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Foreign Direct Investment Projects of Korean Companies

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Abstract

This paper investigates announcement effects of the outward foreign direct investment (FDI) projects of the Korean multinational companies. Although the FDI is considered corporate activity that can provide various benefits beyond financial resources, the most previous research focused on macro analysis such as country-level and industry-level analysis instead of the firm-level study, which is required to decide the investment project from a management perspective. Thus, this study examines the relationship between the outward FDI activities of the Korean corporations and their financial performance to fill the gap in this area.

Keywords: Foreign direct investment, Multinational companies, Korea.

JEL Classification Codes: F21, F23, G15

1. Introduction

Global foreign direct investment (FDI) activities have surged exponentially due to the decreased cross-border restrictions on international capital flows (Doukas & Lang, 2003). It is widely believed that foreign direct investment positively affects the national economy as well as the firm's profitability such as the increased productivity, technology transfers, employee training, international production network, and market expansion (Alfaro, Chanda, Kalemli-Ozcan, & Sayek, 2004). Emerging countries that jumped into the global market later than developed countries, are required to be actively engaged in FDI activities to establish their presence in the competitive global market.

As one of the rapidly industrialized countries in Asia, South Korea (hereafter Korea) is known as an export-focused economic structure. Since Korea started the process of capitalization

belatedly and lacks natural resources that can be traded internationally, a prior goal of the Korean corporations was to increase international capital exchange with foreign countries. This logic is also applied to foreign direct investment of the Korean corporations. As the exports are encouraged by the nationwide economic policies, the Korean firms have focused on the international transactions including FDI as a means to expand their global presence. Outward FDI from the corporations in some fast-developing countries in Asia, represented by Korea and Taiwan, is known to have distinct characteristics compared to other third world multinational enterprises (Dunning, Hoesel, & Narula, 1997). For example, such outward FDI activities have been supported by the government sponsorships for the purpose of the technology development. As opposed to the Chinese outward FDI, which focused on stabilizing the domestic supply of natural resources, the Korean outward FDI mainly aims to the market expansion and the relocation of manufacturing facilities.

From management perspective, FDI can be a double-edged sword generating a great amount of revenues and requiring an enormous capital investment concurrently. Although FDI activities generally have a positive impact on the economic growth, the firm-level study is insufficient to conclude that the corporations can mostly get the advantage of outward FDI activities. Thus, we examine the value creation of the outward FDI to shareholder wealth based on the firms' financial data. In this paper, we focus on the outward FDI conducted by the major Korean multinational corporations after 1990. The reason to concentrate on the period from the 1990s is that the cross-border capital flows of Korea started to increase significantly from the early 1990s (Cho, 2003).

The first part of the paper reviews the previous studies regarding the importance of FDI activities on the performance of multinational companies as well as the overall trends of outward FDI from Korea. In the second section, the data and the research methodology are illustrated along with the hypothesis. Lastly, in addition to the result of the analysis, we conclude with a discussion of the findings with the implication on the management decision.

2. Literature Review

Due to the uncertainty of the result, it is important for man-

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agers to decide whether or not to pursue outward FDI to improve the firm's profitability. It has been studied that outward FDI activities generally affect the corporations' financial performance in a positive way. Dunning (1994) pointed out that the majority of FDI activities originates from countries that are willing to devote themselves on R&D. As a result, FDI enhances the innovative capacity of the firm, since the government policy promoting outward FDI leads to productive R&D and domestic innovative capacity of the home country.

Some papers focus on the factors that generate active FDI flows using firm-specific data. In general, profitability, efficiency, output, and employment are used as the main criteria to decide whether the FDI was effective enough or not on the firm level (Yüce & Zelaya, 2014). Hayakawa, Lee, and Park (2013) determined that home country characteristics played an important role on the firm's FDI decision-making process based on the firm-level empirical data in Japan, Korea and Taiwan. In three countries, as the wages in the home country increased, more manufacturing firms are likely to shift their production facilities abroad; a 10% increase in the home country wages resulted in a 25% increase in the number of firms investing abroad. On the contrary to this, the host country wages and the number of firms investing abroad turned out to be in inverse relationship. In other words, this study revealed that the major determinant in FDI is to minimize production costs by relocating the manufacturing facilities to the countries with lower wages.

In addition, it turned out that the larger and more profitable firms are more willing to take part in FDI, while investing in countries with favorable business environments such as friendlier or simpler regulations (Yüce & Zelaya, 2014). The study investigates the FDI made by the multinational companies into China and India between 2003 and 2008, and concludes that a 10% increase in the size of the total assets is associated with a 2.1% increase in the size of the FDI projects (Yüce & Zelaya, 2014). This means that the growth of the firm may lead to the increase in FDI activities, or vice versa.

In traditional FDI studies, it is known that firms are more likely to invest in less developed countries based on the intention of diversification. Yet, some papers demonstrate that Korean corporations have different motivations according to the target country of FDI; for instance, low-wage and the access to strategic assets are major motives in FDI towards developed countries (Kim & Rhee, 2009). Kim and Rhee (2008) points out that the outward FDI should be examined at the firm level, which is one of limitations of their study.

The Korean institution KOTRA (Korea Trade Investment Agency), which supports dealing with global economic issues and conducting research on investment-related laws and regulations, was exemplified as an exceptional case that encouraged domestic corporations to promote their outward FDI flows. Although Korea is categorized as part of East Asia, the pattern and motives of outward FDI from Korea is different from the adjacent countries in East Asia. According to the research, Korean corporations prefer investing in economies with higher degree of openness, when the domestic GDP is higher (Fung, Garcia-Herrero, & Siu, 2009). On the other hand, companies in China and

Taiwan placed an importance on the distance between home and host country and foreign reserves are important for Japan (Fung, Garcia-Herrero, & Siu, 2009).

Before 1997 Asian financial crisis, both inward and outward FDI flows of Korea began to increase considerably in the 1990s with outward FDI outpacing inflows before this financial crisis. After Korea successfully recovered from the financial crisis, outward FDI increased continuously by exceeding inflows again because Korean firms, especially those in information and communication technology, developed their R&D capacity overseas. Hill and Jongwanich (2009) also stated that outward FDI from East Asia including Korea has been growing rapidly despite the global financial crisis of 2008, with an increase in cross-border M&A activity by 16.1 percent. Thurbon and Weiss (2006) mentioned iPark initiative as an example of outward FDI from Korea. iPark initiatives are collaborative projects between the Korean government and IT start-ups to build up world-class IT sector. After the first iPark (iPark Silicon Valley) established with government funding in 2000, Korean companies succeeded to expand into American consumer market through a negotiated partnership with large distributors in the USA (Thurbon & Weiss, 2006).

Park (2014) reported that the total FDI of Korea significantly increased from 2007 onwards, even though the amount of outward FDI slightly declined in 2009 due to the global financial crisis. He also analyzed the host country that the outward FDI heading and revealed that the Korean companies have invested mostly in Asia (45%), following North America (24%) from 1995 to 2013. He concluded that the corporations preferred to invest in countries with minimal risk, which was interpreted as the partnership between the two countries. Dent and Randerson (1997) argues that the large amount of outward FDI from Korea stems from the Korean economic structure, which has inherent structural weaknesses and its dependence on foreign technology. Thus, Korean conglomerates had experienced the pressure to expand the outward investment. The research analyzed the FDI into Europe in 1990s, and concluded that the corporations raised the outward FDI since they remain under-represented in Europe region.

As shown in the overall trend of outward FDI from Korea, the Korean outward FDI activities were mainly affected by major firms' financial capacities which related to their performance. Despite the significance of understanding the difference in each company, previous research was mainly conducted based on the aggregated data for the entire country or industry, while treating the firms as a homogenous group. The firm-level study is essential to analyze the impact of FDI on the firm and develop empirical theory.

Using firm-level data of the selected manufacturing companies, Lee (2010) identified that outward FDI into less developed countries was associated with lower growth in firm employment and higher growth in capital intensity, which was resulted from the relocation of production lines. On the other hand, outward FDI into developed countries was mainly realized in the purpose of market expansion, so that the parent firm's activities do not change significantly after the FDI (Lee, 2010).

Furthermore, some distinct patterns are demonstrated accord-

ing to the destination of FDI from Korean corporations. Shin, Mirza, and Kim (2009) examined the patterns and performance of FDI from Korea to China by industry. Some independent variables such as size of parent company and years of operation did not have distinct relationships with financial performance of the companies, e.g. their operating profit on sales and net profit on sales. On the contrary, the amount of investment and ownership were significantly related with performance measures in the electronics industry.

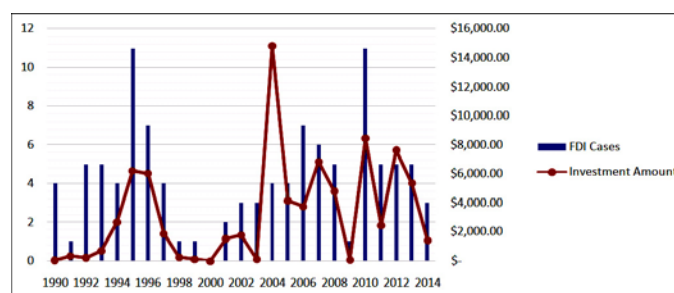
At the firm-level study, the relationship between FDI activities and trades was another major area of interest; whether international trades either replace or promote FDI, and vice versa. Lim and Moon (2001) focused on individual foreign subsidiaries of the Korean multinational companies and mentioned that outward FDI promoted exports if the subsidiaries are in less developed countries. In addition, the positive relationship between FDI and exports was proved in a declining home country industry (Lim & Moon, 2001), hence outward FDI may benefit the trade balance of home country under certain conditions. Lee and Yun (2006) analyzed the firm-level data on FDI from Korea and found out that there is little difference in the firm performance by entry modes of FDI, which is contrary to the typical hypothesis. Still, Chang and Rhee (2011) revealed that accelerated FDI activities can be a profitable strategy for firms, especially firms from emerging markets, which need to globalize swiftly to struggle with global competitors.

Outward FDI is a way to enhance long-term profitability for a firm from emerging markets through combining its internal assets and foreign assets synergistically. Although outward FDI has significant impacts on the firms' performance, many studies have focused on the national characteristics of outward FDI from macro perspectives. Thus, notwithstanding its importance for the corporate management, firm-level studies about impacts of outward FDI are currently insufficient, and this paper will fill this gap through this research.

3. Data Analysis and Methodology

We examine the foreign direct investments of the Korean multinational companies using the Bloomberg database and press releases between 1990 and 2014. We eliminate those transactions that we do not get complete information. The announcement data and issue-specific information such as the size of investment, the target country of investment, and the purpose of FDI were retrieved to verify each case. Due to the domination of the economy by chaebols a large portion of the outward FDI was made by the conglomerates. As the data for smaller amount of investment are not available on Bloomberg, only the investments exceeding USD \$100 million are included, and the scope of the study is narrowed down to multinational companies. After looking at all the FDI cases from the Korean corporations during the period between 1990 and 2014, we ended up with the 107 projects which have complete data required for the analysis. In addition, some corporations repeated

the investment on the same facility several times; for instance, after building the manufacturing facility, the company built additional factories to increase the capacity and improve the yield at the facilities. To prevent the unnecessary duplication of the sample data, we excluded the second or third investment on the same facility, and included the first investment exclusively. Figure 1 shows our sample in different years.



<Figure 1> The FDI Cases Categorization by the Announcement Date (in million).

The yearly trend of outward FDI from 1990 to 2014 was fairly similar to the previous research (see Figure 1). As Hill and Jongwanich (2009) revealed, the overall amount of outward FDI from Korea has continuously raised since 1990. Yet, the amount occasionally declined due to the national economic condition and the impact of global financial crisis.

The outward FDI of Korea has been actively studied from various perspectives. Nevertheless, most research was based on the macroeconomic scope such as the entire country and the industry. Thus, our study focuses on the firm-level data analysis to develop appropriate FDI strategies for the corporate management.

The total 107 cases of outward FDI are used to calculate abnormal returns. The detailed case list is included in Table 1. The total investment amount of the selected cases was \$81,783 million, which is equivalent to the average transaction value of \$764 million per case. As shown in Table 2, approximately 85% of the total projects are made by affiliates of major chaebols; for instance, Samsung Group has Samsung Electronics, Samsung SDI, Samsung Electro-mechanics, Samsung C&T, and so on. Among the chaebol groups, Lotte Group and Posco made the largest investment. In other words, Lotte and Posco focused on the heavy industry or primary metal manufacturing that require the large amount of capital investment in the initial stages. As shown in Table 3, the most predominant industry is electronic equipment manufacturing (26%), followed by transportation manufacturing (22%), and computer manufacturing (13%). The industry categorization is based on the North American Industry Classification System (NAICS) made by Canada of Statistics Canada (Minister of Industry, 2012). In terms of the total transaction value, computer manufacturing is the largest at \$15.8 billion, followed by transportation manufacturing (\$14.7 billion) and primary metal manufacturing (\$12.6 billion). Since Korea expanded its global presence by aiming for

<Table 1> List of FDI Cases of Korean Corporations for 1990 –2014(in million).

	Company	Value	Date	Country	Investment
1	LG Electronics	10	1990-01-24	Italy	build a refrigerator plant with two Italian firms
2	Samsung Electronics	6.8	1990-06-16	Hungary	build a CTV plant as a JV with Orion Electronics
3	Daewoo Heavy Industry	10	1990-09-26	Belgium	acquire a hydraulic excavator manufacturer
4	Daewoo Electronics	37	1990-11-23	France	establish a CTV sales subsidiary with a home appliance distributor JBL
5	LG Electronics	351	1991-02-27	US	acquire a 5% stake of a US TV maker Zenith
6	Daewoo Electronics	30	1992-02-11	France	build a CTV plant
7	Samsung Electronics	15	1992-06-26	UK	build a CTV plant with the sponsorship of the British government
8	Samsung SDI	18.5	1992-07-17	Germany	acquire a state-owned CTV manufacturer WF
9	SK Chemicals Co	141	1992-12-16	Indonesia	build a polyester fabric manufacturing factory as a JV with Batic Keris
10	Samsung Electronics	30	1992-12-27	Portugal	build a semiconductor assembly plant with Texas Instruments
11	Hansol Holdings	92	1993-07-16	Australia	a 10-year investment in a forestry project
12	Hyundai Electronics	165	1993-08-21	US	acquire a 40% stake of Maxtor Corporation
13	Daewoo Corp	300	1993-08-27	China	build a cement plant
14	Daewoo Electronics	150	1993-10-31	France	build a CTV factory
15	Daewoo Electronics	3.8	1993-11-07	Poland	establish a CTV sales subsidiary
16	Samsung SDI	120	1994-08-03	Germany	acquire a CRT glass manufacturer FGT
17	Samsung Electronics	723	1994-10-18	UK	build an industrial park and consumer electronics plants
18	Hyundai Electronics	340	1994-11-11	US	acquire a semiconductor division of AT&T
19	Daewoo Motor	1,500	1994-12-01	China	build a car parts factory Yantai Engine Plant
20	Samsung Electronics	378	1995-03-01	US	acquire a 40% stake of AST Research
21	Daewoo Heavy Industry	200	1995-03-07	Czech	acquire a 50% stake of a commercial vehicle manufacturer Avia
22	LG Electronics	514	1995-07-01	Indonesia	build a CRT plant through a subsidiary LGEIN (LG Electronics Indonesia)
23	LG Electronics	99	1995-08-04	China	build an air conditioner plant with GE and a Chinese corporation
24	Posco	220	1995-09-30	Brazil	establish a 50/50 JV with CVRD (Companhia Vale do Rio Doce)
25	Samsung Heavy Industry	10.8	1995-10-14	UK	build a hydraulic excavator plant
26	Samsung Electronics	1,300	1995-11-05	US	build a NAND flash memory wafer plant
27	Daewoo Heavy Industry	1,100	1995-11-16	Poland	establish a JV Daewoo FSO Motor
28	Hyundai Motor Co.	1,100	1995-11-23	India	build a car manufacturing subsidiary HMIL (Hyundai Motor India Ltd.)
29	Hyundai Electronics	1,300	1995-12-03	US	build a semiconductor plant
30	Hyundai Heavy Industries	10	1995-12-09	Belgium	build a hydraulic excavator factory
31	Samsung Electronics	231	1996-03-31	Mexico	build a consumer electronics complex (CEP)
32	SK Holdings	250	1996-04-09	US	build a polyester film factory
33	Daewoo Shipbuilding & Marine Engineering	53	1996-05-22	Romania	acquire a 51% stake of Mangalia shipbuilding facility
34	LG Semiconductors	2,600	1996-07-11	UK	build a semiconductor and CEP
35	Hyundai Hysco	1,280	1996-08-26	Malaysia	establish a JV with the Terengganu foundation to make steel and aluminum-coated pipes

	Company	Value	Date	Country	Investment
36	Hyundai Electronics	1,500	1996-10-09	UK	build a semiconductor and CEP
37	Kumho Tire Co.	120	1996-12-02	China	build a radical passenger tire facility
38	Daewoo Electronics	400	1997-03-13	France	build a plant to manufacture CRT glasses for CTV
39	Samsung Electro-Mechanics	65	1997-05-09	Philippines	build a high-tech components manufacturing plant
40	Daewoo Motor	1,300	1997-09-19	Ukraine	establish a JV with AvtoZaz automotive factory to development of new models
41	Daewoo group	100	1997-11-24	Morocco	make an agreement with the Moroccan government for various economic projects
42	Daewoo Motor	267	1998-03-20	UK	establish a JV with LDV (Leyland DAF Vans) to build a van manufacturing facility
43	Samsung Electro-Mechanics	140	1999-04-06	Philippines	build a high-tech components manufacturing plant
44	LG Electronics	1,500	2001-07-06	Netherlands	establish a JV with Koninklijke Philips Electronics N.V. for CRT manufacturing
45	Hyundai Motor Co.	30	2001-11-13	US	establish Hyundai Kia Motors Design and Technical Centre
46	Hyundai Motor Co.	1,700	2002-03-29	US	establish HMM (Hyundai Motor Manufacturing Alabama)
47	Samsung Electronics	50	2002-06-15	Mexico	build a plant to manufacture home appliances
48	Hyundai Mobis	40	2002-10-30	US	build a factory to manufacture car components
49	Hyundai Motor Co.	50	2003-01-28	US	establish Hyundai America Technical Centre in the Mojave Desert
50	LG Chem	15	2003-07-01	China	build a plant to produce lithium-ion batteries for electronic cars
51	Hyundai Motor Co.	54	2003-09-09	Germany	establish the Europe R&D centre and HME (Hyundai Motors Europe)
52	Hynix Semiconductor	2,000	2004-02-27	China	build two DRAM manufacturing plants with STMicroelectronics NV
53	Kia Motors	767	2004-03-02	Slovakia	build an engine production and assembly plant
54	SK Corporation	42	2004-08-18	Brazil	participate in the joint development of an oilfield with Devon Energy Corp.
55	Posco	12,000	2004-08-20	India	build a steel plant as a greenfield investment
56	Hankook Tire	328	2005-05-20	Slovakia	build a factory focusing on the automotive and electronic industries
57	LG Philips LCD	1,220	2005-06-23	Poland	build an assembly plant of liquid crystal displays
58	Samsung Electronics	20	2005-09-02	Slovakia	build a warehouse and logistics centre
59	Honam Petrochemical	2,600	2005-12-29	Qatar	build a petrochemical plant with an affiliate of Qatar Petroleum
60	Posco	262	2006-01-05	Mexico	build a galvanizing cold rolling plant with Daewoo International, POSAM, and local firms
61	Hyundai Motor Co.	1,200	2006-03-13	Czech	build a car manufacturing plant as a greenfield investment
62	Kia Motors	1,600	2006-03-13	US	establish KMMG (Kia Motors Manufacturing Georgia)
63	Kumho Tire Co.	155	2006-03-29	Vietnam	build a tire manufacturing facility at My Phuoc industrial complex
64	LG Electronics	150	2006-09-06	Russia	build a digital household appliance plant
65	Posco	361	2006-10-20	Vietnam	build a cold rolling and galvanizing plant at Phu My industrial complex
66	Posco	23	2006-12-27	Australia	acquire a 10% stake of the JV operating the Newpac mine
67	Samsung Electronics	525	2007-03-08	Slovakia	build a factory for LCD TV module
68	Hyundai Motor Co.	400	2007-06-08	Russia	build a plant to manufacture cars
69	SK Gas Corp	44	2007-07-27	China	acquire a total 32% stake of Pingding coal mine
70	Doosan Infracore	4,900	2007-07-30	US	acquire a heavy industry department of Ingersoll Rand

	Company	Value	Date	Country	Investment
71	STX Group	800	2007-10-23	Norway	acquire a stake of Aker Yards ASA to start building cruise liners
72	Lotte Shopping	185	2007-12-17	China	acquire a Chinese supermarket chain CTA Makro
73	CJ CheilJEdang Corp	2.5	2008-02-19	US	acquire a stake of the stem cell research firm Neuralstem
74	LG Display	2,800	2008-04-08	China	build a LCD panel fabrication plant
75	LS Cable Ltd	900	2008-06-11	US	acquire a wire and cable maker Superior Essex Inc.
76	Posco	404	2008-06-30	Australia	acquire a stake of Macarthur Coal
77	Hyundai Motor Co.	700	2008-09-19	Brazil	build a plant to manufacture small car models
78	Samsung Electronics	76	2009-12-22	Poland	acquire the appliance manufacturing facilities of Amica
79	Posco	1,600	2010-01-17	Australia	acquire a 15% stake of the iron ore mining project Roy Hill Holdings.
80	SK Networks Co.	1,000	2010-01-20	Canada	purchase ore with Canada's CLM (Consolidated Thompson Iron Mines)
81	Taekwang Power Holdings	2,000	2010-03-31	Vietnam	build a coal power plant with a Saudi Arabian partner ACWA Power
82	KEPCO	340	2010-07-05	Australia	acquire Bylong coal mine from Anglo American
83	Honam Petrochemical	1,250	2010-07-16	Malaysia	acquire a 72% stake of Titan Chemicals Corp.
84	KEPCO	515	2010-07-21	Indonesia	acquire a 20% stake of Bayan Resources
85	Hanwha Chem	370	2010-08-03	China	acquire a 50% stake of a Chinese PV cell maker Solarfun Power Holdings Co.
86	STX Energy	144	2010-08-29	Canada	acquire a Canadian gas field Maxhamish field
87	SK Networks Co.	700	2010-09-14	Brazil	acquire a stake of MMX Mineracao & Metalicos SA
88	Hankook Tire	353	2010-10-22	Indonesia	build a tire manufacturing plant
89	SK Engineering & Construction Co.	175	2010-11-29	Turkey	build a power plant as a joint investment with Doganlar Yatirim Holding
90	Posco	350	2011-01-05	Turkey	make a partnership agreement for a stainless steel plant with Kibar Holding
91	Daewoo International	350	2011-01-05	Turkey	make a partnership agreement for a stainless steel plant with Kibar Holding
92	Posco	477	2011-07-07	Thailand	build a stake of Thainox Stainless PCL
93	CJ CheilJEdang Corp	669	2011-08-15	Malaysia	invest in a biotechnology plant Kertih Polymer Park with Arkema SA
94	LG Chem	600	2011-08-25	Kazakhstan	build a petrochemical complex with local partners
95	Honam Petrochemical	5,000	2012-02-03	Indonesia	build an integrated petrochemical complex
96	Samsung Electronics	2,300	2012-03-21	China	build a semiconductor facility to manufacture NAND flash wafer fab
97	SK Hynix	248	2012-06-20	US	acquire LAMD (Link a Media Devices)
98	LG group	45	2012-06-28	US	acquire a 51% stake of Fuel Cell Systems
99	Hyundai Mobis	33	2012-08-22	Turkey	build an automotive module manufacturing plant
100	Samsung Electronics	2,000	2013-02-07	Vietnam	build a manufacturing facility for mobile phones
101	LG Electronics	1,500	2013-02-17	Vietnam	build an electronic products manufacturing and assembly factory
102	Samsung Electronics	111	2013-03-06	Japan	acquire a 3% stake of Sharp
103	Samsung Electronics	1,000	2013-03-25	Vietnam	build a mobile phone factory at Yen Phong industrial complex
104	Samsung Electro-Mechanics	750	2013-07-04	Vietnam	build a chip and electronic components plant
105	SK Innovation	367	2014-04-07	US	acquire two oilfields in Texas and Oklahoma
106	Kia Motors	1,000	2014-06-03	Mexico	build an automated manufacturing plant
107	Dongil Corporation	52	2014-06-30	Vietnam	build a textile plant at Loc An-Binh Son Industrial complex

manufacturing-focused development, most of the industry is classified as part of manufacturing industries. Interestingly, due to the inherent lack of natural resources in Korea, 10 projects of the total investments were made to acquire a stake of mines or oil field projects to secure natural resources.

<Table 2> Sample Statistics of Korean Outward FDI (in millions), 1990-2014.

Companies by Group	Total Number of Projects	Percentage	Total Amount
Samsung	21	19.63%	\$ 9,870.10
Hyundai	19	17.76%	\$ 13,269.00
Daewoo	15	14.02%	\$ 5,800.80
LG	13	12.15%	\$ 11,404.00
SK	10	9.35%	\$ 4,966.70
Posco	9	8.41%	\$ 15,697.00
Lotte	4	3.74%	\$ 9,035.00
CJ	2	1.87%	\$ 671.50
KEPCO	2	1.87%	\$ 855.00
Kumho	2	1.87%	\$ 275.00
Other	10	9.35%	\$ 9,939.00
Total	107	100%	\$ 81,783.10

<Table 3> The FDI Cases Categorization by Industry (in millions), 1990-2014.

Projects by Industry	Total # of Projects	Percentage	Total Amount
Electronic equipment manufacturing	28	26.17%	\$ 11,855.10
Transportation manufacturing	24	22.43%	\$ 14,745.00
Computer manufacturing	14	13.08%	\$ 15,822.00
Oil extraction and mining	10	9.35%	\$ 5,134.70
Chemical manufacturing	7	6.54%	\$ 10,534.00
Metal product manufacturing	6	5.61%	\$ 2,721.00
Machinery manufacturing	4	3.74%	\$ 4,930.80
Primary metal manufacturing	3	2.80%	\$ 12,623.00
Plastics products manufacturing	2	1.87%	\$ 370.00
Textile mills	2	1.87%	\$ 193.00
Utilities	2	1.87%	\$ 2,175.00
Other	5	4.67%	\$ 679.50

When a firm decides to expand into the foreign market, it is important to decide a mode of entry. In this study, we categorize the entry mode of the projects into five types based on the country-specific investment characteristics; overseas manufacture, strategic alliance, joint venture, acquisition, and wholly owned

subsidiary (see Table 4).

<Table 4> The FDI Cases Categorization by Entry Mode (in millions), 1990-2014.

Projects by Entry Mode	Total # of Projects	Percentage	Total Amount
Overseas manufacture	43	40.79%	\$ 45,707.80
Strategic alliance	17	15.89%	\$ 9,875.50
Joint venture	11	10.28%	\$ 7,336.50
Acquisition	27	25.23%	\$ 14,214.00
Wholly owned subsidiary	9	8.41%	\$ 4,649.80

Among them, overseas manufacture accounts for a 40% with 43 projects, and the total transaction amount is particularly large as at approximately \$45.7 billion. In other words, it is generally required for the corporation to invest a huge amount of capital to build plants or manufacturing facilities compared to other types of investment. According to the breakdown by the host country, which is shown in Table 5, Europe and Asia account for the largest portion with 34 cases (32%) respectively. Although the number of investment in Europe and Asia is the same, the total transaction amount is completely different; that of Asia was \$41.8 billion, which is three times larger than that of Europe (\$15.6 billion). This is because of the geographical distance between Korea and Europe and entry barrier of the European market. Due to this, the Korean corporations are required to organize a joint venture or partnership agreement to enter into Europe, so that the amount invested by one company reduced significantly.

<Table 5> The FDI Cases Categorization by Host Country (in millions), 1990-2014.

Projects by Host Country	Total # of Projects	Percentage	Total Amount
Europe	34	31.78%	\$ 15,634.90
Asia	34	31.78%	\$ 41,766.00
North America	20	18.69%	\$ 15,110.50
South America	8	7.58%	\$ 3,204.70
Middle East	5	4.67%	\$ 3,508.00
Oceania	5	4.67%	\$ 2,459.00
Africa	1	0.93%	\$ 100.00

Since most of the previous research in this area concentrated on the overall trends that can explain major determinants or generic trends of outward FDI, this paper evaluates the impact of FDI on each company's profitability. This paper fills the gap in the knowledge of existing studies and the paper is concerned with the firm-level financial performance of the outward FDI activities made by the Korean companies. The majority of the previous research suggest that outward FDI expansion is likely to improve the corporations' profitability. Thus, the following hypoth-

esis for the FDI announcements is tested:

Hypothesis: Outward foreign direct investment projects create positive and significant abnormal returns for multinational company shareholders.

The hypothesis is aligned with the traditional findings of the FDI studies investigated so far. It has been proved that larger firms are more likely to benefit through outward FDI since they are more internationalized and effective in the global expansion (Buch, Kleinert, Lipponer, & Toubal, 2005). As the majority of the selected Korean companies are relatively large, it is expected for them to boost their profitability through outward FDI flows.

We use the event study method which examines shareholder wealth gains based on the stock trading prices and abnormal returns. The event study methodology measures the impact of an economic event on the value of firms using the firms' trading prices (MacKinlay, 1997). The firms' financial profitability is judged by changes of the stock prices in relation to changes of the market index during the period that FDI activity is publicly announced. Yüce and Ng (2005) examined the announcement impact of M&A on 1,565 Canadian private and public companies. Based on the abnormal returns and cumulative abnormal returns of the companies, it was concluded that both the target and acquiring company had positive and significant abnormal returns for a two-day holding period (Yüce & Ng, 2005).

We assume that the announcement of FDI to the public will have a positive impact on the stock prices of the firms. During the period between 1990 and 2014, the 107 outward FDI projects done by the publicly listed Korean multinational companies are analyzed. We examine the long-term (250 days) performance before the announcement day and the short-term (50 days) performance after the announcement day for each case.

The announcement date of each project is collected from the financial press release and the daily closing prices of individual stocks and the market index data are retrieved from Bloomberg and Yahoo Finance. After calculating the returns of stock prices on each day, the abnormal returns (AR) compared to the market index (KOSPI Index) are computed. The announcement day is represented by $t = 0$. For each sample project ($i = 1$ to $i = 107$), the return on the security (R_{it}) for each day t , before and after the event, was calculated:

$$R_{it} = K_{it} + e_{it} \tag{1}$$

K_{it} is expected return reflecting changes in the market index, and e_{it} is the component of returns which is unexpected, equivalent to the abnormal return. When calculating the abnormal returns, the regression analysis is done. In other words, the AR of each day is the same as x-coefficient multiplied by the return on market index plus y-coefficient. The abnormal return for each day (e_{it}) is the same as the difference between the observed return and the expected return:

$$e_{it} = R_{it} - K_{it} \tag{2}$$

Thus, the abnormal return is considered as a direct measure of the unexpected change in shareholder wealth triggered by

the event. After calculating the abnormal return for each security, the abnormal return for each event day between day -20 to day 20 ($t = -20$ to $t = 20$) is computed:

$$AR_t = \frac{1}{N} \sum_{i=1}^N e_{it} \tag{3}$$

Lastly, the cumulative abnormal returns (CAR) of some selected periods were calculated to test the hypothesis. The CAR for each project (CAR_i) between certain periods (through day t_1 to day t_2) is defined as:

$$CAR_i(t_1, t_2) = \sum_{t=t_1}^{t_2} AR_t \tag{4}$$

The final CAR for the period between t_1 and t_2 is determined as the average of each project:

$$CAR(t_1, t_2) = \frac{1}{N} \sum_{i=1}^N CAR_i(t_1, t_2) \tag{5}$$

4. Results and Discussion

We study the cumulative abnormal returns of the Korean companies that have made foreign direct investment between 1990 and 2004. After calculating each company's abnormal returns, the average abnormal returns for each day of the short-term (40 days) are computed and shown in Table 6. The t-statistic of each day is calculated to decide the significance of the value. Interestingly, the shareholders start earning significant returns as early as on day -20 and -19, but the returns are not statistically significant. On day -7, the abnormal return is positive at 0.28%, and the abnormal return is positive and significant at 0.42% at the next day (day -6). Although the return on day -5 was negative, the abnormal returns were continuously positive from day -4 to day 5 except one day (day 3). Thus, the shareholders of the company can benefit from excess returns during approximately two weeks around the announcement date.

<Table 6> FDI Cases Abnormal Returns

Event Day	Abnormal Return	t-statistic	Event Day	Abnormal Return	t-statistic
-20	0.03%	.198	1	0.30%	1.617*
-19	0.20%	1.199	2	0.11%	.483
-18	-0.16%	-.788	3	-0.51%	-2.664*
-17	-0.13%	-.813	4	0.02%	.114
-16	-0.06%	-.345	5	0.17%	.898
-15	-0.26%	-1.453	6	-0.22%	-1.380
-14	0.02%	.118	7	-0.50%	-2.253*
-13	-0.01%	-.033	8	0.03%	.080
-12	-0.20%	-.970	9	0.00%	.015
-11	0.08%	.460	10	-0.26%	-1.131
-10	0.12%	.630	11	0.08%	.376
-9	-0.11%	-.680	12	0.16%	.743

-8	-0.24%	-1.394	13	0.14%	.575
-7	0.28%	1.245	14	-0.19%	-.834
-6	0.42%	2.176*	15	-0.48%	-2.359*
-5	-0.25%	-1.915*	16	-0.11%	-.595
-4	0.19%	.956	17	0.12%	.553
-3	0.09%	.472	18	-0.25%	-1.203
-2	0.11%	.558	19	-0.06%	-.335
-1	0.06%	.325	20	-0.10%	-.530
0	0.44%	1.867*			

* Statistically significant at 0.05 level or less for a two-sided t-test

<Table 7> FDI Cases Cumulative Abnormal Returns

CAR Range	Cumulative Abnormal Return	t-statistic
CAR (-5, 5)	0.73%	1.148
CAR (-2, 2)	1.01%	1.944*
CAR (0, 2)	0.85%	2.064*
CAR (0, 5)	0.53%	1.091
CAR (0, 10)	-0.42%	-.610
CAR (0, 20)	-1.13%	-1.260
CAR (0, 30)	-1.78%	-1.936*
CAR (-10, 10)	0.23%	.233
CAR (-40, 40)	-3.02%	-2.215*

* Statistically significant at 0.05 level or less for a two-sided t-test

On the announcement day and the next day (day 1), the returns are positive at 0.44% and 0.30% respectively, and both of them are statistically significant. On day 3, the abnormal returns turned out to be negative at -0.51%, and we assume that this decline is triggered by the constant price increases from day -4 to day 2. In other words, the investors who have gained excess returns due to the surge in shares are likely to liquidate their securities by selling part of their shares, which resulted in the price reduction. The proceeding price increase between day 4 (0.02%) and day 5 (0.17%) supports our assumption as well. The slight decline on day 6 (-0.22%) and day 7 (-0.50%) can be explained by the same inference. Thus, the abnormal returns support our hypothesis that the announcement of outward FDI creates positive shareholder returns exceeding the return on market index.

As shown in Table 7 the holding period returns or cumulative abnormal returns (CAR) are also aligned with the findings of the abnormal returns. During the period of -2 and 2, the companies earn significant and positive return of 1.01%, and the return is also positive and significant within a two-day holding period (CAR 0, 2) at 0.85%. The five-day holding period (CAR 0, 5) and 10-day holding period (CAR -5, 5) also turned out to be positive at 0.53% and 0.73% respectively. However, the positive CAR seems not to last long. For instance, negative returns (-0.42%) started to show up only 10 days after the announcement (CAR 0, 10), and the returns (-1.78%) became significant

30 days after the announcement. Thus we can justify the hypothesis that the announcement of outward FDI generates significant and positive cumulative abnormal returns to shareholders of the company during the short-term holding period as long as two weeks.

5. Conclusion

The result of the study proved that the shareholders of the firms were able to earn significant positive returns due to the announcement of outward FDI activities between 1990 and 2014. Especially, the announcement effects on the shareholders' returns were significantly positive for a two-day holding period starting with the announcement day and a four-day holding period starting two days before the announcement. It means that the shareholders of companies would have earned the significant gain resulted from the announcement of FDI projects. This finding is consistent with a number of the previous studies that outward FDI benefits the corporations and their shareholders. Additionally, the corporation is more likely to benefit from not only the increased stock trading prices but also the positive and advantageous impacts of outward FDI, which were previously proved by numerous studies.

Since there has been no similar firm-level study regarding the Korean multinational companies, this study will assist the corporate management to refine their existing strategies or to decide the market expansion by outward FDI activities. The managers of each company can benefit from the practical guidance which is aligned with the findings of this study. Furthermore, this research will be a foundation to develop a comprehensive framework concerning the relationship between the amount of outward FDI and the improvement in financial profitability, even though the study was limited to the Korean corporations. As FDI is considered as a major vehicle in market expansion, this paper provides empirical evidence for the international investment decision.

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