

**An Empirical Study on the Performance Evaluation of Korean  
Enterprises' Risk Management in China  
- Focusing on the Moderating Effect -**

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**ABSTRACT**

The recent gradual increase in the withdrawal of the small and medium manufacturing enterprises' foreign direct investments (FDIs) to China mandates risk management. While the enterprises in the Manufacturing efficiency-oriented that have entered for the purpose of cost reduction usually suffer from the risk of withdrawal, this study conducted a survey (279 copies of questionnaires) by dividing the Korean enterprises' FDIs to China into domestic market-oriented and Manufacturing efficiency-oriented in order to measure the management effect of business risk in the Chinese market of which the business environment is rapidly changing and verified the impacts of the determinants of the direct investment risk on Risk Management and performance. This study aims to propose measures for coping with risks for Korean small and medium enterprises that have entered, or would enter china since they differentiate controllable risk factors from uncontrollable risk factors after risk management.

Until now, studies of small and medium enterprises' FDIs to China have been concentrated in the analysis of risk determinants, analysis of withdrawal factors and analysis of individual risk management (In particular, marketing, labor and policy risk, etc.). Therefore, this study set up enterprise -wide risk factors the companies advanced into China face, according to the method of the classification by ERM (strategic, financial, Regulations/hazard) and checked if they could improve

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performance by risk corresponding measures, synthetically. In particular, this study divided companies into domestic market-oriented enterprises and Manufacturing efficiency-oriented enterprises, emphasized the academic value of measuring risk management impact, and it is expected that this study would be a useful material for the introduction of the method for the enterprise Risk Management by enterprises' FDIs to China in the future.

**Key words:** Foreign Direct Investment, Risk factors, Risk Management, Performance, Domestic market-oriented, Manufacturing efficiency-oriented

## **I. Introduction**

Should risk management differ depending upon goal or type of foreign direct investment (FDI hereafter) such as resource-seeking, market-seeking or efficiency-seeking objectives ? Are actual risk management different, as to the goal or type of FDI? This empirical research aims to answer the second question with samples of Korean investments in China, as the first question is quite obviously followed by the answer 'Yes' in theory.

The goals or types of FDI are manyfold (Dunning, 1999; UNCTAD 1998) and corresponding risk need to be managed in a reasonable way. For example, risk management should focus on protecting its most critical goal or core value. Or if the goals of FDI are endogenously determined by its business structure or industry belonging, their risk type and risk management style may be fixed in advance. For instance, capital intensive business may not enter into a country with low cost labor, nor labor management can be a major risk management concern. Alternatively, labor intensive business should pursue a low labor cost country and operation risk management option.

Rationality or effectiveness of FDI risk management ought to be checked in an identical country, if possible, in order to minimize any bias from unobserved difference across countries. In this sense, China is a perfect country of Korean FDI, as it has been shifted from low cost production site to high income market over years due to ongoing economic growth. For some Korean companies, China is no more production venue than distribution region, while others still see the country from the same perspective.

Specifically, after 2003, when Chinese government newly adopted a strategy of qualitative growth shifting from previous quantitative growth, several affirmative policies for foreign companies have been cancelled to introduce the new Labor Act to lead to increase in labor costs in China (Lee Tong-ji, 2015). With this, as investment climate changed in China, Korean enterprises came to

experience economic difficulties, resulting in Chinese market divestiture, relocation of production factories to Southeast Asia, including Vietnam or even U-turn back to Korea, or they began to consider China as a new market to buy Korean products.

In spite of a diversity in corporate risks, consensus is being made to classify them into four typical risk quadrants; strategic risk, financial risk, operation risk and hazard risk. Strategic risk very similar to marketing risk or larger than that, as it encompasses risk that corporate strategy may not match outside environment, while operation risk indicates mismatching of actual internal operation with its standard norm or rule. Financial risk means fluctuation of interest rate, foreign exchange rate, market price of assets, liability, income or payment, whereas hazard risk includes all the other pure or uncontrollable risk.

This research aims to address the empirical question whether Korean FDI in China manage their risk in a different way and whether their risk management is effective or not. As this research looks at only Korean enterprises in China, however, without loss of generality, we classify the corporate risks into just three category to put risk management activity into operation activity to show that market-seeking FDI and efficiency-seeking FDI are focusing clearly different risks with different effectiveness.

In this research, we divide Korean smaller manufacturing enterprises in China into 1) domestic market-oriented type and 2) production efficiency-oriented type according to their investment motive, assess their risk factors using a survey, look at how they carry out risk management and check their impact on performance. This study broadly consists of five parts as follows: Section 1 Introduction describes the background and purpose of the study; Section 2 summarizes and discusses the preceding studies of risk factors of direct investment, the aspects of management, performance, and divestiture, decides risk factors and seeks contents to introduce to a plan for risk management. Section 3 sets up research models and research hypotheses; Section 4 conducts an empirical study of direct investment risk management; and Section 5 summarizes the conclusions of the study.

## **II. Theoretical Background**

### **1. FDI**

There are several theoretical explanations on FDI, which is a capital movement mainly aiming at control authority over the foreign enterprise management and profit (Kojima, 1978; Ragazzi, 1981; Root, 1984). While Dunning's (1980, 1988) OLI (ownership, location, internalization) may be the

most popular theory, Rugman (2009) and Ramamurti (2009) extends the widely accepted concept into the idea of firm-specific advantage and country-specific advantage and Mathews (2002, 2006) incorporates the LLL (Link, leverage, learn) concept for late comers. Furthermore, Conconia (2016), Kinuthiaa and Murshedb (2015), Boateng (2015) also adds uncertainty concept or macro economic environment to the existing reasons.

In this paper, we follow the classification of UNCTAD (1998) and Dunning (2000), who divided the investment motives of FDI into two types; the market-oriented type and the efficiency-oriented type (including resources-oriented type). In line with the classification, Kwon Yung-Chul (2009) empirically revealed the fact that domestic market-oriented type enterprises improve business performance more using a localization strategy. As to FDI in China, while there are regional specific research (Cassidy et al, 2009; Kang et al, 2007), we do not specify any regional difference in China in this research.

## **2. Risk Management**

Among various classification method of corporate risks, risk quadrant seems to be a very popular one, which includes *strategic risk, operation risk, financial risk and hazard risk*. For instance, Korean Standards Association (2011) classified the corporate risks into five categories, including strategy, regulation, operation, disaster and finance risk. Nevertheless, strategic risk is usually defined as the uncontrollable and non-financial risk faced by corporation, related to government and economic factors, market competitor factors, market customer factors and new technical factors (Lee Kyung-lyong & Kim Jae-bong, 2013; Kim Pan-jin, 2009; Kristin Vekasi, 2014, Park Tae-seok & Kim Gye-hwa, 2002; Hong Du-hee, 2012). Financial risk, also uncontrollable, is the risk caused by the variability of an enterprise's assets or liabilities, and items including market risk, credit risk, price risk and liquidity risk come under this (Rakesh Agarwal, 2013; Jeong Jae-hee, Ahn Yeon-s, 2014; Hamilton & Chow, 1993, Xu Zi-Chuan, 2011; Hong Jong-min & Park Eui-brum, 2012).

And operational risk usually indicates any mismatch between what is to be done and what is actually being done with respect to human behaviour or system operation, which is accidental or incidental by its nature, and hazard risk is uncontrollable residual risk that is normally insured. Although operational risk is associated with moral(e) hazard and hazard risk with physical hazard in general, we do not distinguish them in this research, as operational risk is not easily distinguishable from operational management or risk management which is assumed here to indicate corporate activity.

As a result, we define the Legal & hazard risk as property risk, legal risk, personnel risk and

consequential loss (Rakesh Agarwal, 2013; Lee Gyeong-ryong & Kim Jae-bong, 2013; Kim Pan-jin, 2009; Thunt Htut Oo, 2012; Nam Kyung-doo & Han Joon-woo, 2002).

### **3. FDI Risk & its Management**

As noted before, we classify the FDI risk as strategic risk, financial risk, and legal & hazard risk, and its corresponding risk management as strategic response such as localization or policy response, human resource management, financial capacity strengthening and environment management.

For instance, FDI risk is a business loss caused in foreign investment enterprises occurring from the host country government's wrongful conduct, including commerce interference or obstruction, change of stipulation, institutional instability, or part or whole seizure of foreigner investing companies' assets (D.W. Zink, 1973; F.V. Weston & W.B. Sorge, 1996; R.M. Rodriguez & E.E. Carter, 1996).

As for general corporation and risk management, there are many research such as Kwak Yeon (2010), Jeung Jae-hee & Ahn Yeon-s(2014), Wang Ying (2012), Nam Kyung-doo, Han Joon-woo(2002), Ham Jeong-sik(2014), Xu Zi-Chuan (2011), Hong Jong-min, Park Eui-brum (2012), in addition to Ai et al (2012), which showed general impact of risk management on corporate or investment performance. All in all, the existing literature focuses on the risk management of domestic investment, not on international FDI. As a result, there are not sufficient empirical studies of FDI risk in China as follows.

## **III. Hypothesis and Research Model**

### **1. Hypothesis**

#### **(1) Correlation between risk factors and risk management**

First of all, we look at the correlation between risk management of Korean-owned enterprises in China and risk factors, if any. This step verifies whether the assessed risk affects risk management or it directly affects performance without risk management and whether it can improve satisfaction with the performance through risk management. Lastly, the difference in performance risk factors according to the investment motive through risk management.

M. E. Porter (1980) proposed an opinion that foreign investing companies could take strategies

such as differentiation, cost reduction and centralization when they encountered a competition risk, Thunt Htut Oo (2012) argued that, in entering Myanmar, enterprises manage risks through a joint venture when a political risk and the restriction of the government appear.

In a study of risk factors and enterprise risk management performance, Park IL (2015) obtained the result that an enterprise's risk factor (Technology, external) had a positive (+) impact on its risk management performance.

Wang Ying(2012) and Xu Zi-Chuan(2011) noted that Korean small enterprises' Chinese subsidiaries manage risks, carrying out local counter-strategies (localization of marketing, localization of production and localization of R&D) when they encounter investment costs risk, legal policy risk, market competition risk and business management risk; Yoon Seung-ok & Lee Chang-ho(2012) verified the correlation that according to the enterprise's size, it manages risks better as the risk level increases; Li Long-zhen & Kim Ki-tae(2008) found that if the macro environmental uncertainty of Korean-owned manufacturing enterprises in China increases, they can manage risks, utilizing a commitment-based HR system; and Jeung Jae-hee & Ahn Yeon-s(2014) obtained the result that social risk and business activity risk have positive (+) impacts on risk management activities.

## **H1. Risk factors would have a significant impact on performance**

### **(2) Correlation between the risk factors and performance**

Step 2 Of the factors affecting business performance, there were greater external factors than internal factors. The higher the political risk; the higher competitive level; the greater the lack of technology; the greater the knowledge of the local market, the more negative (-) impact on business performance becomes (Christmann and Day, 1999; Kim Yong-Duk & Ham Jeong-oh, 2015; Zhao Ting-Ting, 2011; Xu Zi-Chuan, 2011). Increase of local enterprise's burden of expenses and the abolition of tax reduction would have negative (-) impacts on business performance (Nai Ruozhou, 2015; Zhao Ting-Ting, 2011),

The deterioration of the investing company's financial state in the host country has a negative (-) impact on performance (Hamilton & Chow, 1993; Kim Bo-in & Shin Man-su, 2010; Na Won-chan, Kim Yeon-woo, 2016; Choi Kyung-seon, 2012; Hong Jong-min, 2012). The increase of legal and institutional issues of the enterprise investing in China and the market uncertainty has a negative (-) impact on investment performance (Kim Pan-jin, 2009; Lee Young-Joo, 2010; Nam Kyung-doo & Han Joon-woo, 2002).

## **H2. Risk management would have a significant impact on performance.**

### **(3) Correlation between risk management and performance**

Step 3, According to Hitt & Ireland (1984), the strengthening of economic management competency, general management competency and operation management competency has a positive (+) impact on business performance, and Park Il (2015) noted that the enterprise that has excellent policy, organizational culture and system risk management competency has higher management performance.

It is noted that, the greater the local subsidiary' authority and the stronger the commitment-based HR system, the more the positive (+) impact on performance can become (Lee Kyung-lyong & Kim Jae-bong, 2013; Lee Long-zhen & Kim Seong-su, 2010).

It was empirically verified that Korean-owned direct investment enterprises in China could promote performance through improving technology innovation ability, improving marketing ability, localization of production, promoting R&D ability, developing local human resources development, strengthening China's domestic sale organizations, establishing joint ventures with local partners, diversification strategy, strengthening financial capability and compliance with local regulations (Meta & Portugal, 2000; Na Won-chan & Kim Yeon-woo, 2016; Wang Ying, 2012; Zhang Hui-zhi et al., 2005; Hong Jong-min & Park Eui-brum, 2012).

## **H3. Risk management would have a significant impact on performance.**

### **(4) Moderating effects according to investment motive (Domestic market-oriented type and production efficiency-oriented type)**

Jang Jeong-jae (2013) defined Korean enterprises that entered China that targeted the domestic market, that would not withdraw a large enterprise's subcontractors or give up the business and those that wish withdrawal from the business in China or U-turn to Korea as production efficiency-oriented type enterprises like toll processing trade, Chung Youn-Kyaei(2015) analyzed that, of the Korean-owned smaller enterprises in China, in those that pursued a differentiation strategy (brand, quality and customer service strengthening, etc.), there was a more positive (+) impact on production strategy, and there was a more positive (+) impact on business performance, mediated by that while, in contrast, in those that pursued a cost advantage strategy, it turned out that there was no significant impacts on production strategy and business performance.

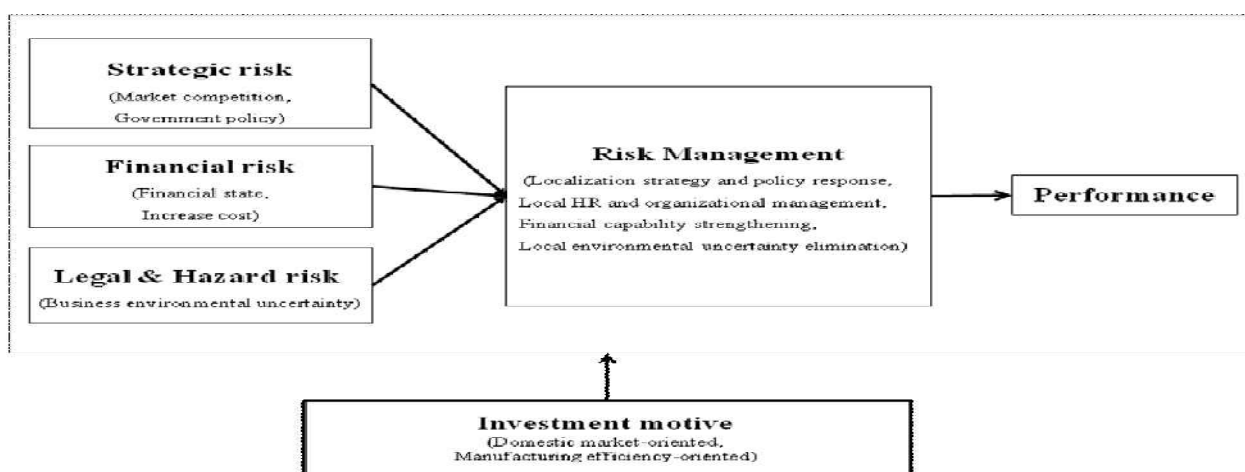
**H4. There would be a significant difference in the correlation of risk factors with risk management and performance according to investment motive (Domestic market-oriented type and production efficiency-oriented type)**

## 2. Research Model

This study set up strategic risk, Financial risk and legal & hazard risk as independent variables, dividing the risk factors of Korean enterprises that invested in China, set up risk management as a parameter and set up performance as a dependent variable. Here, for risk management, risks that have empirically been verified in the preceding studies were set up as corresponding measures, which was actually executed in the business field. In addition, by inserting investment motive as a moderator variable, this study would verify the difference in the impact of an enterprise's risk management according to Chinese domestic market-oriented type and production efficiency-oriented type.

In order to look at the impacts of the parameter and moderator variable between the independent variables and the dependent variable, research models were designed like Figure 3-1.

<Figure 3-1> Research Model



This study would mainly investigate manufacturers of Korean enterprises (Mostly, smaller and medium enterprises) that entered the Chinese market and had subsidiaries in China. To managers and executives at the headquarters in Korea and at Chinese subsidiaries, questionnaires were distributed, and for data research and acquisition, from June 20 through August 15, 2016, China local visit survey method and e-mail survey method were used in parallel, and 279 copies of the questionnaires were used in total for an analysis.

To verify the hypotheses set up in this study, for an empirical analysis of the collected data,



statistical packages program SPSS 18.0 and structural model program AMOS 18.0 were used. Of these, with SPSS 18.0 program, frequency analysis and exploratory factor analysis of general characteristics were conducted while with AMOS 18.0 program, a confirmatory factor analysis and the estimation of the structural equation model for the verification of the suitability of the structural model, the verification of the hypotheses and the verification of the moderating effects were conducted.

## **IV. Empirical Results**

### **1. Analysis of Basic Statistics**

As a result of an analysis in order to examine the general characteristics of the subjects, by the enterprise size, 57 persons (20.4%) belonged to large enterprises while 222 (79.6%) to smaller enterprises. By the place of business, 71 persons (25.4%) belonged to headquarters in Korea while 208 (74.6%) to Chinese subsidiaries. By the type of business, manufacturing business 216 persons (77.4%) belonged to the manufacturing industry while 63 (22.6%) to the service industry. By the investment motive, 173 persons (62.0%) were domestic market-oriented type while 106 (38.0%), production efficiency-oriented type. By the type of investment, 243 persons (87.1%) had a single investment while 36 (12.9%), a joint venture.

### **2. Results of Confirmatory Factor Analysis**

The results of a confirmatory factor analysis (CFA) to check the single dimensionality of the research concept consisting of multiple items before the verification of the research hypotheses are like the following Table 4-1. Of the goodness-of-fit indices of the research unit of the analysis result,  $\chi^2=789.538$ , CMIN/ DF=2.030, RMR=0.033, RMSEA=0.061, NFI=0.881, CFI=0.935, TLI=0.927, and IFI=0.936, and it was proven that the size of the research unit goodness-of-fit was composed appropriately. In addition, as a result of the calculation of Construct Reliability (CR) and Average Variance Extracted (AVE) at a factor loading over 0.50 to evaluate whether the size has representability of the relevant factors, CR of all factors was higher than the standard value .70, and AVE was higher than the standard value .50, so it is judged that the measurement items used have sufficient representability.

<Table 4-1> Confirmatory Factor Analysis

| Variable       |   | Items        | Factor Loading | Coefficient | S.E  | <i>t-value</i> | C.R  | AVE  |
|----------------|---|--------------|----------------|-------------|------|----------------|------|------|
| Strategic risk | → | Strategic_11 | .744           | .810        |      |                |      |      |
|                | → | Strategic_9  | .808           | .847        | .061 | 16.598***      |      |      |
|                | → | Strategic_8  | .797           | .808        | .055 | 15.535***      |      |      |
|                |   |              |                |             |      |                | .964 | .770 |
|                | → | Strategic_7  | .787           | .773        | .058 | 14.604***      |      |      |
|                | → | Strategic_5  | .812           | .817        | .057 | 15.755***      |      |      |
|                | → | Strategic_3  | .758           | .753        | .049 | 14.099***      |      |      |
|                |   |              |                | 10          |      |                |      |      |

|                |   |             |      |      |      |           |      |      |
|----------------|---|-------------|------|------|------|-----------|------|------|
|                | → | Strategic_2 | .800 | .772 | .050 | 14.574*** |      |      |
|                | → | Strategic_1 | .810 | .769 | .052 | 14.503*** |      |      |
| Financial risk | → | Financial_9 | .796 | .788 |      |           |      |      |
|                | → | Financial_8 | .787 | .748 | .050 | 19.336*** |      |      |
|                | → | Financial_7 | .745 | .757 | .057 | 16.641*** | .968 | .792 |
|                | → | Financial_5 | .871 | .902 | .062 | 17.345*** |      |      |

|                   |   |                |      |      |      |           |      |      |
|-------------------|---|----------------|------|------|------|-----------|------|------|
|                   | → | Financial_4    | .829 | .862 | .075 | 16.319*** |      |      |
|                   | → | Financial_3    | .846 | .863 | .064 | 16.342*** |      |      |
|                   | → | Financial_2    | .880 | .837 | .059 | 15.679*** |      |      |
|                   | → | Financial_1    | .839 | .789 | .061 | 14.508*** |      |      |
|                   | → | Legal&Hazard_5 | .740 | .815 |      |           |      |      |
| Legal&Hazard risk |   |                |      |      |      |           | .938 | .751 |
|                   | → | Legal&Hazard_4 | .749 | .726 | .065 | 13.039*** |      |      |

|                    |   |                |      |      |      |           |      |      |
|--------------------|---|----------------|------|------|------|-----------|------|------|
|                    | → | Legal&Hazard_3 | .786 | .767 | .061 | 14.034*** |      |      |
|                    | → | Legal&Hazard_2 | .805 | .822 | .069 | 15.433*** |      |      |
|                    | → | Legal&Hazard_1 | .812 | .850 | .067 | 16.297*** |      |      |
| Risk<br>Management | → | Management_1   | .703 | .610 |      |           |      |      |
|                    | → | Management_2   | .776 | .703 | .160 | 8.669***  | .884 | .660 |
|                    | → | Management_3   | .780 | .552 | .142 | 7.415***  |      |      |

|             |   |               |      |      |      |           |      |      |
|-------------|---|---------------|------|------|------|-----------|------|------|
|             | → | Management_4  | .791 | .768 | .171 | 9.068***  |      |      |
| Performance | → | Performance_1 | .786 | .691 |      |           |      |      |
|             | → | Performance_2 | .832 | .754 | .108 | 11.682*** |      |      |
|             | → | Performance_3 | .870 | .832 | .114 | 12.791*** | .949 | .790 |
|             | → | Performance_4 | .891 | .892 | .118 | 13.584*** |      |      |
|             | → | Performance_5 | .885 | .877 | .105 | 13.395*** |      |      |
|             |   |               |      |      |      |           |      |      |

Fit Statistics : CMIN=789.538, p=0.000, CMIN/DF=2.030, RMR=0.033, RMSEA=0.061, NFI=0.881, CFI=0.935,  
TLI=0.927, IFI=0.936

\*\*\*: p<.01

The results of an analysis of the correlation coefficient and the average variance extraction are like Table 4-2. As a comparison of the AVE of each of the two constructs to the squared correlation between the constructs and checking if the AVE of the two is greater than the squared correlation in order to verify the discriminant validity, the AVE value was greater than the squared correlation of each variable in all variables, so it is judged that all variables have discriminant validity (Fornell & Larcker, 1981).

<Table 4-2> Correlation Matrix

| Division          | Risk Factor                 |                             |                            | Risk Management            | Performance |
|-------------------|-----------------------------|-----------------------------|----------------------------|----------------------------|-------------|
|                   | Strategic risk              | Financial risk              | Legal&Hazard risk          |                            |             |
| Strategic risk    |                             |                             |                            |                            |             |
| Financial risk    | .353 <sup>***</sup> (.125)  |                             |                            |                            |             |
| Legal&Hazard risk | .532 <sup>***</sup> (.283)  | .492 <sup>***</sup> (.242)  |                            |                            |             |
| Risk Management   | -.115(.013)                 | -.146 <sup>**</sup> (.021)  | -.014(.000)                |                            |             |
| Performance       | -.279 <sup>***</sup> (.078) | -.237 <sup>***</sup> (.056) | -.120 <sup>**</sup> (.014) | .545 <sup>***</sup> (.297) |             |

\*\*\*: p<.01, \*\*: p<.05

관리성과

### 3. Verification of Structural Equation Modeling

The results of goodness-of-fit verification of the overall structural models in this study are like Table 4-3. In the results of an analysis, of the goodness-of-fit indices,  $\chi^2=759.767$ , CMIN/DF=1.963, RMR=0.032, RMSEA=0.059, NFI=0.885, CFI=0.940 and TLI=0.932, and IFI=0.940, which satisfy the basic requirements, so it was proven that the overall goodness-of-fit was appropriate for the theoretical models of the research hypotheses set up in this study.

<Table 4-3> Estimated Model Fit

| Division | CMIN    | p    | CMIN/df | RMR  | RMSEA | NFI  | CFI  | TLI  | IFI  |
|----------|---------|------|---------|------|-------|------|------|------|------|
| Model    | 759.767 | .000 | 1.963   | .032 | .059  | .885 | .940 | .932 | .940 |

|     |  |  |  |  |  |  |  |  |  |
|-----|--|--|--|--|--|--|--|--|--|
| Fit |  |  |  |  |  |  |  |  |  |
|-----|--|--|--|--|--|--|--|--|--|

The results of an analysis of the path-coefficient value of the research models are like Table 4-4. It turned out that, as sub-factors of the risk factors, strategic risk ( $\beta=-.192$ ,  $p<.05$ ), Financial risk( $\beta=-.237$ ,  $p<.01$ ) and legal & hazard risk ( $\beta=.214$ ,  $p<.05$ ) had significant impacts on risk management, and **Hypothesis 1 was adopted**.

It turned out that, as sub-factors of risk factors, strategic risk ( $\beta=-.208$ ,  $p<.01$ ) and Financial risk( $\beta=-.107$ ,  $p<.10$ ) had significant impacts on performance, and **Hypothesis 2 was partially adopted**.

Finally, it turned out that the risk management ( $\beta=.632$ ,  $p<.001$ ) had a significant impact on performance, and **Hypothesis 3 was adopted**.

<Table 4-4> Path-coefficient value of the research models

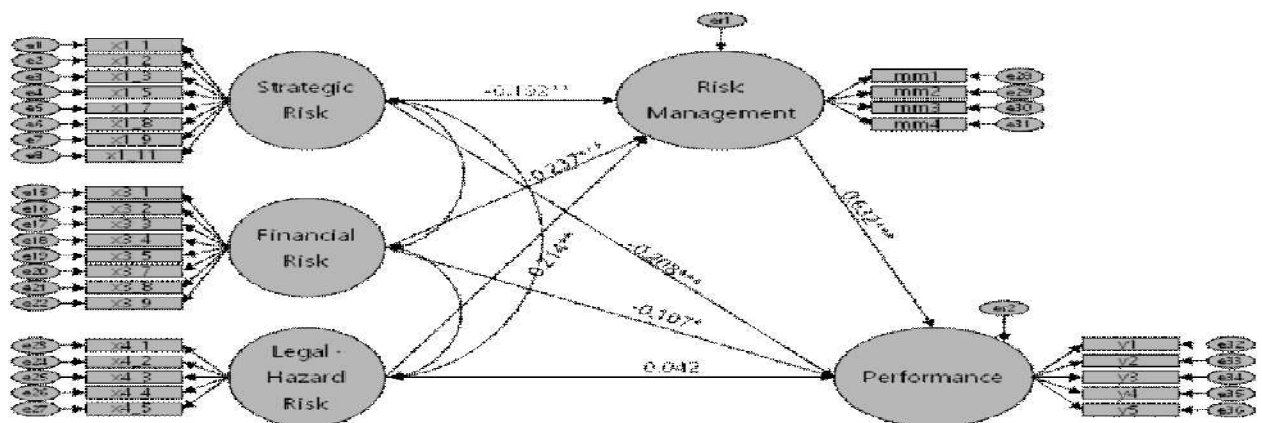
| Hypothesis | Independent variable | dependent variable   | Coefficient | S.E  | C.R.      | p-value | Accepted or not |
|------------|----------------------|----------------------|-------------|------|-----------|---------|-----------------|
| H1-1       | Strategic risk       | →<br>Risk Management | -.192       | .047 | -2.072**  | .038    | O               |
| H1-2       | Financial risk       | →<br>Risk Management | -.237       | .050 | -2.742*** | .006    | O               |
| H1-3       | Legal&Hazard risk    | →<br>Risk Management | .214        | .055 | 2.015**   | .044    | O               |



|      |                   |   |             |        |      |           |      |   |
|------|-------------------|---|-------------|--------|------|-----------|------|---|
| H2-1 | Strategic risk    | → | Performance | -0.208 | .046 | -2.945*** | .003 | O |
| H2-2 | Financial risk    | → | Performance | -.107  | .048 | -1.652*   | .098 | O |
| H2-3 | Legal&Hazard risk | → | Performance | .042   | .053 | .526      | .599 | X |
| H3   | Risk Management   | → | Performance | .813   | .632 | 7.109***  | .114 | O |

\*\*\*p<.01, \*\*p<.05, \*p<.10

<Figure 4-1> Whole Model Path Coefficient



The results of an analysis of direct and indirect impacts in the entire research models of the total impact are like Table 4-5. First, to examine the direct impact of risk factors on risk management, it turned out that strategic risk ( $\beta=-0.192$ ,  $p<.05$ ), Financial risk( $\beta=-0.237$ ,  $p<.01$ ) and legal & hazard risk ( $\beta=0.214$ ,  $p<.05$ ) were significant. In addition, to examine the direct impact of risk factors on performance, the indirect impact through risk management and the total impact, it turned out that the direct impact ( $\beta=-0.208$ ,  $p<.01$ ), the indirect impact ( $\beta=-0.121$ ,  $p<.05$ ) and the total impact ( $\beta=-0.329$ ,  $p<.01$ ) of strategic risk were significant; the direct impact ( $\beta=-0.107$ ,  $p<.10$ ), indirect impact ( $\beta=-0.150$ ,  $p<.10$ ) and total impact ( $\beta=-0.257$ ,  $p<.01$ ) of Financial riskwere significant; and the indirect impact ( $\beta=0.136$ ,  $p<.10$ ) of legal & hazard risk was significant. Lastly, to examine the direct impact of risk management on performance, it turned out that risk management ( $\beta=0.632$ ,  $p<.01$ ) was significant.

<Table 4-5> Results of Mediating Effect

| Independent variable | dependent variable   | Total effect | P-value | Direct effect | P-value | Mediating effect | P-value |
|----------------------|----------------------|--------------|---------|---------------|---------|------------------|---------|
| Strategic risk       | →<br>Risk Management | -.192**      | .038    | -.192**       | .038    | -                | -       |
| Financial risk       | →<br>Risk Management | -.237***     | .006    | -.237***      | .006    | -                | -       |
| Legal&Hazard risk    | →<br>Risk Management | .214**       | .044    | .214**        | .044    | -                | -       |

|                   |   |             |          |      |          |      |         |      |
|-------------------|---|-------------|----------|------|----------|------|---------|------|
| Strategic risk    | → | Performance | -.329*** | .000 | -.208*** | .003 | -.121** | .031 |
| Financial risk    | → | Performance | -.257*** | .002 | -.107*   | .098 | -.150*  | .051 |
| Legal&Hazard risk | → | Performance | .177     | .117 | .042     | .599 | .136*   | .081 |
| Risk Management   | → | Performance | .632***  | .000 | .632***  | .000 | -       | -    |

\*\*\*: p<.01, \*\*: p<.05, \*: p<.10

The results of an analysis of moderating effects according to investment motive are like the following Table 4-6. To examine the structural models according to the investment motive, it turned out that, in the free model,  $x^2=1358.477$  and  $df=774$  while in the constrained model,  $x^2=1404.303$  and  $df=781$ . To compare the free model and the constrained model, in the free model,  $x^2$  was 45.826 ( $p<.01$ ) smaller than in the constrained model while the degree of freedom was 7 smaller, so there was a significant moderating effect according to the investment motive, and **Hypothesis 4 was adopted**.

<Table 4-6> Model Fit of Moderating Effect

| Division   | CMIN     | p    | CMIN/<br>df | RMR  | RMSEA | NFI  | CFI  | TLI  | IFI  |
|------------|----------|------|-------------|------|-------|------|------|------|------|
| Free Model | 1358.477 | .000 | 1.755       | .037 | .052  | .804 | .904 | .892 | .905 |

|                   |          |      |       |      |      |      |      |      |      |
|-------------------|----------|------|-------|------|------|------|------|------|------|
| Constrained Model | 1404.303 | .000 | 1.798 | .050 | .054 | .798 | .897 | .886 | .899 |
|-------------------|----------|------|-------|------|------|------|------|------|------|

#### 4. Moderating effects according to investment motive

The results of an analysis of the impact rate of each hypothesis according to investment motive are like Table 4-7. First, for the **domestic market-oriented type, it turned out that, in the correlation between risk factors and risk management, strategic risk to risk management ( $\beta=0.285$ ,  $p<.05$ ), Financial risk to risk management ( $\beta=-0.457$ ,  $p<.001$ ) and legal & hazard risk to risk management ( $\beta=0.351$ ,  $p<.05$ ) were significant. In the correlation between risk management and performance, it turned out that risk management to performance ( $\beta=0.504$ ,  $p<.01$ ) was significant.**

In addition, for the **production efficiency-oriented type**, it turned out that, in the correlation between risk factors and risk management, strategic risk to risk management ( $\beta=-0.374$ ,  $p<.05$ ) was significant. In the correlation between risk factors and performance, it turned out that strategic risk to performance ( $\beta=-0.361$ ,  $p<.01$ ) was significant while in the correlation between risk management and performance, it turned out that risk management to performance ( $\beta=0.410$ ,  $p<.01$ ) was significant.

<Table 4-7> Path-coefficient value according to investment motive

|      | Independent variable | dependent variable   | Domestic market-oriented |           |                 | Manufacturing efficiency-oriented |          |                 |
|------|----------------------|----------------------|--------------------------|-----------|-----------------|-----------------------------------|----------|-----------------|
|      |                      |                      | coefficient              | C.R.      | Accepted or not | Coefficient                       | C.R.     | Accepted or not |
| H1-1 | Strategic risk       | →<br>Risk Management | .285                     | 2.284**   | O               | -.374                             | -2.404** | O               |
| H1-2 | Financial risk       | →<br>Risk Management | -.457                    | -3.406*** | O               | .022                              | .179     | X               |

|      |                      |                      |       |          |   |       |           |   |
|------|----------------------|----------------------|-------|----------|---|-------|-----------|---|
| H1-3 | Legal&Hazard<br>risk | →<br>Risk Management | .351  | 2.374**  | O | -.154 | -.974     | X |
| H2-1 | Strategic risk       | →<br>Performance     | -.156 | -1.436   | X | -.361 | -2.631*** | O |
| H2-2 | Financial risk       | →<br>Performance     | -.082 | -.732    | X | -.120 | -1.147    | X |
| H2-3 | Legal&Hazard<br>risk | →<br>Performance     | -.042 | -.323    | X | .054  | .415      | X |
| H3   | Risk<br>Management   | →<br>Performance     | .504  | 3.379*** | O | .410  | 2.838***  | O |

\*\*\*: p<.01, \*\*: p<.05, \*: p<.10

The result of an analysis of direct and indirect impacts for the total impact by investment motive is like Table 4-8. As a result of the analysis, first, it turned out that, for the **domestic market-oriented type**, to examine the direct impacts of risk factors on risk management, strategic risk ( $\beta=0.285$ ,  $p<.05$ ), Financial risk ( $\beta=-0.457$ ,  $p<.01$ ), and legal & hazard risk ( $\beta=0.351$ ,  $p<.05$ ) were significant. To

examine the direct impact of risk factors on performance, the indirect impact through risk management and the total impact, it turned out that the indirect impact ( $\beta=0.143$ ,  $p<.10$ ) was significant in strategic risk while the indirect impact ( $\beta=-0.230$ ,  $p<.01$ ) and the total impact ( $\beta=-0.312$ ,  $p<.01$ ) were significant in economic risk; the indirect impact ( $\beta=0.177$ ,  $p<.10$ ) was significant in legal & hazard risk. To examine the direct impact of risk management on performance, risk management ( $\beta=0.504$ ,  $p<.01$ ) was significant.

For the **production efficiency-oriented type**, to examine the direct impact of risk factors on risk management, it turned out that strategic risk ( $\beta=-0.374$ ,  $p<.05$ ) was significant. To examine the direct impact of risk factors on performance, the indirect impact through risk management and the total impact, in strategic risk, it turned out that the direct impact ( $\beta=-0.361$ ,  $p<.01$ ), the indirect impact ( $\beta=-0.154$ ,  $p<.10$ ) and the total impact ( $\beta=-.515$ ,  $p<.01$ ) were significant. To examine the direct impact of risk management on performance, it turned out that risk management ( $\beta=0.410$ ,  $p<.01$ ) was significant.

<Table 4-8> Verification of direct/indirect impact and total impact according to investment motive

| Independent variable | dependent variable | Domestic market-oriented |               |                  | Manufacturing efficiency-oriented |               |                  |
|----------------------|--------------------|--------------------------|---------------|------------------|-----------------------------------|---------------|------------------|
|                      |                    | Total effect             | Direct effect | Mediating effect | Total effect                      | Direct effect | Mediating effect |
| Strategic risk       | → Risk Management  | .285**                   | .285**        | -                | -.374**                           | -.374**       | -                |
| Financial risk       | → Risk Management  | -.457***                 | -.457***      | -                | .022                              | .022          | -                |
| Legal&Hazard risk    | → Risk Management  | .351**                   | .351**        | -                | -.154                             | -.154         | -                |

|                   |   |             |          |         |          |          |          |        |
|-------------------|---|-------------|----------|---------|----------|----------|----------|--------|
| Strategic risk    | → | Performance | -.013    | -.156   | .143*    | -.515*** | -.361*** | -.154* |
| Financial risk    | → | Performance | -.312*** | -.082   | -.230*** | -.111    | -.120    | .009   |
| Legal&Hazard risk | → | Performance | .135     | -.042   | .177*    | -.009    | .054     | -.063  |
| Risk Management   | → | Performance | .504***  | .504*** | -        | .410***  | .410***  | -      |

\*\*\*: p<.01, \*\*: p<.05, \*: p<.10

Independent variable dependent variable

## V. Summary and Conclusion

Based upon Korean corporations doing business in China, this research incorporates 173 domestic market-oriented type companies (62%) and 106 production efficiency-oriented type companies (38%) to see any difference in risk, risk management, its effectiveness between two types of FDIs. As a result of a t-test to verify the difference between two groups, strategic risk and financial (environment) risk were higher in production efficiency-oriented type than in domestic market-oriented type, and risk management and performance were higher in domestic market-oriented

type than in production efficiency-oriented type, which shows different mediating impact of risk management on the performance depending upon the objective of FDI. More specifically, domestic market-oriented corporations appear to manage their strategic, legal and hazard risk more actively than manufacturing efficiency-oriented ones. Nevertheless, both types of FDIs show significant risk management effect on performance.

In the future, it will be necessary to measure the risk management impact of the Korean industries that entered Chinese service industry such as financial industries and franchises in order to meet the local consumers' tastes, and understanding risk factors that Korea-China joint-venture companies experience in China and proposing appropriate plans for risk management will be important tasks.

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