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The Effects of Trade and Investment Liberalization on Korea's FDI

Jong Duk Kim Research Fellow, Multilateral Trade Team, Department of International Trade (kim.jd@kiep.go.kr)
Seungrae Lee Research Fellow, Trade and Investment Policy Team, Department of International Trade (srlee@kiep.go.kr)
Jun-Gu Kang Senior Researcher, Trade and Investment Policy Team, Department of International Trade (jgkang@kiep.go.kr)
Hyuk Hwang Kim Senior Researcher, Trade and Investment Policy Team, Department of International Trade (hhkim@kiep.go.kr)

1. Global Establishment of Trade and Investment Liberalization

As WTO negotiations keep failing and are being stalled to reach a comprise on lowering trade barriers around the world, countries are turning to bilateral and regional talks to advance the co-operation on trade rules. According to WTO statistics, there are currently 258 regional trade agreements (RTAs) in force of which 69% became effective after 2000. Korea, a WTO member reluctant to be involved in RTAs with certain countries, joined the emerging movement. After signing a free trade agreement (FTA) with Chile in 2004, Korea entered into multiple FTAs with 49 other countries, with seven individual ones, including the U.S. and India, and three regional trade blocs, including EFTA, ASEAN, and EU. It is currently negotiating FTAs with other countries, such as Indonesia, Vietnam, and Turkey. While most of RTA talks have incorporated rules on industrial tariff and non-tariff barriers, services, and trade remedies, countries now seek to co-operate on other areas of policymaking, such as rules on investment.

2. The Effects of Investment Liberalization on FDI

Along with the advances in transportation and telecommunication infrastructures, multinational firms were able to expand in global markets through establishing cross-country production and distribution networks. The increasing trend of global foreign direct investment (FDI) flows have now reached the USD 1.45 trillion level and are expected to reach the USD 1.6 trillion level by 2014 (World Investment Report, 2013).[1] Taking into account that most governments are keen to attract and facilitate foreign investment as a means for productive capacity building and sustainable development, and that today's global economy is characterized by global value chains that involve production processes in multiple locations through intra-firm trade, FDI is expected to be a more prevail phenomenon in the global trade arena. With regard to FTA, while trade and investment liberalization is getting more associated to FDI by which countries seek to include investment provisions in current and upcoming trade agreements, prior reports and papers that analyze the effects of FTA were limited to economic effects on goods and services. Using the case of Korea FTA, this report analyzes economic consequences of investment provision inclusions in trade agreements on the outward and inward FDI of Korea.

3. Analysis of Investment Provisions

There exist substantial bodies of work in examining the relationship between FTA and FDI. By constructing a binary variable that represent whether the FTA between countries are in force, most of researches used a gravity model framework of trade and investment to find that FTA is positively associated with inward and outward FDI flows (Blomstrom et al., 2000; Moon and Yoon, 2011). However, examining the effects of FTA by constructing a binary variable that indicate whether FTA is in force does not fully capture the important contents of the agreement. In particular, using an FTA dummy variable implies that agreements signed with different countries include the same provisions on trade and investment that neglect the different characteristics of FTA partners. In an effort to supplement the drawback of previous researches, we collect all relevant information on substantive investment provisions contained in all Korea FTAs in force as of May 2013. Following the methodology developed from Lesher and Miroudot (2006), we constructed indices of the extensiveness of investment provisions based on five broad categories: (1) Right of establishment and non-discrimination in the pre-establishment phase, (2) non-discrimination for post-establishment, (3) investment in services, (4) investment regulation and protection, and (5) investor-state dispute settlement. Using the information on the elements of each sub-category, we designed the index by normalizing the information on a zero-to-one scale, where zero indicates the absence of a given provision and one implies the most FDI-friendly provision in the list of possible options. Table 1 reports the aggregate index of investment provisions of Korea FTAs that are in force, which is computed as a simple average of indices of five broad categories explained above. The aggregate index indicates that the Korea-Peru FTA has the highest score (0.93), followed by the Korea-US FTA (0.90), while the Korea-ASEAN FTA recorded the lowest score (0.53). These scores imply that Korea's free trade agreement with Peru or the U.S. has more of the investment provisions con-

[1] UNCTAD, Geneva, 2013. World Investment Report. United Nations Press, New York and Geneva

tained in the agreements, while free trade agreement with ASEAN countries has less than that of other countries. With regard to FTA partner's income-level, the table shows that index score does not exhibit distinct patterns. For instance, while the Korea-U.S. FTA records the highest index score of investment provisions, the Korea-EU FTA has the second lowest score of provisions. On the other hand, trade agreements with trade-integrated regions contain less of the investment provisions than agreements with single countries. While the average index score of Korea's FTA with EFTA, ASEAN, and EU is 0.63, the average index score of Korea's FTA with single countries is 0.79. This provides evidence that upon inclusion of an investment chapter in free trade agreements with integrated regions that consist of several participating countries, they are unlikely to conclude agreements with fairly extensive investment provisions.

Table 1: Final index of investment provisions

RTA	Year into force	Final index
Korea-Chile	2004	0.78
Korea-Singapore	2006	0.68
Korea-EFTA	2006	0.70
Korea-ASEAN	2009	0.53
Korea-India	2010	0.66
Korea-EU	2011	0.65
Korea-Peru	2011	0.93
Korea-US	2012	0.90

4. Results

Using indices constructed from the substantive investment provisions in trade agreements, we specify the gravity model framework to examine the effects of FTA on inward and outward FDI. To analyze the net effects of FTA on FDI, we included several control variables, such as countries' GDP, trade openness, and GDP per capita ratio between Korea and foreign countries that can affect FDI flows between countries. Taking into account that countries agree on bilateral investment treaties regardless of FTA talks, we also added a binary variable that represent whether bilateral investment treaties between Korea and foreign countries are effective. Estimating the model separately for Korea's inward and outward FDI at the aggregate level, the results presented in Table 2 indicate that the aggregate index on five categories of investment provisions are positively associated with inward and outward FDI from Korea such that Korea's inward and outward FDI is likely to increase to FTA partners that contain extensive investment provisions in agreements. Alternatively, by constructing a binary variable that represents whether the FTA partner is a developed or developing nation relative to Korea based on the GDP per capita ratio between countries and examine its interaction effects with index of investment provisions on FDI flow, we show that FTA partners' characteristics and investment provisions have significant effects on Korea's inward FDI. In particular, the results indicate that inward FDI flows are likely to increase from developed FTA partners that contain extensive investment provisions in the agreement, whereas inward FDI flows are likely to decrease as agreement involves high levels of investment provisions from partners that are considered to be developing countries. On the other hand, while high levels of investment provisions involved in the agreement increase Korea's outward FDI flows, it does not have significant effects when interacted with partners' characteristics.

When we perform the same empirical specifications by adding an investment provision index computed from each category, ones that are not reported in the table, we found that the magnitude of investment provisions becomes larger as investor-state dispute settlement is included in the chapter of the agreement. On the other hand, the estimation results suggest that FTA has heterogeneous effects on outward FDI from different industry sectors based on categories included in investment provisions. For instance, FDI flows from manufacturing sectors are likely to increase to FTA partner as agreement involves high levels of investment provisions in general, while FDI flows from wholesale and retail sectors are more likely to increase as agreement involves extensive investment provisions on investment in services and investment regulation and protection. In regard to FTA partners' characteristics, we find that investment provisions have positive effects on outward FDI flow from manufacturing sectors to partners that are considered to be developing countries relative to Korea, while outward FDI flow from wholesale and retail sectors are likely to increase to partners that are considered to be developed countries relative to Korea and that include high levels of investment in services in the agreement.

Table 2: Summary of regression results at aggregate level

Variables	Inward FDI	Outward FDI
Joint market size	6.958*** (1.697)	2.02*** (0.609)
GDP per capita ratio between Korea and foreign countries	-0.836 (0.746)	-1.944 (1.457)
Dummy variable for BITs	0.705 (0.809)	0.559** (0.259)
Index of investment provisions (IIP)	0.171* (0.097)	0.581** (0.269)
Interaction between developing nation and IIP	-0.116** (0.045)	-0.591 (0.445)
Interaction between developed nation and IIP	0.308** (0.124)	0.119 (0.365)
Number of observations	1296	840
Adjusted R-squared	0.72	0.856

Robust standard errors are in parentheses. ***, **, * denote significance at 1%, 5%, and 10%, respectively.

5. Implications

Using the case of Korea FTA, we find that inward and outward FDI flows are positively associated with high levels of investment provisions in the trade agreement. In particular, by constructing indices of substantive investment provisions based on specific categories included in trade agreement and estimate their effects on both inward and outward FDI flows, we contribute to FTA literature by providing in-depth analysis on the relationship between FTA and FDI. Based on the estimation results, we expect our analysis to be practical for policymakers in the execution of upcoming FTA negotiations. In addition to showing the positive effects of investment provisions in agreement on FDI flow, heterogeneous effects of specific categories in investment provision on FDI flows from different industry sectors guide us on which category to emphasize in FTA talks when negotiating with different economies that can benefit certain domestic industry sectors. KIEP