

Current state of global business management
by Korean enterprises and the ripple effects
on the domestic economy in Korea

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Summary

Chapter 1. Background and purpose of this research

Since 2007, foreign direct investments total approximately \$ 20 billion, which represent more than 2% of the annual GDP. External trades of the Korean economy are changing rapidly from having been previously driven by trade to now overseas production of the present through investing directly in foreign countries. There are strong voices arguing that active overseas direct investments by Korean companies would have positive impact on strengthening the companies' competitiveness while having negative impacts on the domestic economy in Korea. So far, the effects of overseas direct investments made by Korean companies were analyzed mainly in terms of exports and imports, and there have been no analysis conducted concerning enterprises. Thereby, this report aims to comprehensively review and evaluate the possible impact of overseas direct investment by Korean enterprises on the domestic economy.

First of all, this research analyzes flows and structures of overseas direct investments, which are the most representative type of global management by companies, and the current state of overseas sales. In the third and fourth chapter, an empirical analysis was conducted on the effect of globalized employment by Korean companies on the domestic employment and investment, and in the fifth chapter we provide political implications.

As a method to evaluate economic effects, correlations were estimated using a regression analysis and nonparametric test. Dynamic relations between overseas investment activities and domestic economic activities were estimated under the dynamic panel analysis. In order to examine the causality of overseas investments, the propensity score matching methods and difference in differences were used.

This research is the first actual proof analysis using statistics of mother companies in Korea and comprehensively estimates the impact on employment, investments, exports/imports and labor productivity by using business panel data.

Chapter 2. Current state of global business management by Korean enterprises

Direct overseas investments by Korean companies have maintained a high level of 2 % compared to the GDP since 2007, and the investments are made mainly by large corporations. In particular, the share of investments aiming at market penetration has increased greatly; therefore, it was analyzed that Korean companies

have shifted their global business strategies from arms' length trade to market penetration through local productions.

In terms of proportion of exports by local corporations compared to their sales, that of Korean companies is lower than that of the US and Japan, so it can be determined that there is room for more globalization. With regard to trade between companies, it turned out that mother companies and local corporations are highly interdependent of each other in terms of imports. In short, it means that the share of internal trade through imports is high in Korean multinational companies. This means, in part, that as the sales of local corporations go up, there would be a bigger effect of increasing the exports of Korea. In addition, as purchase amounts of the mother company increase, the effect of raising profits would be bigger. In the end, it means that the higher the ratio of added values of mother companies, the further the amount of trade surplus expansion.

As a limit of a business analysis, it is hard to correlate and examine the statistics provided since the statistics offered by the Export and Import Bank of Korea and the Statistics Korea all provide one aspect of the current situation. It is necessary to explore business activities of multinational companies by integrating both statistical databases, but currently it is not possible to do that due to many reasons such as legislation. Due to active overseas manufacturing activities of companies, their activities are having increasing impact and correlation on the Korean economy. As a result, it is required to rearrange the statistics to figure out the above factors.

Chapter 3. Preceding research and methodologies

It is difficult to consider Korea's growth and development separately from external-oriented economic policies. As the expansion of international trade induced the historically unprecedented growth and development of the Korean economy, overseas direct investment along with an increase in trade volume is related to the enhancement of global competitiveness of Korean companies. However, there are no clear results that have been produced by an empirical study on the impact of outward foreign direct investment on the domestic economy. Although the domestic investment and employment should go up as a result of increased overseas direct investments, we cannot exclude the possibility of rather decreasing domestic employment and investment. In particular, in times when companies invest less and hire fewer workers domestically, the increase of overseas direct investment can be in many ways said as having a substitutive relationship with domestic economic activities.

As domestic and overseas activities of foreign investment companies are limited due to constraints on resources, limitations on production capacity and restrictions caused by market competition, it can be conceived that domestic and overseas production factors are having substitutive relations and an increase in overseas manufacturing activities would in turn decrease the domestic production. However, in contrast, rather than being limited by restrictions, overseas direct investments can serve as opportunities for companies to increase profits of domestic productions, raise domestic employment and investment and expand production by capturing

the opportunities to generate profits. Through overseas activities, companies are able to buy intermediary goods cheaply, thus allowing them to utilize more factors and expand production.

Under these circumstances, this report tries to examine the impact of overseas direct investment on the domestic economy in Korea and also conduct an empirical analysis of the following tasks. First, the report analyzes the impact of overseas direct investments on the domestic employment and investment. Second, it examines whether overseas investments raise profitability and competitiveness of domestic companies. Third, the research explores implications for discussions on whether overseas direct investments are tools for survival for companies through global business management.

In order to estimate the economic impact of overseas direct investments, an empirical analysis is conducted as follows. First, a regression analysis and a non-parametric test are used to assess the correlations between overseas investment and domestic employment, investment and labor productivity. Second, by taking into consideration of the different characteristics of domestic companies, the empirical analysis examines the dynamic correlations by assessing the impact of overseas direct investments that would be placed on the domestic economy. By using panel data on companies, we conduct a dynamic panel analysis. Third, through a propensity score matching, we examine the correlations between overseas investments and others. Unlike test materials, there are limits in assessing the treatment effects in terms of observed materials. In order to calculate the treatment effect, there should be a comparison with the control group, since problems of sample

selection or arbitrary selection by researchers may occur with regard to the separation of the two groups, and such problems do not happen in terms of test materials. Therefore, matching methods and difference in differences are used to solve the issues of such selections related to differences between the treatment group and the control group. By using company level panel materials based on a research on the business activities of Korean companies performed by Statistics Korea, we attempted to generate results of the empirical analysis through assessment and evaluation on the impact of overseas direct investments on the domestic economy. Through a dynamic panel data model, we assessed the correlations between overseas direct investments and domestic employment, investment and labor productivity. In addition to that, by using a propensity score matching and difference in differences, we analyzed the causality between overseas direct investment and domestic employment, investment and labor productivity.

Chapter 4. Result of analyzing ripple effects

As a result of analyzing the dynamic correlations and the causality under the dynamic panel data analysis, the impact of overseas direct investments on the domestic economy can be summarized as follows. First, overseas direct investments are highly correlated to the employment, investments, and exports of domestic companies in Korea, but the dynamic connectivity is not significant. The substitutive relationships discovered in the preceding research turned out to be a correlation, but the figures are not significant in

terms of dynamic connectivity or the causality.

Second, overseas investments of businesses have correlations, and a dynamic connectivity with labor productivity and sales and the causality between them was significant. This means that sales of companies and their labor productivity have correlations, dynamic connectivity and the causality altogether.

Third, in the dynamic panel data analysis, it turned out that as overseas direct investment goes up, profits of companies earned through local production increase. This result indicates that overseas direct investment has effects of cutting production cost. Companies investing in foreign countries take up a significant portion of trade volume including exports and imports of the domestic market, and much of the exports and imports are trade relating to foreign investment companies. Thus, it seems that there is dynamic connectivity between overseas direct investment and profits of companies. Although there are possibilities of replacing domestic productions as overseas direct investments increase profits of companies, there also are possibilities of expanding domestic production as the investments raise exports and profits of companies.

Fourth, in the dynamic panel analysis, it turned out that exports within companies increased as overseas direct investments went up. This result can be interpreted as the effect of overseas market expansion coming from overseas direct investment. Thereby, as the increase of overseas investment expands internal trade of companies according to overseas operation, thus it has effects of increasing sales and labor productivities thanks to reduced production costs by local manufacturing.

As a result of comparing with preceding studies conducted by

Desai, Foley, Hines(2005, 2009), the effects of overseas direct investments on the domestic economy turned out to be different in part. In studies conducted by Desai, Foley, Hines(2005), overseas direct investments and domestic investments of American multinational companies were complementary with each other. In addition, in studies conducted by Desai, Foley, Hines(2009), it turned out that overseas business activities of American multinational companies were complementary with their domestic employment and investments.

As these studies were about American multinational corporations, the analyzed data was different as well as the analysis method from those used in this paper, as these studies employed an analysis of time series and instrumental variable. With simple correlations, it is hard to assess complementary or substitutive relations since enterprises penetrating into a country through overseas direct investment have issues of making choices in terms of scale or productivity.

This study analyzed the economic effect of overseas direct investments on the domestic economy by focusing on data concerning corporations. A dynamic panel model was used as an analysis method to examine the dynamic connectivity between overseas direct investments and domestic employment, investment and labor productivity, and the cause and effect analysis was done by using the propensity score matching and difference in differences methods.

By using panel documents on companies, this paper analyzes the effects of overseas direct investments on the domestic employment and investments, so the results can be different from the

economic effect at the macro-economic level. Also, the analyzed data was collected from 2008 to 2012, so in order to assess the economic effect, it is required to examine sufficient data with longer period. Given the fact that overseas direct investments have increased markedly since the mid-2000s and are reflecting the recent economic conditions home and abroad, this paper can be seen as a more recent analysis of economic effect of overseas direct investments than other preceding studies.

Findings in this study do not fully support the idea that overseas direct investments improve their competitiveness through R&D and innovation, although the investments enhance labor productivity. Given the characteristics of analysis materials, it is difficult to consider costs spent on investment through research and development, so it is required to evaluate and analyze in the longer term perspective. Therefore, it is hard to consider that overseas direct investments have dynamic connectivity with enhancement of companies' internal capacity to innovate; rather, the investments are interpreted as inevitable survival strategies to strengthen the global competitiveness of companies through local production and expanding markets. As overseas direct investments increase sales of companies, it can be said that the investments have both negative and positive income effects on the domestic employment and investment.

When looking at the countries and regions the companies are advancing into, the companies mostly penetrated into low income countries to cut production costs. Also when looking into industrial features of local corporations receiving overseas direct investments, the share of overseas direct investments in labor intensive

industries was high. Therefore, it was determined that overseas direct investments are giving out opportunities of employment and investment to low waged and low income countries, and concerns may grow bigger concerning taxes, investments in education, training, SOC. It is needed to forge policies to make overseas direct investments to increase sales of companies while raising the domestic employment and investments together.

Social interests and concerns over overseas direct investments should not be overly interpreted, as the investments have the effects of both replacing the domestic employment and investments and enhancing trade and the domestic productivity through exports and imports within companies. It seems that the existing overseas direct investments have significant effects of replacing the domestic employment in labor intensive economies, as the investments were made in low income countries. Along with this, in the domestic industries, which are capital intensive and technology intensive, it was estimated that increase in trades within companies would lead to the enhancement of sales and productivity. In the future, favorable policies would be economic policies that lead sustainable economic developments by pursuing the virtuous cycle in which overseas direct investments of companies strengthen their internal capacity to innovate and global competitiveness, thus creating jobs and increasing investments in the domestic market.

Chapter 5. Conclusion and the implications

It was analyzed that in terms of overseas direct investments

made by Korean companies, mostly large business groups are expanding their investment scope of countries, and companies have changed their global business structures into one that can penetrate into a country through local production, as seen in the rapid surge in ratio of investment for advancing into overseas countries. As a result of assessing the dynamic correlations and the cause and effect of overseas direct investments, first it turned out that companies' overseas direct investments have correlations with employment, investment and exports, but dynamic connectivity was not significant. Second, overseas direct investments of companies have correlations and dynamic connectivity with labor productivity and sales. It turned out that overseas direct investments did not have significant impact on the domestic employment and investment. Third, as more overseas direct investments are made by companies, the imports of the companies from local production go up, which in turn lead to the increase of sales.

As for policy implications, first of all, it is urgently required to make policies so that overseas direct investments of Korean multinational companies can spur investment or employment. Second, if overseas direct investments are made as part of survival strategies under the global business management, it would be needed to reinforce policy supports such as workforce training or provision of information. Third, it is necessary to build up basic materials on the effects of overseas direct investments on the domestic economy and the correlations by rearranging statistics on global business management of companies.