

An Empirical Study on the Determinants of Ownership of Korean SMEs' FDI in China - Focusing on Manufacturing Firms

Byung Hee Lee ■ Hanyang University*

Mi Yeon Nam ■ Hanyang University**

Yu Jin Chang ■ Hanyang University***

〈Abstract〉

The purpose of this study is to provide an empirical analysis of factors influencing the determinants of the choice of entry mode for the Korean SMEs' FDI in China on the basis of Dunning's eclectic paradigm(OLI Paradigm) and the transaction cost theory. In this study these factors can be classified into three categories. That is, firm, internalization and local environmental factors. Firm factors consist of 'Differential products ability', 'Entrepreneurship' and 'Network'. Internalization factors consist of 'Transaction of tangible & intangible assets'. And local environmental factors consist of 'Legal constraints', 'Industrial competitive intensity' and 'Condition of labor market'. The empirical results from analysis show that only 'Transaction of tangible assets' of the Internalization factors and 'Industrial competitive intensity' of the local environmental factors negatively affect the choice of entry mode in Korean SMEs' FDI in China. In other words, it can be seen that the lower the utilization of corporate tangible assets and the lower the degree of

* First author. Professor. School of Business, Hanyang University
(E-mail: blee@hanyang.ac.kr)

** Co-author. Master. School of Business, Hanyang University
(E-mail: bestglobal@gmail.com)

*** Corresponding Author. Ph. D. School of Business, Hanyang University
(E-mail: choachoa2@hanmail.net)

competition in the same industry within the investment area, the more preferred the sole investment over the joint venture. We hope that this study will provide many implications for the decision of the investment type of Korean SMEs that want to invest directly in China.

*Keywords: FDI, OLI, Transaction Cost, Determinants of Ownership

I . Introduction

As the trend towards economic globalization increases, the global economy is accelerating a global competitive system without barriers. Globalization of the economy means the adjustment of the world's industrial structure. Meanwhile, Korea is constantly facing new environmental changes both internally and externally. Structural problems such as deepening industrial and income polarization, declining employment rates, weakening industrial relations, and lowering growth potential are being expressed. Employment release by the major business, employment absorption by the SMEs, and contribution to creation, which are clearly visible after the Asian financial crisis, show that the growth of the SME sector is necessary for shared growth. In addition, in order to resolve the industrial polarization problem, it is necessary to improve productivity and income in the SME sector, which shows relatively low productivity, and this will contribute to a certain part of solving the problem of income polarization and social integration. In this economic environment, SMEs whose strength are innovation, creativity, dynamism, flexibility, and professionalism as their strengths are to overcome competitiveness resulting from the difference in corporate size, and to apply and grow in this environment, Korean SMEs pay attention to overseas investment. It started to turn around, and foreign direct investment began actively in China, which has low wages and a wide market.

Korea's investment in China began in earnest in 1993, coupled with China's external opening and diplomatic relations between Korea and China accelerated in 1992. From 1994, China has emerged as the largest host of foreign direct investment by Korean companies along with the United States. As of December 2019, Korea's trade balance with China had a surplus of about \$25.4 billion, a decline from \$47.77 billion in the same period of 2018, but exports to China in 2019 showed an increase from the previous year(China Industry and Economy Brief 2021).

The proportion of investment in China by company size continues to be led by large companies, while SMEs are gradually decreasing. Over the past five years, large and small companies accounted for 81.0% and 17.2% of investment in China, respectively. While large companies seem to be expanding investment in China, SMEs and private companies are cautious about investing in China due to the worsening investment environment. In addition, the withdrawal rate of Korean companies that have invested in China, especially Korean SMEs, accounted for more than 90% of the total withdrawal of Korea, which is as high as the increase in investment in China. This high withdrawal rate can be attributed to the lack of information and understanding of the Chinese market. Also, the problem of business cyclical problems such as shortage of funds and sluggish sales of SMEs is also due to structural problems such as poor competitiveness of SMEs, industrial structure, and transaction structure(Institute for Foreign Economic Policy 2020).

Investment status by Korean and Chinese in manufacturing industries increased to \$5.4 billion as of 2019, accounting for 93% of the total investment. Among the manufacturing industries, technology and capital-intensive sectors such as electronic parts and automobiles continue to maintain the top ranks, but the share of investment in the textile and apparel sector, which is a labor-intensive sector, has gradually decreased due to the surge in labor costs in China in recent years. In the case of investment in the non-manufacturing industry, the proportion of investment in the financial

insurance industry and wholesale and retail sectors in addition to the manufacturing industry is gradually increasing due to the recent expansion of the Chinese government's opening of foreign direct investment to the service industry and the improvement of Chinese income and consumption patterns.

Korea's FDI is still in its infancy in terms of size and relative comparison with foreign countries, especially in the case of SMEs. However, due to the recent changes in the international trade environment, protectionism and import regulations in advanced countries have been strengthened, so the need for SMEs' FDI continues to increase, given that SMEs exports can be subject to less import regulations rather than large-scale exports centered on large companies. In addition, the purchasing tendency of foreign buyers is shifting to small and multi-product systems, so SMEs can respond more flexibly than large companies.

This study aims to provide implications for establishing effective investment strategies in China by collecting data from Korean SMEs in China and analyzing the impact of each factor on their FDI strategies.

II. Literature Review

1. Theory on the Determinants of Ownership Structure of Foreign Direct Investment

After a company decides to enter the overseas market through FDI, it faces the problem of the ownership structure of its overseas subsidiaries. An important alternative is a solo investment or a joint venture with one or several partners. Several scholars have tried to identify the factors that determine the type of foreign direct investment. In general, the transaction cost theory, which is the basis of the internalization theory and the eclectic theory, among the FDI theories, provides an answer to the type of ownership structure that an investment firm wants (Anand and Delios 2002). According

to the transaction cost theory, companies internalize transactions to reduce transaction costs caused by market imperfection, and as a result, global companies emerge. Transaction cost refers to the cost of negotiating a transaction between the parties to the transaction, monitoring and enforcing the contract arising from the transaction. The reason transaction costs occur is because of 'transaction difficulties'. Factors that make transactions difficult are divided into attributes possessed by humans and attributes possessed by transactions. The attributes possessed by humans are divided into bounded rationality and opportunism, and the attributes possessed by transactions are again divided into asset specificity, uncertainty, and frequency of use(Williamson 1975, 1989).

In the transaction cost theory, one of the most important determinants of market failure is the existence of specialized assets in the transaction(Williamson 1979, 1985). That is, if the parent company owns intangible or specialized assets such as management know-how, technology, and marketing capabilities, these assets internalize transactions in the market due to the difficulty of concluding contracts and the nature of public goods(Buckley and Casson 1976; Williamson 1989). For example, when a differentiated new product or accumulated technology or know-how is traded using normal market transactions, significant transaction costs are incurred and uncertainty increases at the same time. Therefore, a company that owns intangible or specialized assets finds other ways to fully compensate for the profits, and for this purpose, rather than selling or lending such assets, they internalize them to overseas subsidiaries(Buckley and Casson 1976). Therefore, factors that increase or decrease transaction costs become the determining factors for ownership of overseas subsidiaries, and companies usually have a tendency to choose ownership interests that minimize transaction costs.

2. Prior research

According to a study by Lecrew(1984), technical leadership, advertising

intensity, assets of subsidiaries, assets of parent companies, and export costs showed a 'positive' relationship with the ratio of ownership interests. The degree of connection between the parent company and its subsidiaries, the attractiveness of the local country, and the number of potential competitors and the 'negative' was confirmed.

Park and Kim(1998) investigated the determinants of FDI ownership of Korean companies based on the transaction cost theory. As a result of the survey, it was found that the higher the reputation of a company, the more likely it is to own a majority stake. They judged that the more Korean companies that have accumulated more reputation, the more likely they would prefer a majority stake to maintain their reputation. Chen and Hu(2002) conducted an analysis on the determinants of the entry method for foreign companies invested in China from 1979 to 1992 based on transaction costs. The analytic results show that the company's unique advantages in marketing technology, brand recognition, differentiated products, etc., local market potential, industrial potential, cultural distance, capital-intensive projects, and continuous investment significantly influence the entry method of foreign direct investment.

Brouthers(2002) used Dunning's eclectic theory to study SMEs in Greece entering Eastern Europe. In this study, it was found that the explanatory power of the eclectic theory for the selection of the entry method of Greek SMEs entering Eastern Europe is very high. However, he argued that not all factors of the eclectic theory influence the choice of entry method.

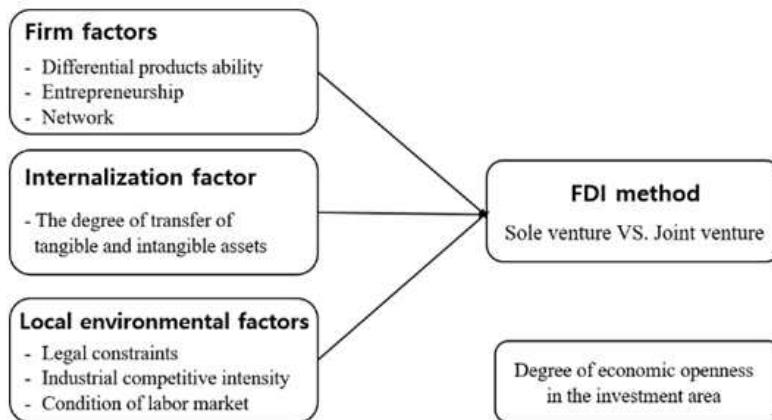
III. Research model and hypothesis setting

The purpose of this study is to examine factors for selecting the form of FDI. Using Dunning's eclectic theory and transaction cost theory, a theoretical model was constructed by dividing the independent variables that affect the choice of sole venture and joint venture by Korean SMEs into firm factors,

internalization factors and Chinese investment environment factors in the FDI method.

Three variables were specified as the firm factors: Differentiated products ability, network resources, and entrepreneurship; The second factor, the detailed variable of the internalization factor, is the degree of transfer of tangible and intangible assets; and the third factor, the Chinese investment environment, was divided into three variables: labor market conditions, institutional environment and competition.

Figure 1. Research Model



The most important thing for company to expand overseas to generate revenue and achieve long-term results depends on its ability to manufacture superior products that can work in the global market. Differentiated products ability is one of the most important factors among the company's unique superiority factors, and it has secured international competitiveness that competitors cannot easily access, as well as creating new demand and expanding the market in the fierce competitive environment of overseas markets. The most promising way for Korean SMEs to gain competitiveness

between developing countries such as China and advanced countries such as the US and Japan is to differentiate their products through R&D. Agarwal and Ramaswami(1992) argue that if companies have the ability to differentiate their products, they have the risk of alliances, such as illegal leakage of related technologies, so they conduct FDI in the sole investment. In addition, companies with more specialized technologies associated with the product will have a higher percentage of ownership(Lecrew 1984), and be more free to determine the entry strategy. Hypothesis 1 was established accordingly.

Hypothesis 1: The greater the level of differentiated products ability, the more likely the company would prefer a sole investment to a joint venture

Companies can reduce risk through network activities(Macmillan 1983), obtain necessary resources at a lower cost than market transaction costs through social relations(Starr and Macmillan, 1990), or obtain help and financial resources from local communities(Birley 1985), access to distribution channels, information acquisition, and innovation(Larson 1991). The main motivation for a company's strategic alliance is to efficiently utilize its own competitive advantage in an expanded market or to utilize the competitive advantage of other companies. In addition, companies are constantly pursuing development and innovation in order to secure their own competitive advantage, which takes enormous costs and inevitably has investment risks. Companies are trying to secure or maintain their competitive advantage by sharing these investment risks and management assets among partners. In particular, SMEs have inferior in information collection and marketing skills compared to large companies, and as a means to overcome these unfavorable conditions, SMEs can use external resources to build cooperative networks with large companies, and universities. Therefore, companies with more network resources are more likely to invest in high control. Therefore, hypothesis 2 was derived.

Hypothesis 2: The more network resources a company owns, the more likely the company would prefer a sole investment to a joint venture

Entrepreneurship is the act of creating a creative economic organization or network for the purpose of pursuing profits and growth under risk and uncertainty. It refers to a activity that is the summation of the entrepreneur's thinking, beliefs, capacities, and behavioral patterns and that creates new economic value for a new or existing organization(Romme et al. 2018).

In general, SMEs are small in size and depend more on human resources, especially the capabilities of the CEO, than large companies. Therefore, the CEO's entrepreneurship of a SMEs has a great influence on the company's entry into overseas markets. Knight(2001) studied how entrepreneurship and marketing strategy affect the overseas expansion of SMEs. As a result of research, entrepreneurship and marketing strategy enable companies to acquire technology and prepare for internationalization. MacDougall and Oviatt(2003) measured the characteristics of a high-entrepreneurship team unit under the assumption that there is a team of high-entrepreneurship members in companies with high entrepreneurship. They argued that their knowledge and competitiveness in the international experience were high. Companies with such rich expertise and high competitiveness are more likely to enter overseas in a higher mode of control. Therefore, the hypothesis about entrepreneurship and FDI is set as follows.

Hypothesis 3: The greater the entrepreneurship of the CEO, the more likely the company would prefer a sole investment to a joint venture

Tangible assets include production facilities, R&D, sales and marketing organizations, warehouses and distribution facilities, and intangible assets include superior production technology, patent rights, marketing capabilities, management techniques and trademarks owned by a company. Madhok(1997) described tangible assets as an company's resources and intangible assets as

the company's capabilities, including the financial and management resources, the technical depth and multinational experience. An important reason why companies invest more resources directly into overseas is that it is more efficient to make direct investments in carrying out transactions of intangible assets such as intellectual assets than to use the market. In addition, Kim and Hwang(1992) argued that the more difficult it is to transfer the technology, facilities, and management know-how owned by a company to other foreign companies, the more they reduce transaction costs and prefer joint venture with overseas subsidiaries. In this way, companies internalize their management resources through internal transactions so that they can easily use management resources between countries, thereby reducing transaction costs and increasing efficiency. If the transfer of resources between the parent company and the subsidiary is difficult when a company executes FDI, the transaction cost increases, and the company takes a higher control mode, that is, an investment form through sole investment. Therefore, a hypothesis was established according to the degree of transfer of tangible and intangible resources of company which is a factor of internalization.

Hypothesis 4-1: The lower the degree of transfer of tangible assets, the more likely the company would prefer a sole investment to a joint venture

Hypothesis 4-2: The lower the degree of transfer of intangible assets, the more likely the company would prefer a sole investment to a joint venture

In the transactional cost approach, since the uncertainty or opportunistic nature of market transactions entails a large amount of cost and risk, a company chooses ownership with a high level of control in order to use its monopoly advantage to the maximum profit while avoiding the cost and risk. Birley(1985) argued that for minimizing risk, multinational corporations would reduce their ownership shares, and joint ventures are less risky than sole ventures. According to a study on FDI in China, Korean companies often

invest in order to utilize cheap resources for their businesses(Park 2021). While cheap labor and low wages in developing and underdeveloped countries are always considered factors of comparative advantage in the international trade of certain goods, the level of investment and operation risk can be increased due to unsystematic and irrational labor market conditions. Therefore, since SMEs located in China would prefer joint ventures over sole ventures, the hypothesis was developed as follows.

Hypothesis 5: The better the condition of the labor market within the investing area, the more likely a company would prefer a sole venture to a joint venture

Corporate environmental factors such as politics, economy, society, culture, etc. of the investment area have an important influence on the choice of a company's entry method, and one of the most influential factors is the policy of the local government on foreign-invested companies. In other words, the company's selection of FDI types is affected by involuntary factors(Kwon and Ryans 1987). A typical involuntary factor is the local government's regulation of ownership of foreign investment. This institutional environment can have a potential influence on the choice of entry method(Anderson and Gatignon 1986). Strong regulatory policies for foreign-invested companies diminish the willingness of local direct investment, thus making investment companies prefer joint ventures over sole ventures. Therefore, the hypothesis was established as follows.

Hypothesis 6: The better the institutional environment of the investment area, the more likely a company would prefer a sole venture to a joint venture

The fierce competition in the local market makes multinational corporations inhibit entry into foreign markets through direct investment and favor entry methods that involve low resources. If the industry is highly competitive in

China, In particular, SMEs are resisted by existing companies that are already in an advantageous position in terms of market share, distribution network control, economies of scale, and brand awareness, so the possibility of success by entering the local market is low and the possibility of withdrawal due to failure increases. The barriers to entry by these competitors have a negative impact on companies seeking to enter foreign markets(Luo 2001). This means that the higher the intensity of competition in the relevant industry, the more newly entrants avoid the form of investment such as sole ventures due to the possibility of losing competitive advantage and market control(Harrigan 1985). Therefore, the more competitive the same industry in the investment area is, the more the joint venture will be chosen. Conversely, the lower the competition, the more the sole ventures will be chosen. Therefore, the following hypothesis was derived.

Hypothesis 7: The lower the level of competition in the same industry in the investment area, the more likely a company would prefer a sole venture to a joint venture

IV. Methods

1. Sample and Data Collection

This study was aimed at Korean small and medium-sized manufacturing companies that have established and operated subsidiaries in China in order to understand the factors influencing the decision of Korean small and medium-sized manufacturing companies to determine the form of direct investment in China. The reason why sample companies of SMEs with FDI are limited to manufacturing is that the number of investments and the amount of investment by manufacturing companies account for a significant portion of the total number of investments and investment amount.

The survey was conducted on 320 Korean small and medium-sized

manufacturing companies currently operating subsidiaries in China using the <Directory of Korean Overseas Enterprises> issued by the Korea Trade-Investment Promotion Agency and the China Enterprise Information Service issued by Kocham Biz. The subjects of the survey were the CEOs of parent companies and subsidiaries, heads of overseas business divisions of parent companies, and people in charge. As a result of the questionnaire, a total of 83 questionnaires were collected, and a total of 71 questionnaires available as samples were used for the empirical study, excluding some questionnaires that were inappropriate. The types of investments of the companies for the analysis were 57 sole ventures(80.3%) and 14 joint ventures(19.7%).

2. Descriptive Statistics

The characteristics of the sample to be used in this study are as follows: by entry type, by industry, by capital, by number of employees, by company age, by years of overseas expansion, and by investment region in China.

Table 1-1. Investment type

	Frequency	Percent (%)
Sole investment	57	80.3
Joint investment	14	19.7
Total	71	100.0

Table 1-2. Number of employees

	Frequency	Percent (%)
50 people and less than 50 people	37	52.1
51-100 people	14	19.7
101-150 people	6	8.5
151-200 people	4	5.6
201-300 people	10	14.1
Total	71	100.0

Table 1-3. Capital

	Frequency	Percent (%)
\$500,000 and less than \$500,000	22	31.0
\$51-100 million	21	29.6
\$101-200 million	17	23.9
\$201-300 million	5	7.0
\$301-400 million	3	4.2
\$401-600 million	3	4.2
Total	71	100.0

Table 1-4. Investment training

	Frequency	Percent (%)
5 years and under 5 years	45	63.4
6-10 years	21	29.6
11-15 years	4	5.6
more than 16 years	1	1.4
Total	71	100.0

Table 1-5. Type of Business

	Frequency	Percent (%)
Textiles	11	15.5
F&B	11	15.5
Chemical Engineering	3	4.2
Machine Metal	1	1.4
Non-ferrous metal materials	2	2.8
Auto parts	16	22.5
Precision Machinery	1	1.4
Medical equipment	1	1.4
Semiconductor	1	1.4
Electronic Components	4	5.6
IT equipment	1	1.4
Game console	1	1.4
Others	18	25.4
Total	71	100.0

Table 1-6. Subsidiary location

	Frequency	Percent (%)
Eastern coast, central inland, western inland	31	43.7
Bohai Bay, Yangtze River, Pearl River Delta	21	29.6
Northeast 3 Islands	19	26.8
Total	71	100.0

3. Dependent variable

In the studies of many researchers such as Stopford and Wells(1972) and Hennart(2005), define more than 95% of ownership share of foreign subsidiaries as sole ventures. A joint venture is defined as a case in which more than 5% and less than 95% of the shares are owned. In this study, a value of 1 for a sole venture with a 95% or more ownership shares in accordance with this classification criterion and, if not, 0 for a joint investment, and divided into two groups to make a dummy variable(Stopford and Wells, 1972).

4. Independent variables

1) Differential products ability

The 5-point Likert scale is used as detailed variables for the development of new products prior to other companies, introduction of foreign technologies and strengthening alliances, diversification of production items, securing professional research manpower, and investment in R&D(Dess and Devis 1994; Miller 1998).

2) Network resources

Network resources were measured as the number of cooperative organizations a company has with external institutions and the utilization of

the network. The number of networks is the sum of the number of networks with large companies, foreign companies, various financial institutions, universities and research institutes, and government institutions, and network utilization was measured by the annual average frequency of external help over the past three years.

3) Entrepreneurship

To measure entrepreneurship, Macdougall's(1994) study were used. Accordingly, entrepreneurship was categorized into initiative, risk-taking, and innovation, and each was measured with 3 measures, and a total of 9 measures were measured on a Likert 7-point scale.

4) The degree of transfer of tangible & intangible assets

By manipulating the variable with the internalization superiority into the degree of transfer of tangible and intangible assets, which are company management resources. This variable was composed of measurement items such as utilization of company-specific technology and know-how, utilization of production, management, marketing, and R&D manpower, utilization of transportation and storage facilities, and joint development and utilization of raw materials(Kim and Hwang 1992). Each was measured on a Likert 5-point scale.

5) Labor market conditions

The labor market environment such as the employee turnover rate was measured using the Likert 5-point scale

6) Institutional environment

The Likert 5-point scale was used as a measuring variable for the level of legal restrictions in the investment area in China and the degree of

satisfaction with the incentive policy of the investment area.

7) Degree of competition in the same industry within the investment area

The number of current and potential competitors in the investment area market, the degree of instability in the market share of the investment area, the burden of local companies' competitive advantage, and the degree of interest in the investment area market of third country companies were measured on a five-point scale.

5. Control variables

One of the biggest concerns in China's business is the selection of investment areas. In China, each regional economic zone is divided into tangible and intangible barriers, so the preferential benefits for investment companies are different for each region, and the investment environment and the degree of openness of the regional economy are different. So, regions are selected by evaluating intangible resources. For this reason, in this study, the degree of economic opening of the investment area was set as a control variable(Kang and Lee 2007).

6. Validity and reliability analysis

In order to verify the validity of the independent variables, an exploratory factor analysis was conducted, and the eigenvalue criterion was designated as 1. Commonality represents the ratio explained by the extracted factors, and variables with low commonality are removed from factor analysis. In general, if the commonality is 0.4 or less, it is determined that the commonality is low and can be removed. Reliability was confirmed by calculating the inter-item reliability, and if this coefficient was .6 or higher, it was judged as good reliability.

7. Validity of firm factors

The results of the exploratory factor analysis of the firm factors are shown in Table 2. The eigenvalues for factor 1 were 3.633, eigenvalues for factor 2 were 2.768 and eigenvalues for factor 3, 2.190, with variance rates for factor 1 being 25.953%, factor 2 being 45.723%, and factor 3 being 61.366%. Among the variables, factor 1 and factor 3 were extracted as two factors as entrepreneurship, and factor 1 with a higher eigenvalue, was used for analysis. In this factor analysis, the commonality of the product diversification variable was 0.336, which was removed from the factor analysis. Item internal consistency was found to be 0.766 for product differentiation ability, 0.675 for network resources, and 0.854 for entrepreneurship.

Table 2. Exploratory factor analysis of firm factors

Division	Factor1	Factor2	Factor3	Commonality
Risk-taking entrepreneurship8	0.841	0.052	0.077	0.716
Initiative entrepreneurship6	0.824	-0.043	0.001	0.681
Risk-taking entrepreneurship9	0.780	-0.193	-0.195	0.684
Initiative entrepreneurship4	0.734	0.131	0.325	0.662
Initiative entrepreneurship5	0.702	0.348	0.273	0.689
Risk-taking entrepreneurship7	0.668	0.100	-0.191	0.493
Securing technical manpower	0.173	0.780	0.044	0.640
R&D investment	0.241	0.745	0.009	0.613
Priority development of new products	-0.098	0.736	0.081	0.557
Introduction of foreign technology and strengthening of partnership	-0.191	0.735	-0.214	0.622
Diversification of production items	0.064	0.563	-0.123	0.336
Innovation entrepreneurship1	-0.111	0.018	0.851	0.737
Innovation entrepreneurship3	0.045	-0.107	0.774	0.613
Innovation entrepreneurship2	0.087	-0.064	0.733	0.548
Eigenvalue	3.633	2.768	2.19	
Variance(%)	25.953	45.723	61.366	

8. The validity of the internalization factor

The results of the exploratory factor analysis of internalization factors are shown in Table 3. The eigenvalue for factor 1 was 1.650 and the eigenvalue for factor 2 was 1.531, and the total variance for factor was 79.519%. Factor 1 and Factor 2 were extracted from the utilization of the company's tangible and intangible resources, which are two factors: the utilization of the company's tangible assets and the utilization of the company's intangible assets. The inter-item reliability coefficient was 0.789 for tangible assets and 0.674 for intangible assets.

Table 3. Exploratory factor analysis of internalization factors

Division	Factor1	Factor2	Commonality
Utilization of joint development of raw materials	0.921	0.002	0.848
Utilization of production and transportation storage facilities	0.886	0.207	0.827
Utilization of technical know-how	0.077	0.864	0.753
Utilization of technical manpower	0.109	0.861	0.753
Eigenvalue	1.65	1.531	
Variance(%)	41.243	79.519	

9. Validity of Chinese investment environmental factors

Table 4 shows the results of the factor analysis on the Chinese investment environment factors. The eigenvalue for factor 1 was 1.764, the eigenvalue for factor 2 was 1.402, and the eigenvalue for factor 3 was 1.191, and the total variance for factor was 62.237%. In factor 2, the employee turnover rate with the highest loading amount was extracted, and in factor 3, system satisfaction with the highest loading amount was extracted. The inter-item reliability coefficient was found to be 0.562, the degree of competition in the same industry within the investment area.

Table 4. Exploratory factor analysis of Chinese investment environment factors

Division	Factor1	Factor2	Factor3	Commonality
Burden of competitive advantage	0.779	-0.005	-0.222	0.656
Market share instability	0.723	0.205	-0.02	0.566
Number of competitors	0.638	0.086	0.383	0.561
Worker turnover rate	-0.057	0.893	-0.046	0.803
Degree of legal regulation	-0.305	-0.669	-0.042	0.543
System satisfaction	0.071	0.083	0.856	0.744
Worker requirements	0.355	0.317	-0.509	0.485
Eigenvalue	1.764	1.402	1.191	
Variance(%)	25.198	45.226	62.237	

V. Results and Discussion

Logistic regression analysis was performed to verify the hypothesis of this study model. Factors influencing the decision of each investment type were analyzed with the dependent variable investment type as sole venture (1) and joint venture (0). When the regression coefficient is positive, the independent variable increases the probability of choosing a sole venture, and when it is negative, it can be interpreted as increasing the probability of choosing a joint venture. In this study, firm factors; product differentiation ability, network resource utilization, and entrepreneurship, internalization factors; The degree of transfer of corporate tangible and intangible assets, Chinese investment environmental factors; labor market conditions, institutional environment and competition in investment areas were set as independent variables. In addition, the degree of economic opening of the investment area was set as a control variable. The analysis results are as shown in Table 5. Among the variables that represent the firm factors that determine the type of direct

investment in China for Korean SMEs, differential products ability, degree of transfer of tangible assets, and competition in the same industry, which are factors in China's investment environment, are all were found to have a negative effect. That is, as the degree of transfer of tangible assets of a company is lower, companies tend to prefer sole venture, and when the level of competition among the same industry in the investment area is lower, companies tend to choose sole venture. Therefore, hypothesis 4-1, 4-2 and hypothesis 7 are supported. The firm factor, differential products ability, was also found to have a statistically negative effect, but it was different from the predicted sign, which did not support hypothesis 1.

Table 5. Results of logistic regression analysis on factors that determine investment types

Variable		B	S.E.	p	Exp(B)
Control variable	Investment amount	0.064	0.629	0.919*	1.066
	Differential products ability	-0.994	0.426	0.020**	0.37
Independent variables	Entrepreneurship	-0.094	0.392	0.810	0.91
	Network resources	0.045	0.057	0.427	1.046
	Degree of transfer of tangible assets	-0.806	0.437	0.065*	0.447
	Degree of transfer of intangible assets	-0.435	0.417	0.296	0.647
	Competitiveness in the same industry	-0.894	0.405	0.027**	0.409
	Labor market conditions	0.13	0.396	0.743	1.139
	Institutional environment	0.188	0.395	0.634	1.207
	-2 Log likelihood		50.558		
Chi-square		11.132			
Sig.		0.194			

*p<.10, **p<.05

1. Firm factors

As a result of the analysis, among all the variables consisting of the firm factors, network resources had a positive effect, but did not appear to be statistically significant, and thus did not affect the decision of investment type. Hence, the hypothesis 2 that the more network resources there are, the more companies will prefer sole investment to joint ventures, failed to support the hypothesis 2. Network resources can have an impact on SMEs in Korea to make direct investments in China, but they do not have a direct impact on the decision of direct investment type. According to the survey results of this study, although the level of cooperation between industry-academia in the network of companies conducting sole venture is high, the level of cooperation between companies and international cooperation is very low. On the other hand, companies that conduct joint ventures have a balance between international cooperation, cooperation between companies, and industry-academia cooperation, and not only joint ventures, but also other forms of investment. Therefore, excellent network resources do not necessarily take the form of sole venture, which is a highly controlled mode when establishing a direct investment strategy in China. Rather, SMEs that make good use of their networks go abroad by exporting and licensing rather than direct investment.

The results of the analysis of the effect of entrepreneurship on the decision of the investment type show that entrepreneurship has a negative effect on the decision of the direct investment type of SMEs and is not statistically significant. They failed to support hypothesis 3 that they would prefer to sole venture. Although entrepreneurship is an alternative as a new growth engine for a company, it must consider the conditions under which entrepreneurship can be exercised. The conditions will include a wide variety of factors that can influence a company's decisions. In other words, it interacts with the uncertainty, hostility, diversity of the external environment, and the age, structure, and size of the company, which is the internal environment, to

influence the decision of a company's investment strategy. In addition, according to the survey results of this study, most of the companies in the survey were small in size, low in business years, and mainly concentrated in labor-intensive manufacturing industries such as textiles, clothing and food and beverages, and small investments were the mainstream. It can be seen that the preference for sole venture was not determined by the effective entrepreneurship of the top management, but that there were other distinct monopoly advantages that could reduce foreign costs. For these reasons, the hypothesis that the higher the entrepreneurship is, the more companies prefer to sole venture was not supported.

It was found that the differentiated products ability, which is a firm factor, had a statistically negative effect, but it was different from the predicted positive sign, which did not support the hypothesis that the greater the differential products ability, the more the company prefers sole venture. As found in previous studies, the ability to differentiate products is one of the most important factors among the advantages of a company. Due to the inherent weaknesses of SMEs, though SMEs have quality and technology, they are vulnerable in brand development and overseas marketing, such as building customer awareness in the local market and increasing product value compared to Chinese products, and local protection of the developed products is weak. Therefore, it can be proposed that joint ventures are preferred over sole ventures.

2. Internalization factor

The analysis results show that the degree of transfer of corporate intangible assets has a negative impact on the decision of direct investment form in China. The transfer of knowledge, which is an intangible asset of a company, plays an important role in reinforcing technology-based capabilities and facilitating the process of R&D, producing, and selling products using new

technologies, thereby deriving inputs into specific performance. Under the knowledge-driven economy, the source of corporate competitiveness is the technological competence of a company, the source of corporate competitiveness is the technological competence of a company. However, although Korean SMEs possess certain technological capabilities, the level of R&D investment and activation of research activities and the level of utilizing the created knowledge is relatively lower than that of large companies. The export growth rate of Korean SMEs is lower than that of large companies, and the proportion of SMEs among all Korean exports is on a continuous decline. It can be assumed that one of the reasons is the low degree of transfer of intangible assets of SMEs, and it can negatively affect the decision of SMEs' FDI. In addition, as a result of the study, the lower the degree of transfer of tangible assets, the higher the tendency for SMEs to prefer sole venture in direct investment in China. The reason why a company invests more resources directly abroad is that it is more efficient to conduct intra-company transactions rather than using the market to conduct transactions of tangible assets such as raw materials as well as intangible assets required for overseas management. As analyzed above, SMEs that participated in this survey had a high level of cooperation between industry-academia, but the level of cooperation between companies or international cooperation was still incomplete. SMEs that are difficult to expand their logistics network for pioneer the Chinese domestic market, such as installing logistics warehouses at major investment bases, will prefer sole venture to procure resources through internal transaction rather than trading resources in external markets when investing directly in China.

3. China's investment environment factor

It was found that only the degree of competition in the same industry had a statistically negative(-) effect. As Korean SMEs are relatively backward in

ecological conditions, making them vulnerable to their survival base. Large companies are fundamentally restricted from R&D and growth due to strict unit price and profit control, and as a result, SMEs are being turned away from excellent human resources, and as a result, SMEs are shrinking further. With China emerging as the base of the global manufacturing industry or IT industry, it is becoming more difficult for Korean SMEs with such vulnerabilities to maintain international competitiveness. Therefore, SMEs seem to be gaining competitiveness based on regions with low competition rather than regions with high competition in the industry.

On the other hand, it was found that the better the labor market conditions, the less SMEs prefer to sole venture when investing directly in China. Korean SMEs have rich experience in labor-intensive industries during the period of rapid economic growth. Therefore, it has a comparative advantage in the management of low-wage labor overseas such as China because of its excellent management ability in organization, production, and labor. It seems that even if labor market conditions deteriorate in the Chinese investment environment, SMEs can also enter into joint ventures with large companies, and that SMEs can make foreign direct investment through cooperation by industry type.

In addition, as a result of analyzing the influence of the institutional environment on the decision of the investment type, it was found that the institutional environment did not have a significant effect. When looking at the regulations for SMEs, there are many different types. Regulations on startups and business activities, wage changes, health and safety standards, and regulations on tax and foreign trade can be divided into three categories: economic regulation, social regulation and administrative regulation. Economic regulation is often used by governments to influence resource allocation, including restrictions on entry and exit from markets, regulation through fiscal and credit policies, and trade restrictions. Social regulation is used to control corporate behavior, mainly in the fields of health and safety, environment and labor, and administrative regulation is aimed at promoting

administrative efficiency in the public and private sectors. Looking at China's investment environment, China's regional economy is characterized by different levels of regulation for foreign companies in each investment area, as well as different levels of control over economic, social and administrative regulations. As the companies surveyed in this study are concentrated in the resource-seeking manufacturing sector, these companies are invested by the local government because the procurement cost burden due to the procurement of production facilities, distribution facilities and raw materials is higher than the compliance cost of the local government's regulations. Although there are many institutional benefits such as incentives and the institutional environment is relatively good, SMEs reduce transaction costs by conducting direct investment into China through joint venture rather than sole venture. In other words, institutional environmental level of the investment area may have an effect on the direct investment of Korean SMEs in China, but it does not have a direct effect on the decision of the direct investment type.

VI. Conclusion

This study empirically analyzed factors affecting the decision of Korean SMEs' direct investment in China based on Dunning's Eclectic theory and transaction cost theory. As a result of the empirical analysis, it can be seen that the lower the utilization of tangible resources of a company, the more the sole investment is preferred over the joint venture.

The main implications to be presented through this study are as follows.

First, according to the results of this study, most of the direct-invested companies preferred sole venture over joint venture. The fundamental reason can be interpreted as the pursuit of smooth management of tangible assets such as domestic production facilities and intangible assets such as accumulated experience and knowledge.

Second, the most important factor in the direct investment of Korean small and medium-sized manufacturing companies into China is the selection of a manufacturing location, which includes local procurement of labor and raw and subsidiary materials, and various legal regulations on foreign investment companies. As wages and land prices rise in China, the effect of reducing production costs is gradually disappearing, as well as changes in foreign investment policies such as the revision of the labor law for foreign investment companies, SMEs entering China must prepare appropriate countermeasures. Korean SMEs considering entry into China need to avoid investing only in reducing production costs and low wages.

The limitations of this study and future research directions are as follows.

First, it may be difficult to generalize the results of this study due to the small number of samples. In future research, it is absolutely necessary to carefully design data collection processes by which survey return rates are increased and more valid data are obtained. With higher sample sizes and much less sample biases, the generalizability of empirical results and the representability of samples can be further justifiable. Second, KOTRA's data used in this study is clustered by region, which is very vulnerable to investment incentives and follower effect dependent on the leading MNE's entry in that region. In future studies, these factors should be neutralized or moderators should be introduced as a new research model.

References

- Agarwal, Sanjeev and Sridhar N. Ramaswami. 1992. "Choice of foreign market entry mode: Impact of ownership, location and internalization factors." *Journal of International Business Studies* 23(1), 1-27.
- Anand, Jaideep and Andrew Delios. 2002. "Absolute and Relative Resources as Determinants of International Acquisitions." *Strategic Management Journal* 23(2), 119-134.
- Anderson, Erin and Hubert Gatignon. 1986. "Modes of foreign entry: A transaction cost analysis and propositions." *Journal of International Business Studies* 17(3), 1-26.
- Bello, Daniel C., Shirish P. Dant and Ritu Lohtia. 1997. "Hybrid governance: the role of transaction costs, production costs and strategic considerations." *Journal of Business & Industrial Marketing* 12(2), 118-133.
- Birley, Sue. 1985. "The role of networks in the entrepreneurial process." *Journal of Business Venturing* 1(1), 107-117.
- Buckley, Peter J. and Mark Casson. 1976. "A long-run theory of the multinational enterprise." in *the future of the multinational enterprise*, edited P. J. Buckley and M. C. Casson, 32-65. London: Palgrave Macmillan.
- Caves, Richard E. 1971. "International corporations: The industrial economics of foreign investment." *Economica* 38(149), 1-27.
- Chen, Haiyang and Michael Y. Hu. 2002. "An analysis of determinants of entry mode and its impact on performance." *International Business Review* 11(2), 193-210.
- Harrigan, Kathryn Rudie. 1985. *Strategies for joint ventures*. California: Free press.
- Hennart, Jean-Francois. 1991. "The transaction cost theory of the multinational enterprise." in *the nature of the transnational firm*, edited C. Pitelis and R. Sugden, 79-126. London: Routledge.

- Hymer, Stephen H. 1960. "The International Operations of Nation Firms: A Study of Foreign Direct Investment." Ph.D. Dissertation. Cambridge: MLT Press.
- Kang, Sung Jin and Hong Shik Lee. 2007. "The Determinants of Choice of South Korean FDI in China." *Japan and the World Economy* 19(4), 441-460.
- Kindleberger, Charles Poor. 1969. "American Business Abroad." *The International Executive* 11, 11-12.
- Kim, W. Chan and Peter Hwang. 1992. "Global Strategy and Multinational's Entry Mode Choice." *Journal of International Business Studies* 23(1), 29-53.
- Knight, Gary A. 2001. "Entrepreneurship and strategy in the international SME." *Journal of International Management* 7(3), 155-171.
- Larson, Andrea. 1991. "Partner networks: Leveraging external ties to improve entrepreneurial performance." *Journal of Business Venturing* 6(3), 173-188.
- Lecraw, Donald J. 1984. "Bargaining power, ownership, and profitability of transnational corporations in developing countries." *Journal of International Business Studies* 15(1), 27-43.
- Lee, Jang Kyu. 2020. "Analysis of the strategies of major small and medium-sized enterprises in China." Institute for Foreign Economic Policy.
- Luo, Yadong. 2001. "Determinants of Entry in an Emerging Economy: A Multilevel Approach." *Journal of Management Studies* 38(3), 443-472.
- MacMillan, Ian C. 1983. "Preemptive strategies." *The Journal of Business Strategy* 4(2), 16-26.
- Madhok, Anoop. 1997. "Cost, value and foreign market entry mode: The transaction and the firm." *Strategic Management Journal* 18(1), 39-61.
- McDougall, Patricia P. and Benjamin M. Oviatt. 2003. "Some Fundamental Issues in International Entrepreneurship." *Entrepreneurship Theory & Practice* 18(27), 1-27.

- Nakos, George, K. D. Brouthers and R. Moussetis. 2002. "Greek and Dutch SMEs Entry Mode Choice and Performance: A Transaction Cost Perspective." in Proceedings of the 28th Annual Conference of European International Business Academy (EIBA), Athens (Greece), 1-32.
- Park, Young Ryeol and Jeong Hoon Kim. 1998. "Analysis of Determinants of Korean Overseas Joint Venture Ownership: A Transaction Cost Theoretic Approach." *International Business Journal* 9, 55-70.
- Park, Jae Gon. 2021. "China's Foreign Trade and Korea-China Trade." *China Industrial Economy Brief*, 15-27.
- Romme, A. Georges L. and Isabelle MMJ Reymen. 2018. "Entrepreneurship at the interface of design and science: Toward an inclusive framework." *Journal of Business Venturing Insights* 10, e00094.
- Starr, Jennifer A. and Ian C. MacMillan. 1990. "Resource cooptation via social contracting: Resource acquisition strategies for new ventures." in *Strategic Management Journal* 11, 79-92.
- Stopford, John M. and Louis T. Wells Jr. 1972. *Managing the multinational enterprise : Organization of the firm and ownership of the subsidiary*. New York: Basic Books.
- Williamson, Oliver E. 1975. *Markets and Hierarchies: Analysis and Antitrust Implications: A Study in the Economics of Internal Organization*. New York: Free Press.
- _____. 1979. "Transaction-cost economics: the governance of contractual relations." *The journal of Law and Economics* 22(2), 233-261.
- _____. 1989. "Transaction cost economics." *Handbook of Industrial Organization* 1, 135-182.

국문요약

한국 중소기업의 해외직접투자시 소유권 결정요인에 관한
실증적 연구 -중국에 진출한 제조업을 중심으로

이병희 ■ 한양대학교
남미연 ■ 한양대학교
장유진 ■ 한양대학교

본 연구는 한국 중소기업의 대 중국 직접투자형태 결정에 미치는 요인들을 Dunning의 절충이론과 거래비용이론에 입각하여 실증적으로 분석하였다. 우선 이러한 요인들을 기업요인, 내부화 요인 및 중국투자환경요인 이 세 가지로 구분하였으며 기업특성과 관련된 변수로 제품차별화 능력, 네트워크자원 및 기업가정신을, 내부화 요인과 관련된 변수로 기업 유·무형자산의 이전정도를, 그리고 중국 투자환경과 관련된 변수로는 제도적 환경, 노동시장 조건 및 동종산업 경쟁정도에 관한 가설을 설정하였다. 다음으로 이러한 요인들이 한국 중소기업의 대 중국 직접투자형태 결정에 어떠한 영향을 미쳤는지를 실증적으로 분석하였다. 실증분석은 중국에 직접투자를 하고 있는 71개의 한국 중소제조기업을 대상으로 이루어졌다. 분석결과는 다음과 같다. 기업요인, 내부화 요인 그리고 투자환경요인의 세부변수를 통하여 설정한 7개 가설 중, 내부화 요인인 기업 유형자산의 이전정도와 중국투자환경요인인 투자지역 내 동종산업 경쟁정도만 가설을 지지하는 것으로 나타났다. 즉 기업 유형자산의 이전정도가 낮을수록 합작투자보다 단독투자를 선호한다는 것과 투자지역 내 동종산업의 경쟁정도가 낮을수록 합작투자보다 단독투자를 선호한다는 것을 알 수 있다. 본 연구가 중국에 직접 투자하고자 하는 한국 중소기업의 투자유형 결정에 많은 시사점을 제공하기를 기대한다.

주제어: 해외직접투자, 절충이론, 거래비용, 소유지분결정요인

