “한국 제조기업의 국제합작투자 소유권 결정요인,” *무역학회지*, 32(5), 119-139.

김병구. 김규배(2013), “A Study on the Chinese Market Entry Strategies of Korean Fashion Companies: The Case of E-Land,” *국제경영리뷰*, 17(4), 189-220.

김영래. 康靑松(2008), “한국제조기업의 대중국 직접투자방식 결정요인에 관한 연구,” *국제경영연구*, 19(2), 81-105.

성용모(2009), “중국기업의 해외직접투자선택 결정요인에 대한 탐색적 연구,” *경영경제연구*, 32(2), 67-90.