

## **The Shifting Location Decisions of Korean Outward FDI**

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September 1, 2008

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## **ABSTRACT**

Korea has clearly moved from being developing county to one of developed countries. In the context of investment development path developed by Dunning, we examine the important factors for the locational decisions of Korean outward foreign direct investment, considering host countries at very different stages of economic development. In line with this objective, this paper tests empirically the determinants of Korean outward investment using macro economic factors of host countries along with the two Korean business group case studies, namely, Samsung and LG. Thus, this paper seeks locational changing trends of Korean outward FDI as firm strategy considerations. We test our hypotheses using official Korean outward FDI data collected from 1994 to 2005. The behavior of Korean investment showed several distinctive features. The statistical analysis of investments by Korean firms revealed significant changes in the regional investment of FDI, and changed of its traditional determinants as well. From the empirical tests and the two case studies, we found out that the dynamic effects of economic development have influenced on the shifts of outward FDI characteristics.

**Key words: Korean outward FDI, theory of FDI, location decisions, MNE firm strategy**

## **INTRODUCTION**

Our argument starts the Korean outward FDI possesses unique characteristics that differentiate from developed countries on the basis of investment development path. Recently, changing patterns of outward foreign direct investment have raised important questions in emerging economies (Hejazi and

Paul, 2003). This paper examines the determinants of location decisions of Korean outward FDI by analyzing Korean outward FDI into both developed and developing countries over 12 years. Although previous studies identify stages process to firm internationalization which is linked to geographic distance (Johanson and Vahlnes, 1977) and the types of foreign direct investment (FDI) motivations, few studies have attempted to develop a theory of explaining the relational characteristics of the types of FDI motivations reflecting location decisions. Namely, many of the empirical studies have focused on the relation between motivations and location decisions of FDI without considering different economic level variations. Thus, using official data from domestic and international key organizations as of the end of 2005, this research is one of the first empirical test formally the forces driving Korean outward FDI.

This study is using the theory of FDI that integrates firm strategy as well as macro economic factors. As scholars identified, the traditional FDI theories have implied that the investing firm is from a developed country and the invested country is less developed country (Makino et al., 2002; Moon, 2004). Perhaps, like Erramilli et al.(1997) mentioned, this is because the focus of empirical studies was mainly in developed countries which are taking ownership advantages in all foreign host locations. On the other hand, many scholars also argue that this traditional argument is not satisfactory in explaining a variety of FDI in newly industrialized and emerging economy countries. Since they did not much considered any specific cases in which emerging country firms expanded their international activities from their home countries to both developed countries and developing countries (Makino et al., 2002). In fact, little empirical investigations have been tested on this issue.

Thus, our research focus is on the determinants of location decisions of outward FDI in emerging countries which are passing through evolutionary stages, respectively. Korea is a good empirical test case for this because Korea is a successful representative of several leading emerging countries even though it is now clearly on the way of moving forward to a developed country. In this context, we develop hypotheses linking the impact of Korean outward FDI to the relation between three motivations and location decisions. From the research, we expect that the theoretical generalization in emerging economy is also appropriate as prior studies have identified impacts on the outward FDI location decisions of a multinational enterprise.

For a long time, international business researchers (Makino et al., 2002; Moon, 2004) have concerned to find the phenomenon why and when developing countries invest in developed or developing countries. However, up to now, related many studies don't explain sufficiently various FDI motivations from less developed countries to more developed countries and other strategic investment

by firms from developed countries to developing countries. Accordingly, the primary purpose of this study is empirically to test on this issue providing empirical investigations through longitudinal Korean outward FDI data analysis and additional case studies of Samsung and LG, the dominant Korean business group affiliates.

In fact, Korea is too economically developed to be considered as a developing country, but it is not sufficient to be included among the traditional advanced countries. For example, Korean outward FDI was four times greater in the 1994-2005 periods than in 1993 (Korea Export-Import Bank, 2006). And also Korea's outward FDI in manufacturing sector accounted for about 50% of the total value of outward FDI. From this phenomenon, Korea can be recognized as a rapidly growing emerging country.

However, there is still no clear explanations about changes of location decision phenomenon of Korean outward FDI and also still no theoretical and empirical support whether Korean firms would prefer to invest in low income countries for low wage advantages or/and high income countries for market entry into large potential markets. Even if there are some studies on Korean outward FDI, they did not use longitudinal panel Korean outward FDI data at the macro-economic level. It is necessary to be examined from a macro-economic perspective for a more realistic analysis. Likewise, it uses a unique data set from Korea that in less than 15 years has evolved from a less developed country to become a fully developed. It claims that Korean firm's decision makers should understand how certain factors in different FDI host countries can influence their location decisions in obtaining different kinds of assets.

In this study, we tried to find these answers. We expect that this empirical test will show what specific country-based real motivations of foreign investment are. Moreover, our results will reveal that the diverse location factors by home country depends on the stage which each group of host countries has reached in the investment development path. In this context, our research questions are followings. 'Is there a statistically significant pattern in Korean outward FDI to the developed and developing countries, respectively?' 'Are the mixed motivations of Korean outward FDI in deciding foreign locations?'

This paper is organized as follows: the next section reviews the literature and develops the hypotheses for empirical analysis. And next the methods and data are presented. Details of the methodology used in our research are explained in this section. It describes measurement formula, research model, and variable specifications. Then, data and sample are explained. The empirical results from an analysis using data from official statistics of publically recognized organizations such as Export and Import Bank of Korea, World Bank, UN, ILO, IMF from 1994 to 2005. As firm level

approaches, we also examine Samsung and LG cases. Finally, the conclusions are presented.

## **THEORY AND HYPOTHESES**

Recently the increasing role of emerging economies implies potential opportunities for both home country's economies and host country's economies. However, scholars have less importantly considered outward FDI by emerging countries as one of the major sources of world economic development (UNCTAD 2006) despite with the importance of FDI outflow. According to UNCTAD (2006), recent outward FDI from developing countries explore investment opportunities abroad to build a competitive position. Nevertheless we do not clearly understand the affection of FDI in developing countries while we do better know how multinational companies are influenced by different economic contexts (Murtha and Lenway, 1994).

Moreover, the influence of the economic factors in FDI at the country level has not been examined (Ingham 1996). Just previous researches investigated the effect of structural positions of countries on their economic growth in order to explain the development of individual countries (Chase-Dunn and Grimes 1995). As mentioned above, our argument is the Korean outward FDI possesses unique characteristics that differentiate from developed countries. Korean outward FDI has tended to invest in developed countries for either/both strategic asset-seeking or/and market-seeking purposes, and developing countries for either/both efficiency-seeking or/and market-seeking purposes. In this paper, we claim that size of target market and labor costs are importantly impacted to invest abroad. And also we claim that technology intensity is a strong motivation to invest abroad. We highlight that strategic asset-seeking approach in Korean outward FDI is the most important consequences for both developed countries and developing countries.

In general, FDI explains the effects of economic opportunities generated by the market demand and low costs both a home country and a host country. Namely, FDI moves to countries with economic indicators that increase profits and decrease labor costs. Kumar (1998) found that the amount of the outflow of FDI from Asian newly industrialized economies to developed countries has been rapidly increased over the past decade. The emerging economy firms investing in developed countries tended to use outward FDI primarily to obtain intangible assets. On the other side, the emerging economy firms investing in developing countries tended to use outward FDI primarily to strengthen their competitive advantages.

According to Penrose (1959), firm specific resources in a home country motivate its going abroad to exploit existing organizational slack resource for growth. The monopolistic advantage view of

foreign direct investment and the eclectic theory emphasized the ownership specific advantages drawn from in a home country as the important driving force for foreign direct investment (Buckley and Casson 1998; Dunning 2000, 2002). Furthermore, Dunning's eclectic paradigm posits at large that FDI flows from more developed countries to less developed countries since investing firms from more developed countries have some ownership advantages that are not available to local firms in less developed countries. But, firms in developing countries invest to developed countries for internalization.

Location factors are usually linked to different motives. Investment development path will supplementary help us to understand this phenomenon. This approach explains how to decide the main motives and different location factors in foreign direct investment. According to this dynamic approach, all countries depend on their level of economic development (Dunning and Narula, 1994, 1996; Narula and Dunning, 2000)<sup>1</sup>. IDP approach adopts three motives to invest, namely, efficiency-seeking, market-seeking, strategic asset-seeking made by Dunning. The three motives also represent asset exploitation and asset exploration (Makino et al., 2002; Dunning and Narula, 1996). From the assumptions of this approach, the most relevant factors for locating FDI depend on the stage of development of different host countries.

<b>Insert Table 1 about here</b>
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Meanwhile, there are some significant differences among motivations between the developed countries and the developing countries. The main motives for firm's decision makers investing in the developing countries are efficiency-seeking and market-seeking while investing in the developed countries are strategic asset-seeking and market-seeking. In fact, the linkage between investment and the development level of countries is not the same from the investments development path (Dunning, 1986). When the host country develops, the type of the foreign investment gradually evolves to higher levels. IDP seeks to trace the link between the shifting trends of home country's efficiency-seeking and market-seeking investments and the economic development of different regions. Firms, however,

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<sup>1</sup> The economic development of different countries is examined by categorizing their evolution through five stages. The developed countries (DCs) are in two stages of the IDP (stages 4 and 5). The newly industrialized countries(NICs) which are catching up and converging with the DCs are stage 3. The less developed countries(LDCs) which are becoming NICs with various shapes are in the most backward stages of the IDP (stages 1 and 2). The summary of IDP is in Table 1.

might apply a different mix compared to that. This phenomenon is likely to be repeated when competitive pressures start building up even in the new location, triggering the search for another prospective region for efficiency-seeking and market-seeking investments.

### **The Relation between Motivations and Location Decisions of Korean Outward FDI**

Research on the investment path, whether to developed or developing countries, has a longitudinal element (Dunning, 1981, 1986; Dunning and Narula, 1996). Less developed countries attract mostly efficiency-seeking FDI in product markets (Deng, 2004). However, many firms in developing countries may have been able to invest abroad like other developing countries whether factor and market demand conditions were similar to them.

In case of Korean outward FDI, motives in location decisions for investing abroad are mixed. Korea economy has developed so fast through the step by step. Currently, Korea is situated between the stage 3 and 4 of IDP. At the beginning, Korea has not shown the exact same situation like the stage one by Dunning. Instead, Korea is just focusing on market-seeking due to the lack of capital and technological skills. As time passed, however, the motivations to invest overseas were expanded to other activities. Initial outward FDI to a certain location was mainly for the purpose of market access. For example, Samsung and LG business group affiliates reveal that the motivation of engaging in outward FDI was to focus on market access in the host country in the 1970s, the early stage of international expansion. Furthermore, technology intensity is a strong determinant of Korean outward FDI like developed countries.

As widely accepted, outward FDI in developing countries is driven by various factors (Li and Resnick 2003; Reiljan 2000). According to Li and Resnick(2003), “First, market related factors appear to be strong forces. Second, rising labor costs in the home economy is a particular concern. Third, competitive pressures on developing country firms are pushing them to expand overseas.” In addition, the rapid growth of many developing countries is causing them concerns for their economic expansion.

From our empirical test, we find that motives in location decisions of Korean outward FDI are similar like other emerging countries through evolutionary path, but with some distinctive features. However, the distinction might not always clear cut even in the same country research. For example, the motives in location decisions for Korean outward FDI might be operated by the government policy. Anyhow, Korean firms are more focused on investing abroad to labor-seeking or market-seeking until they obtain the competitive advantages. And then, they may be using their investment activities as a means to improve their global market position by acquiring new sources of competitive advantage.

Since strategic asset-seeking behavior in location decisions is not expected to appear at the stage 3 level of investment development path. Accordingly, contrary to previous recognitions on early Korean overseas manufacturing investment, the results of our study imply that differences between Korea and developing countries FDI are rather insignificant. It is then assumed in this research that the investment by Korean firms reflects the interest both developed and developing countries simultaneously.

### **Market seeking vs. Efficiency seeking FDI in Location decisions**

Traditionally, identified by ownership advantage in doing business abroad (Moon, 2004), the influencing motives of investment decisions are market-seeking and efficiency-seeking (Hymer, 1976; Buckley and Casson, 1976; Rugman, 1981; Hennart, 1982). Both market-seeking and efficiency-seeking FDI are conducted by relatively more developed countries which have higher labor costs. Because firms have a greater tendency to undertake FDI to the markets whose size is large enough to compensate for the costs of investments in those markets (Yu and Ito, 1988). In addition to their large market size, developing countries also offered lower wage and factor costs (Chakrabarti 2001; Makino et al. 2003). In previous literature, the indicators of market attractiveness are determined by market potential such as GDP, population. Similarly, Sethi et al.(2003) found that GNP is highly significant and positive, but population did not show significant meaning. On the contrary, we found that population as a proxy of market size is also very significant in this study.

Reiljan (2000) stated about market-seeking as follows. “First, market-seeking FDI provides complementary assets such as technology, management and organizational competence. Second, market-seeking FDI fosters backward supply linkages and clusters of specialized labor markets and agglomerative economies. Third, market-seeking FDI raises standards of product quality and domestic consumer expectations of indigenous competitors. Forth, market-seeking FDI stimulates local entrepreneurship and domestic rivalry”.

Therefore, market-seeking FDI would occur more likely in large countries than in small countries for standard goods, and more likely in developed countries than in developing countries for differentiated goods. From this point of view, we can draw the understandings that developing countries tend to invest in developed countries for market-seeking, small and large developing countries for efficiency-seeking purposes, and large developing countries for both market-seeking and efficiency-seeking purposes. The fact that the different external environments pose different levels of complexity for foreign investors (Lee and Beamish 1995) is particularly significant to globally



operating firms from developing countries.

Meanwhile, efficiency-seeking was also summarized by Reiljan (2000) as follows. “First, efficiency-seeking FDI improves international division of labor and cross border networking and entices comparative advantages of host countries. Second, efficiency-seeking FDI provides access to foreign markets and/or sources of supply. Third, efficiency-seeking FDI fosters backward supply linkages and clusters of specialized labor markets and agglomerative economies. Forth, efficiency-seeking FDI raises standards of product quality and domestic consumer expectations of indigenous competitors. Fifth, efficiency-seeking FDI aids structural adjustment”. We understand that a couple of features are overlapped with the market-seeking FDI.

Moreover, intense competitive pressures in the original host region would cause foreign investment countries to make efficiency-seeking investments into low wage countries to reduce costs. Namely, competitive intensity and the efficiency-seeking investment exploit economies of scale. It is likely to be repeated when competitive pressures start in the old location, and then trigger the search for another perspective region for efficiency-seeking and market-seeking investments.

Taken all together, assuming that Korean firms can gain access to low cost labor easier in developing countries than in developed countries, we expect that Korean firms are more likely to invest for efficiency-seeking purposes in developing countries, and less likely to invest in developed countries. Hence, we create the following two hypotheses to test in the study.

**Hypothesis 1a:** All other factors being equal, Korean manufacturing firms that invested in developed countries are more likely to act market-seeking investment than efficiency-seeking investment

**Hypothesis 1b:** All other factors being equal, Korean manufacturing firms that invested in developing countries are more likely to act efficiency-seeking investment than market-seeking investment

### **Market seeking vs. Strategic asset seeking FDI in Location decisions**

Dunning (1998) argues that “the most significant change in the motives for FDI over the last two decades had been the rapid growth of strategic asset-seeking FDI”. This implies that it fits less toward exploiting an existing ownership specific advantage of an investing firm, and more toward exploring new advantage by the acquisition of new intangible assets or by a partnering arrangement with a foreign firm.

Although a firm may not have any significant advantage relative to its competitors, the firm may

have to be active in FDI to attain a strategic asset. In reality, firms from emerging countries investing in developed countries use outward FDI to strengthen their non-price competitiveness (Kumar 1998). Moreover, foreign firms invest for strategic asset-seeking in developing countries when they really want to attain a specific asset such as technology although the investments are not immediately profitable. These can explain the current situation of Korea. From the early 90s, many Korean firms go abroad to learn highly sophisticated technologies while many foreign multinational firms come to Korea to obtain the Korean unique IT technology.

As Reiljan (2000) mentioned, followings are the characteristics of strategic asset-seeking FDI. “First strategic asset-seeking is oriented to acquiring resources and capabilities that an investing firm will sustain or advance its core competence in regional or global markets. Second, strategic asset-seeking FDI provides new finance capital and complementary assets. Third, strategic asset-seeking provides access to foreign markets and provides local entrepreneurship and domestic rivalry. Fourth, strategic asset-seeking FDI improves international division of labor and cross border networking and entices comparative advantages of host countries.” One particular type of intangible asset is knowledge (Buckley and Casson 1976; Hennart 1982, 1991; Rugman 1981; Teece 1986).

According to van Hoesel (1999)’s in-depth case studies of Korean consumer electronics, the study generalizes, newly industrialized economy firms including Korean firms are more likely to invest in countries where market potential is large. By using data of Korean overseas manufacturing investment, this study contributes to a better understanding of the changing aspects of Korean outward FDI.

Taken all together, assuming that Korean firms can gain access to potential market easier in developing countries than in developed countries, we expect that Korean firms are more likely to invest for market-seeking purposes in developing countries, and less likely to invest in developed countries. Hence, we create the following two hypotheses to test in the study.

**Hypothesis 2a:** All other factors being equal, Korean manufacturing firms that invested in developed countries are more likely to act strategic asset-seeking investment than market-seeking investment

**Hypothesis 2b:** All other factors being equal, Korean manufacturing firms that invested in developing countries are more likely to act market-seeking investment than strategic asset-seeking investment

### **Efficiency seeking vs. Strategic asset seeking FDI in Location decisions**

Firms from emerging countries are most likely to invest developed countries for sophisticated

technology, thereby compensating for their competitive disadvantages (Deng, 2004). In recent years, Korean outward FDI like many other East Asian countries (Dunning, 2006) has been to access important proprietary technology, intangible strategic assets. In addition, Dunning (2006) argues that MNEs from emerging countries might be prompted to invest in more advanced countries to market access rather than to exploit their ownership advantages. In this context, it is expected that Korean outward FDI would go directly abroad for strategic asset-seeking FDI towards economies with significant levels of human and intellectual capital in the developed countries, to strengthen their competitiveness (Dunning et al., 1998; Dunning, 2006).

Emerging country's firms tend to invest in high income countries to produce differentiated goods to high income customers (Makino et al., 2002). To gain higher returns than indigenous firms in the host country, they need to possess superior technological capabilities to produce more unique differentiated goods. For the empirical test, we assume that efficiency-seeking FDI by Korean firms would occur more likely in developing countries when they have more superior labor production capabilities and in developed countries when they have superior technological capabilities over the firms in the host countries. In other words, Korean firms tend to focus on the utilization of their capabilities.

Taken all together, we can hold the position that the current Korean outward FDI is both asset exploitation and asset exploration. Hence, we create the following two hypotheses to test in the study.

**Hypothesis 3a:** All other factors being equal, Korean manufacturing firms that invested in developed countries are more likely to act strategic asset-seeking investment than efficiency-seeking investment

**Hypothesis 3b:** All other factors being equal, Korean manufacturing firms that invested in developing countries are more likely to act efficiency-seeking investment than strategic asset-seeking investment

## **RESEARCH METHODOLOGY**

We took both empirical test and brief case studies. As case studies, we reviewed the investment behavior of the two most prominent business groups of Korea. The case studies support our empirical test results, too. At the empirical test, this study was analyzed by using macro-economic factors because the determinants under investigation affect all MNEs uniformly (Freeman, 1978). The approach is the space and time dimensions of the pooled data and estimates random effects generalized least square (GLS) regression generally used in panel analysis. After excluding host countries with missing values, we used 444 observations from 37 countries for all in the models. Following is the

measurement formula. The analysis is used to derive a generic descriptive model that explains the motivations in location decisions of Korean outward FDI. Although not reported formally here, OLS analysis was also carried out showing statistically significant among the relational characteristics of motives in location decisions.

$$Y_{it} = \beta_0 + \beta_1 X(GDP)_{it} + \beta_2 X(GDPpercapita)_{it} + \beta_3 X(population)_{it} + \beta_4 X(patents)_{it} + \beta_5 X(wages)_{it} + \beta_6 Control(exchangerate)_{it} + \beta_7 Control(inflationrate)_{it} + \beta_8 Dummy(developed country)_{it} + \mu_{it}$$

### Research Model

The study shows empirically two different aspects of proposed hypotheses, using data on Korean outflow FDI of 18 developed countries and 19 developing countries from 1994 to 2005. To avoid industry bias, we only use the manufacturing industry outflow FDI data. The empirical panel data of 12-year time series and cross sectional tests utilized a number of GLS regression models. The dependent variable is the Korean outward FDI in the country  $i$  at the end of  $t$ . Three categories of variables are entered: market-seeking, efficiency-seeking, strategic asset-seeking. Here, we also test developed and developing countries by comparing results for the subsamples of 18 the developed and 19 the developing countries, respectively.

**Model 1:** it had the annual Korea outward FDI flows in respective countries, as the dependent variable. 444 observations were included over the entire 12-year period. Model 1 ran random effects GLS regression on the factors of GDP, GDP per capita, population, patents, wages, and dummy developed countries. Exchange rate and inflation rate are also included as control variables. The coefficients in this model depict the motives in location decisions of Korea FDI outflows during this period. This model depicts the cumulative effect of the volume of FDI outflows.

**Model 2:** it is the same structure with the model 1, but only 216 observations of developed countries were included over entire 12-year period. Model 2-1(H1a) ran random effects GLS regression on the factors of GDP, GDP per capita, population, and wages while model 2-2(H2a) on the factors of GDP, GDP per capita, population, and patents. Model 2-3(H3a) is to find the relationship between strategic asset-seeking and efficiency-seeking investment in developed countries.

**Model 3:** it is the same structure with the model 1, but only 228 observations of developing countries were included over entire 12-year period. Model 3-1(H1b) ran random effects GLS regression on the factors of GDP, GDP per capita, population, and wages while model 3-2(H2b) on the factors of GDP,

GDP per capita, population, and patents. Model 3-3(H3b) is to find the relationship between strategic asset-seeking and efficiency-seeking investment in developing countries.

<b>Insert Table 2 about here</b>
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### **Variable Specifications**

Our study assumes that GDP, GDP per capita, population, and wages, patents are key macro-economic determinants of FDI as economic actors independently from one another.

**FDI outflows:** this dependant variable represented annual Korean outward FDI flows (US\$ thousand). Namely, annual Korean FDI flows into respective countries over the entire 12-year period. Data is from 1994 to 2005.

**GDP:** each country's year-end Gross Domestic Production in US\$ billion. Market potential is commonly measured by the size and growth of GDP and sometimes by size and growth of population (Crenshaw 1991; Dunning 1994).

**GDP per capita:** each country's year-end Gross Domestic Production per capita in US\$.

**Population:** each country's year-end population.

**Patents:** each country's yearly applied patents number. We might argue whether country patent data as a proxy of strategic asset seeking is appropriate. But, patent data is the only available data in the country level. The patent system makes it theoretically possible to transfer knowledge on the market even though knowledge is difficult to codify into patents (Park, 1999). Proprietary ownership advantage endowments can be also proxy for the number of patenting in the host country.

**Wages:** each country's average wages based on hourly compensation costs in US\$ for production workers in manufacturing.

**Exchange rate:** each country's yearly average exchange rate in US\$.

**Inflation rate:** each county's yearly average inflation rate.

**Dummy developed country:** a dichotomous dummy variable, taking the value of one when the country is from developed country, and zero when it is from developing country

**Time:** time periods from 1994 to 2005, with t=1 denoting the year 1994.

### **Data and Sample**

The sample comprised 18 developed countries and 19 developing countries that had invested from Korean manufacturing firms during 1994-2005. The main data source were the annual statistics of the

export-import bank of Korea (2007), the annual World Development Indicator 2007 and UNCTAD world investment report 2006. In addition, wages data collected from BLS, U.S.A. and the labor statistics of ILO, 2007. Used other information collected by UN, OECD, IMF as complementary data.

**RESULTS AND ANALYSIS**

Longitudinal panel data were used to test Hypotheses. The 444 available observations of 37 developed and developing countries during 1994-2005 was used to gain evidence Korea outward FDI motives in location decisions including market-seeking, efficiency-seeking, and strategic asset-seeking.

Table 3 presents the descriptive statistics and Table 4 shows correlations matrix. The data matrix did not present any particular problems for the estimation of the coefficients. The correlation analysis showed no significant correlation among explanatory variables.

**Insert Table 3 about here**

**Insert Table 4 about here**

The correlation results of other variables showed some significant level. It presents that Korean FDI outflow is significant in GDP, population, patents, wages variables but are not significant in the other variables. Some showed signs of potential multicollinearity. Although developed countries typically have high wage levels, that coefficient is unexpectedly not significant, thus indicating possible multicollinearity. However, this did not cause any serious problems.

**Insert Table 5 about here**

Table 5 present the variance inflation factor (VIF) test result, which indicate the there are no general problems with the data.

**Insert Table 6 about here**

Table 6 provides the results of the 3 models that regressed on dependent variables including Korean outward FDI with various independent variables and also shows the results of the random effects GLS regression. Looking at the main variables in model 1, 2 and 3, the results showed similar results as

conventionally recognized (Buckley et al. 2007) according to the theory of FDI. We see that market size is the most important determinant of Korean outward FDI. In GLS regressions, however, one of the three alternative measures of host market size (GDP per capita) did not attained significance. The host market size variables (GDP and population) retained to capture the market-seeking motivation. GDP variable has more powerful explanation than population variable in developed countries. In particular, we see that population and patents are significant factors of Korean outward FDI. Korean investors preferentially seek out larger market and strategic assets. Korean manufacturing firms entered in high income countries for market-seeking and strategic asset-seeking while entered in low income countries for either market-seeking or efficiency-seeking FDI.

However, the study also showed the different motivations between developed countries and developing countries. Surprisingly, Korean outward FDI is strategic asset-seeking rather than efficiency-seeking in developing countries. We are not sure this is the phenomenon of stage 3 and 4 of IDP. It is clear that Korean outward FDI in developing countries is not only motivated by host market size but also motivated by host country's strategic asset. Looking at control variables, inflation showed positively significant in developed countries. The inflation was a characteristic of those buoyant markets that attracted Korean firms.

In detail, model 1 has Korean FDI outflows over the entire 12-year period as the dependent variable and did control for exchange rate and inflation rate. It examined the cumulative effect of those flows. The coefficients indicate significantly large FDI outflows going to the developed countries with high population and high patents. In Sethi et al.'s research(2003), FDI intended to invest the developed countries with high GDPs and low populations for market-seeking. However, our finding was Korean firms entered to countries with high population and high patents which is not the same as previous research. Population variable is better than GDP, GDP per capita as a market-seeking proxy. Thus, this finding needs further specific tests to be one of contributions in the research.

Model 2 for only developed countries has the same variables as in model 1 with including two control variables. It shows that Korean outward FDI is associated positively with absolute host market size. The empirical results obtained from model 2-1(H1a), model 2-2(H2a), and model 2-3(H3a). These findings support H1a and H3a. By contrast, H2a was not supported. GDP variable is significant but the sign of the result shows in reverse. Inflation as a control variable showed strongly significant. Therefore the results show that apart from exchange rate, GDP and patents are significant (0.01 and 0.1 level, respectively) and positive. This indicates that Korea FDI flows into developed countries with high GDP not high population. This finding is contrary to model 1 results that found a negative

relationship.

There was not theoretical reasoning to suggest that Korean manufacturing firms would prefer to invest in low GDPs countries for any reasons. In comparison with model 1 and model 2 results, we found that the motivations of Korean outward FDI are different from the economic levels of host countries.

Model 3 for only developing countries presents more complicated results. The empirical results obtained from model 3-1(H1b), model 3-2(H2b), and model 3-3(H3b). H3b was not supported. But it is found to be significant reversely. We argue that this reversed result is a new finding in the study. The empirical results show that market-seeking, efficiency-seeking, and strategic asset-seeking are significant (0.01 level, respectively) and positive. However, model 3-1(H1b) and model 3-2(H2b) have not explanation power because the models just can show the significance not showing the relational characteristics. This shows that we cannot give an orderly rank among three motivations in developing countries. It is difficult to compare among them in the stage 3 of investment development path. Therefore, we hold the position that Korean outward FDI favors all high market size, low wages, and technology advantages simultaneously.

In previous researches, many advanced countries would prefer to invest in developing countries to gain low wage advantages or market entry into large potential markets. Our results are mostly agreeable to previously recognized research results. However, some can have different explanations in the results. Unlike the behavior of developed countries, developing countries would prefer to invest in developing countries to gain intangible strategic asset, too. This finding can be one of our contributions in the research. Therefore, our findings imply that Korean outward FDI is likely to invest in developing countries which is situated in potential market attractiveness at low wage levels and also owned strategic assets.

Additionally, although it is not reported formally here, we examined the interaction effects. Interaction is a product of dummy developed country and wage variable. It is intended to test whether there was any statistically significant wage differential between the developed countries and the developing countries during 12-year period. For the test, it is used Korean FDI outflow as a dependent variable and included wages, wage differential and dummy developed countries as independent variables. Wages and dummy coefficients are negative and statistically significant. Due to the high possible multicollinearity, however, interaction variable does not give any meaningful explanation.

## **Two Case Studies about Location Decisions: Samsung and LG Business Groups**



Korean firms have rapidly developed into strong global players from domestic players with the lack of competitive advantages. To enhance their competitiveness, many Korean firms go abroad to expand their businesses. It is recognized that market size is an important determinant of investment patterns.

Following two case studies aim to examine the validity of traditional theories of FDI in explaining investment behavior of Korean firms at the stage level 3 or 4 of investment development path. We selected Samsung and LG business group, the two biggest business groups in Korea, for examining their investment behavior. As of 2006, Samsung group has total 26 affiliates including electronics, finance, machine, chemicals, etc. and LG group has total 21 affiliates including electronics, chemicals, ICT and services. There are a total of 577 outward FDI reported to the Ministry of Finance and Economy until December 31, 2004 by Samsung and LG business groups.

In this study, it involves only the actively engaged affiliates in overseas activities among many affiliates of Samsung and LG business groups. Namely, Samsung Corporation, Samsung Electronics, and Samsung Electro-mechanics for Samsung and LG international, LG Electronics, and LG Chem for LG. Table 7 summarized the location of outward FDI of Samsung and LG affiliates in periodical order. It is clear that they mainly invest in developed countries during the early stage. They, however, gradually invest both the developed and developing countries. The interesting trends are Samsung and LG show exactly the same pattern of location choice over time. Initially, Samsung and LG entered a certain location for market access. As time passed, the motivation to invest overseas was expanded to include other activities.

In case of Samsung, the motivation to engage in outward FDI for different locations was mainly for market access. But the exceptions are Brazil and China. It is a reflection of market size, low-cost production (Dunning, 2003), and low labor cost. Briefly, it is witnessed that the first investment behavior of Samsung business group's affiliates are similar because of the network and the same business category, but the subsequent investment behavior is not similar because of affiliate owned specific advantages.

Meanwhile, the motivation of outward FDI of LG is different from the Samsung's motivation. Their initial outward FDI and the subsequent outward FDI do not show the consistent trends even though they are focusing on the market access at first. This phenomenon can be interpreted as an effort of LG business group to internalize certain transactions by active involvement from foreign expansion.

In general, the location for outward FDI has changed over time. The firms concentrated their outward FDI in developed countries at the initial stage, but later moved to the developing countries. But, this did not occur in mutually exclusive manner among affiliates of Samsung and LG, respectively.

According to traditional FDI theories, firms are predicted to move into less developed countries not into developed countries. Korean outward FDI is not mutually exclusive. Diversified motivations resulting in more foreign investments are more acceptable in explaining firms' globalization strategies. This discrepancy can be understood in the concept of exploitation and exploration (March, 1991).

As a result of the two case studies, the investment behavior of Korean firms is completely passing through the investment development path from the early stage to final stage. But the behavior of Korean firms does not comply with the traditional theories of FDI. Thus, we argue that this is not only limited to Korean firms but also a common feature shared by firms originating from newly industrialized countries or emerging countries to a certain extent.

## **CONCLUSION**

With the ongoing globalization, many firms are now actively promoting outward FDI to obtain their competitiveness. Accordingly, outward FDI is now considered by many firms as an important means of operating their business. Thus, it is necessary to understand the extent to which the investment location decisions of Korean firms are explicable by the conventional FDI theories. This paper is attempted to find the determinants of Korean outward FDI throughout the test of three motives in location decisions. In addition, it is to test the extent to which the mainstream FDI theory is also applicable to emerging country contexts. We found that Korean outward FDI has both conventional and idiosyncratic dimensions. In terms of our main variables, we found a conventional result for market size. The host market size has a positive influence on Korean outward FDI. This indicates that market-seeking was a key motivation for Korean outward FDI in the period. And also Korean outward FDI was driven by the motive to acquire strategic assets. The strategic asset-seeking FDI was found as the most important motivation historically in Korea whether to invest in developed or the developing countries. These results support a conclusion that Korean outward FDI has invested abroad not only to exploit their ownership advantages but also to obtain competitive advantages they did not previously possess.

In our research, we expected that low wage advantages for the developing countries are only focused in order to invest for the economic development. Since the high wage differential between developed and developing countries has been the significant factors in 1980s. However, the potential market with low wage advantages and the obtaining of strategic assets were both most significant factors during 1994-2005. Therefore, this research contributes not only to the empirical literature on understanding of location decisions of Korean outward FDI, but also to build consensus of theoretical

issue on FDI in emerging countries.

In the test, market size and patents have influenced as important factors for the period and wage has only influenced in developing countries. In this view, there were two arguments on the results of empirical analysis. First, unlike previous researches, patents variable for strategic asset-seeking was recognized very importantly. Second, GDP and population variables for market-seeking were not consistent. In detail, these variables can be relevantly divided into matrix type such as high GDP and low GDP, high population and low population.

In conclusion, this paper offers some theoretical contributions as well as managerial implications. We attempted to find the uniqueness from Korean outward FDI by examining both the developed and the developing countries. The conventional theory of FDI could apply for the same in emerging countries. But it needs to modify or upgrade for the better fitness in emerging countries. After consideration of investment development path, we conclude that the Korean outward FDI to the developed countries explores to obtain assets they don't have while to the developing countries exploits to expand the market using their ownership disadvantage. This distinction is very important because implications are different in terms of FDI motives in location decisions according to the economic level of countries. In particular, the Korean outward FDI to the developing countries is a relatively new phenomenon and from this some important implications can be derived. With high economic growth, Korean firms are more focusing on strategic asset-seeking and proprietary knowledge by concentrating on the developed countries.

Finally, this study has some limitations that should be overcome in future studies. First, concerning the level of analysis, outward FDI may be examined at the firm level. However, many firms often invest in a particular country with the same reason, notwithstanding unique characteristics in individual investment decisions. Knickerbocker(1973) found out that the flow among competitors to enter foreign markets triggers bandwagon effect. Firm specific advantages utilize these advantage to operate abroad to seek markets or low cost labor cost.

Second, we did not consider any policy and culture issues in our study since we wanted to see the economic effects purely. However, Korean government policy may have led to a distinctive pattern of Korean outward FDI. Third, we may consider both inward and outward FDI to better understandings. In the future research, we can consider a different approach based on investment development path between home and host country. But, in this research, we mainly concentrated on the outward FDI due to the growing importance of recent Korean outward FDI. Fourth, we should focus more on the firm specific approach throughout case studies. However, we could not do in-depth studies due to the data

availability. As mentioned before, we just followed Knickerbocker(1973)'s arguments on bandwagon effects. He showed that firms follow their rivals into new markets as a strategic response to oligopolistic rivalry. We think that firm level in-depth cases studies are needed for developing this research.

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**Table 1 Main Features of Investment Development Path (IDP)**

5 stages	Features
Stage 1: developing countries	<ul style="list-style-type: none"> <li>- little inward and no outward FDI</li> <li>- limited location advantage, natural resource endowments</li> <li>- focused on natural resource seeking and market seeking</li> </ul>
Stage 2: developing countries	<ul style="list-style-type: none"> <li>- growing inward and little outward FDI</li> <li>- owned location advantage, natural resource endowments</li> </ul>

	- primarily natural resource seeking and market seeking
Stage 3: Newly industrialized countries	- rising inward and outward FDI - asset advantages are developed - market seeking and lesser extent strategic seeking and natural resource seeking
Stage 4: developed countries	- high inward and higher outward FDI - strong competitive location advantages - primarily strategic asset seeking and lesser market seeking
Stage 5: developed countries	-fluctuating between inward and outward FDI -strong competitive location advantages -primarily strategic asset seeking and lesser market seeking

*Source: Dunning and Narula (2000)*

**Table 2 the Proxy of Korean Outward FDI**

Hypotheses and number	Proxy	Theoretical justification	Main or control variable	Data source
Outward FDI	Annual outflow of Korean FDI			Korea Import-Export Bank, UNCTAD
Market seeking FDI	LGNI: Host country GNI	Market seeking	Main	World Bank Development Indicator
	LPOP: Host country	Market seeking	Main	United Nations



	population			Statistics Social Indicator
Efficiency seeking FDI	LWAGES: Host country wages	Efficiency seeking	Main	U.S. Department of Labor, ILO
Strategic asset seeking FDI	LPATENT: Total annual patent application in host country	Strategic asset seeking	Main	World Intellectual Property Organization
Exchange rate	LERATE: Host country official annual average exchange rate against RMB(fixed to dollar)	Domestic currency price of foreign assets	Control	World Banks Development Indicator
Host country inflation rate	LINF: Host country annual inflation rate	Macroeconomic conditions	Control	IMF: World Economic Outlook Database

*Note:* all monetary values are in constant (2000) US\$ prices

\* Developed country list: Australia, Belgium, Canada, Finland, France, Germany, Ireland, Italy, Japan, Luxembourg, Netherlands, New Zealand, Singapore, Spain, Sweden, Switzerland, United Kingdom, United States (18 countries)

\*\* Developing country list: Brazil, Chile, China, Czech Rep., El Salvador, Guatemala, Hong Kong, Hungary, India, Kazakhstan, Mexico, Philippines, Poland, Portugal, Romania, South Africa, Sri Lanka, Taiwan, Thailand (19 countries)

**Table 3 Descriptive statistics**

variables	N	Mean	Std. Dev.	Minimum	Maximum
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1. FDI outflow (US\$ thousand)	444	55202.89	213340.10	0	2174084
2. GDP (US\$ million)	444	775.26	1708.02	8.09	12433.93
3. GDP per capita (US\$)	444	16423.43	14322.20	286.18	80080.28
4. lnPopulation	444	17.02	1.56	12.91	20.99
5. Patents	444	28938.85	79641.56	0	440248
6. Wages (US\$ hourly)	444	10.64	9.32	0.14	33
7. Exchange rate	444	57.69	194.85	0.16	1736.21
8. Inflation	444	13.91	119.24	-3.9	176.3
9. Dummy Developed	444	0.48	0.50	0	1

**Table 4** Correlation Matrix of Variables

variables	1	2	3	4	5	6	7	8	9
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1. FDI outflow (US\$ thousand)	1.00							
2. GDP (US\$ million)	0.35**	1.00						
3. GDP per capita(US\$)	-0.60	0.34**	1.00					
4. lnPopulation	0.42**	0.45**	-0.36**	1.00				
5. patents	0.28**	0.82**	0.30**	0.38**	1.00			
6. Wages (US\$ hourly)	-0.07	0.35**	0.90**	-0.21**	0.26**	1.00		
7. Exchange rate	-0.06	-0.01	-0.08*	0.03	-0.13	-0.07	1.00	
8. Inflation	-0.02	-0.11*	-0.30**	0.05	-0.11*	-0.30**	-0.02	1.00
9. DummyDeveloped	-0.06	0.33**	0.82**	-0.22**	0.24**	0.89**	-0.04*	-0.09** 1.00

\*\* Correlation significant at 0.01 (two-tailed)

\* Correlation significant at 0.05 level (two-tailed)

**Table 5** Variance inflation factor test

variables	VIF	1/VIF
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Wages	9.86	0.101456
GDP per capita	7.98	0.125385
Dummy developed	5.15	0.194155
GDP	4.01	0.249173
Patents	3.27	0.305443
Population	2.27	0.441029
Exchange rate	1.11	0.899913
Inflation	1.01	0.987784

**Table 6-1 GLS Regression Results of Models 1 and 2 (developed countries)**

Independent variables	Model 1 FDI outflow (Random Effects)	Model 2-1 FDI outflow (H1a)	Model 2-2 FDI outflow (H2a)	Model 2-3 FDI outflow (H3a)
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GDP (US\$ million)	-5.89 (-0.33)	44.35 (4.87)***	56.21 (5.17) ***	
GDP per capita	0.66 (0.28)	-1.19 (-0.59)	-1.12 (-0.89)	
lnPopulation	0.00 (6.04) ***	-12745.34 (-0.86)	-13430.61 (-1.10)	
Patents	0.99 (2.75) ***		-0.28 (-1.42)	0.44 (2.35) **
Wages (US\$ hourly)	-3490.35 (-0.79)	24.14 (0.01)		-1242.86 (-0.51)
Exchange rate	-11.27 (-0.25)	-43.47 (-1.06)	-41.60 (-1.03)	-34.84 (-0.80)
Inflation	-5.48 (-0.08)	33405.12 (3.60)***	28741.42 (2.99) ***	35210.73 (3.47) ***
Dummy Developed	37307.91 (0.65)			
R-squared	0.36	0.37	0.38	0.21
N	444	216	216	216

- z-values are given in parentheses. The superscripts \*\*\*, \*\*, and \* indicate that the coefficient is significantly different from zero at 1%, 5%, and 10% level, respectively.

**Table 6-2 GLS Regression Results of Models 3 (developing countries)**

Independent variables	Model 3-1 FDI outflow (H1b)	Model 3-1 FDI outflow (H2b)	Model 3-3 FDI outflow (H3b)
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GDP (US\$ million)	919.87 (17.90) ***	313.17 (3.90)***	
GDP per capita	5.63 (1.00)	-8.60 (-2.36)	
lnPopulation	-88725.3 (-4.47) ***	-33193.08 (-1.52)	
Patents		7.42 (8.69) ***	10.27 (21.34) ***
Wages (US\$ hourly)	-55548.46 (-3.90) ***		-7596.66 (-0.89)
Exchange rate	-3.89 (-0.03)	-21.70 (-0.16)	-38.84 (-0.28)
Inflation	73.01 (1.47) *	28.74 (0.69)	33.71 (0.79)
Dummy Developed			
R-squared	0.71	0.68	0.59
N	228	228	228

- z-values are given in parentheses. The superscripts \*\*\*, \*\*, and \* indicate that the coefficient is significantly different from zero at 1%, 5%, and 10% level, respectively.