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URATA, Shujiro
RIETI

BAEK, Youngmin
Fukuyama University



Research Institute of Economy, Trade & Industry, IAA

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Impact of International Investment Agreements on Japanese FDI: A Firm-level Analysis¹

Shujiro URATA

(Waseda University/ RIETI)

Youngmin BAEK

(Fukuyama University)

Abstract

In this study, we examine the impact of Japan's international investment agreements (IIAs) on the locational choice of Japanese firms' foreign direct investment (FDI) by considering the quality of IIAs. We estimate the conditional logit model covering 94 host countries, 16 manufacturing sectors, and 12 non-manufacturing sectors from 2000 to 2019. We found that the presence of IIAs, particularly comprehensive and high-level ones, has a positive impact on Japan's FDI. On the contrary, the past incidence of investor–state disputes has a negative impact. These effects are found to be particularly strong for FDI by small and medium-sized enterprises. High regulatory quality is found to attract FDI, whereas the positive impact of IIAs in attracting FDI is strong in countries with low regulatory quality.

Keywords: International investment agreements (IIAs), BITs, FTAs, ISDS, Foreign direct investment

JEL classification: F15, F21

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Corresponding author: Research Institute of Economy, Trade and Industry (RIETI), Asian Development Bank Institute (ADBI), Institute of Developing Economies (IDE), Waseda University, Japan; E-mail: surata@waseda.jp.

1. Introduction

Foreign direct investment (FDI) has become an important international economic activity in recent decades. The world FDI stock has increased approximately 18 times from \$2.2 trillion in 1980 to \$41.4 trillion in 2020¹. As a result of the notable increase in the world FDI stock, the proportion of inward FDI stock in the gross domestic product (GDP) in the world increased significantly from 9.6% to 48.8% in 1990–2020, whereas the corresponding figure for exports to GDP increased from 15.3% to 20.8%².

Various factors may be identified for the increasing importance of FDI. For international investors, such as multinational corporations (MNCs), FDI has become a very important vehicle to construct value chains or supply chains. Such chains would enable these investors to achieve efficient performance in production and management. MNCs fragment their activities into various processes, such as research and development, manufacturing, and sales. By undertaking FDI, they locate these fragmented processes in countries and regions where these processes can be conducted most efficiently. For local firms in FDI recipient countries (host countries), FDI is an important source of technology, which plays a critical role in improving their competitiveness. Local firms can acquire technology by doing business with foreign firms and imitating their practices.

FDI also attracts the attention of government policymakers in FDI-supplying (home) and FDI-receiving (host) countries. For the home country, an expansion of overseas activities by MNCs through FDI improves the efficient use of resources, such as labor and capital, contributing to economic growth. This case is particularly important for a country like Japan, experiencing a declining labor force and a shrinking domestic market. A successful operation of MNCs in foreign countries would increase an inflow of profits to Japan, contributing to increased investment in various activities, including research and development. For the host country, FDI brings multiple benefits. In addition to technology transfer, discussed above, FDI generates employment and investment, which in turn would contribute to economic growth.

The preceding discussions indicate an interest in attracting FDI for potential host countries and achieving a successful operation of MNCs for the home countries. These expectations of host and home governments have led to the enactment of international investment agreements (IIAs). IIAs include bilateral investment treaties (BITs) and free trade agreements (FTAs) with a provision of investment. IIAs are argued to promote FDI as they provide foreign investors with not only protection from unexpected events but also a rules-based investment environment. In such an environment, rules are clearly established and applied fairly and transparently. Recognition of these merits of IIAs has led to their rapid expansion in the 1980s and early 1990s (Figure 1). The rate of increase declined in the mid-1990s and continued to decline in the 2010s. One reason for the decline is the increasing concern by the host government about the reduction in their policy space, as IIAs

¹ Inward FDI stock obtained from StatsAPEC, <http://statistics.apec.org/>

² The figures are taken from StatsAPEC, <http://statistics.apec.org/>

tie their hands in formulating and implementing policies. The growing concern may be observed from an increasing number of investor–state dispute cases. Very few cases existed in the early 1990s. However, the number began to increase in the early 2000s and reached approximately 80 cases in 2015 and remained at about that level since then³. Another reason for the decline is the decrease in the number of possible IIAs as the number of IIAs increased. Moreover, skepticism about the effectiveness of IIAs in promoting FDI on the parts of policymakers and researchers increased. Empirical studies on the impact of IIAs on FDI have shown mixed results, as will be shown in Section 2.

Japan was rather slow in enacting IIAs compared with other countries. Japan’s first IIA was with Egypt in 1978 (Figure 2). The number of Japan’s IIAs remained at a low level until the turn of the century when Japan began to actively establish IIAs. The cumulative number of IIAs enacted by the Japanese government from 1978 to 1999 was 6. The corresponding number for 2000–2010 was 16 and then increased to 28 for 2011–2022. As of the end of February 2022, Japan’s cumulative IIAs amounted to 51, 34 BITs and 17 FTAs. Notably, Japan’s IIAs increased rapidly after the 2000s, when the rate of increase in IIAs in the world slowed down. This somewhat contrasting development in the establishment of IIAs may reflect that Japan was a slow starter in establishing IIAs and thus had actively caught up with other countries.

In light of the preceding discussions on the increasing importance of FDI and contrasting developments between the world and Japan’s IIAs, this study examines the impact of IIAs on FDI in the case of Japan. Specifically, we examine if IIAs contribute to the increasing probability of the host country in attracting FDI from Japan. Urata (2015) analyzed the impact of Japan’s IIAs (FTAs and BITs) on FDI by Japanese firms by examining the data covering 97 countries from 1980 to 2012. He found that both FTAs and BITs have a positive impact on FDI by Japanese firms. Our study is an extension of Urata (2015) by incorporating several new elements. First, we cover 2000–2019. Second, we consider the quality of IIAs. Specifically, the provisions of IIAs, such as pre- and post-establishment national treatment, performance requirement, and investor–state dispute settlement (ISDS), are considered. Third, recognizing the importance of minimizing risks for investors, we examine the past record of incidences of getting involved in disputes. Fourth, we consider regulatory quality as an indicator of the quality of institutions of the host countries. Finally, we would like to emphasize that we take a different approach from previous studies. As will be discussed in detail below, we study the effect of IIAs on the probability of an IIA partner being selected as FDI destination for Japanese firms, whereas previous studies examined their effect on the magnitude of FDI to the IIA partners. Thus, our study sheds a new light on this issue.

The rest of the paper is structured as follows. Section 2 reviews the literature on the impact of IIAs, mainly BITs, on FDI. Section 3 overviews FDI by Japanese firms, and Section 4 discusses Japan’s IIAs. Then, Section 5 presents the methodology for our empirical analysis and the data used

³ See UNCTAD, World Investment Report 2021, Figure III.4. Trends in known treaty-based ISDS cases, 1987–2020, p. 129. (https://unctad.org/system/files/official-document/wir2021_en.pdf)

for the analysis, and Section 6 presents and discusses the results of our analysis. Finally, Section 7 concludes the study with some policy recommendations.

2. Impact of IIAs on FDI: A Survey of Literature

The issue of the importance of IIAs in increasing FDI has attracted considerable attention from policymakers and researchers. Many empirical studies have been conducted since the 1990s. In addition, several useful survey articles have been published, including Jacobs (2017) and Pohl (2018). The results of empirical studies are mixed in that some studies found a positive impact, whereas others did not. Although with mixed results, many studies found that BITs are effective in increasing FDI if certain conditions such as high institutional quality of the host economies and/or strong dispute settlement provisions in BITs are satisfied. Let us briefly summarize important findings from some selected studies.

One of the first rigorous empirical studies on the impact of BITs on inward FDI is Hallward-Driemeier (2003). She analyzed bilateral FDI outflows from 20 economies in the Organisation for Economic Co-operation and Development to 31 developing economies for the 1980–2000 period and did not find a positive impact of BITs on FDI flows. One interesting finding is the positive impact of the interaction term between BITs and institutional quality measured by various indicators, such as the rule of law and corruption. This result suggests that BITs are more effective in inducing FDI in settings of higher institutional quality and where institutions are already being strengthened. The author argued that this finding undermines a central rationale for some less developed economies that enter into these agreements hoping to bypass the need to strengthen institutions.

Tobin and Rose-Ackerman (2005) also found that BITs are ineffective in increasing FDI. They conducted two types of analyses. One examines the impact of BITs on overall FDI inflows to 64 developing economies for the 1985–2000 period, whereas the other focuses on bilateral FDI flow from the United States to 53 economies for the 1980–2000 period. The authors considered that the latter analysis would reveal the direct impact of BITs, including indirect effects. Tobin and Rose-Ackerman did not find the FDI inducing effect of BITs in either analysis. However, they found that BITs are effective in attracting FDI in developing economies that achieved a certain level of political stability. This finding is consistent with the findings of Hallward-Driemeier in that BITs cannot substitute an unfavorable business environment resulting from political instability.

Some studies found that BITs and institutional quality are substitutes. Neumayer and Spess (2005) analyzed the impact of BITs on FDI inflows to 119 developing countries from 1970 to 2001. They included several variables capturing the quality of institutions, such as political constraint, political risk, government stability, and law and order in the host country, as explanatory variables. They found that both BITs and high institutional quality in developing countries attract FDI. They also found that an interaction term between institutional quality and BITs is negative and statistically significant in some cases. They interpreted the results indicating substitutability of

institutional quality and BITs in that the positive impact of BITs on FDI decreases as institutional quality rises. Busse et al. (2010) also found a substitutable relationship between BITs and institutional quality in the host country in their study of bilateral FDI flows from 28 source countries to 83 developing host countries from 1978 to 2014.

Recent studies considered the quality of BITs, particularly focusing on dispute settlement provisions. Strong dispute settlement provisions are hypothesized to promote FDI because they provide stronger protection. Frenkel and Walter (2018) investigated the impact of the strength of international dispute settlement provisions in BITs on inward FDI by developing an index that measures the strength of international dispute settlement provision of BITs. They applied this index to determine whether BITs positively affect bilateral and total FDI inflows and inward FDI stocks. Specifically, they conducted a panel data analysis using panel data covering 2,571 BITs involving 186 host economies between 1970 and 2016. They found that the presence of BITs is associated with greater inward FDI and that stronger international dispute settlement provisions in BITs are associated with greater inward FDI. These relationships are found not only for inward FDI from BIT partner economies but also from other economies, indicating the presence of the signaling effect of BITs. Furthermore, they found that the impact is larger for inward FDI to developing economies.

Aisbett, Busse, and Nunnenkamp (2018) examined the impact on FDI of compensation claims against developing host economies brought to dispute settlement by investors for alleged violation of BIT obligations. Their analysis was conducted on bilateral FDI flows for a panel of 83 developing host economies and 39 source economies, covering 1980–2010. They found that BITs do have a causal positive impact on FDI flows to developing economies but only for those hosts who have not had a BIT claim brought to arbitration. They labeled such an effect as the “BITs as deterrents” hypothesis and drew an important policy implication for developing economies, namely, the potential costs of dispute settlement provisions should no longer be ignored when engaging in BIT negotiations. In particular, small and poor host economies may need considerable technical support from international organizations, such as United Nations Conference on Trade and Development (UNCTAD), to strengthen their expertise and improve their bargaining position vis-à-vis highly developed source economies with regard to designing increasingly complex and binding investment provisions in BITs.

Dixon and Haslam (2016) analyzed the impact of BITs on FDI by considering the quality of BITs. In their study, the quality of BITs is measured by considering 13 aspects of an investment agreement from the perspective of flexibility given to the host government⁴. An agreement with limited flexibility is regarded as “high quality” to investors. Their data set covers 18 Latin American economies and seven of the largest North American, European, and Asian investors in the region

⁴ They are overall objectives (preamble); scope of application (definition of investment); right of establishment; treatment standard (national treatment and most-favored nation); expropriation standard; compensation standard; freedom of transfer; use of operational measures and advantages (performance requirements); promotional measures; dispute settlement type; precision and force of agreement; exceptions; and temporal phasing.

and signers of BITs: Canada, the United States, France, Germany, Spain, the United Kingdom, and the Republic of Korea. Their analysis found that ratified treaties that offer significant investment protection have some effect, whereas signed treaties do not. This finding suggests that credible commitment is an important causal mechanism for FDI. The treaties that reflect credible commitment are characterized by an expansive definition of investment, provisions on property rights, fair and equitable treatment, and expropriation. Moreover, these treaties are restrictive on governmental policy autonomy, curtailing the use of performance requirements, disallowing restrictions on capital, profit, and remittance transfers, and allowing for access to binding international arbitration.

Berger et al. (2013) examined the contents of BITs and regional trade agreements (RTAs) in their analysis of their impact on FDI. They selected the provisions on pre-establishment national treatment (PENT) and most-favored nations treatment (MFN), and ISDS for their analysis of the data covering bilateral FDI flows involving 28 source countries and 83 developing host countries for the period 1978–2004. The first two variables capture the level of openness of the FDI regime, whereas the last variable indicates the level of protection of FDI. They found that FDI reacts positively to liberal FDI admission rules under RTAs, whereas dispute settlement provisions are found to play a minor role. They also found that the mere existence of BITs attracts FDI.

Many empirical studies examined the issue at the aggregated sector level without considering the sectoral differences. This approach masks important differences in the degrees of risks associated with an investment in different sectors. For example, the risk of expropriation of investment with high sunk costs is high because taking over an investment that cannot easily be withdrawn is relatively easy for a government. Colen et al. (2016) examined the heterogeneous impact of BITs on FDI in different sectors. They argued that an empirical investigation of heterogeneous effects is important because the impact of FDI on the host economies differs among various sectors. They also argued that the results from the investigation may give important information for the host economy governments in formulating their policies toward FDI. Their sample consists of FDI data for seven different sectors (i.e., agriculture, mining, manufacturing, banking, utilities, private services, and real estate) in 13 economies in Central and Eastern Europe and the Former Soviet Union over the period 1994–2009. They found that BITs are effective for attracting FDI in the sectors of utilities and real estate. For foreign investments in manufacturing and services, BITs do not seem to play a major role in investment decisions. They also found that different effects across samples can at least partially be explained by the different degrees of sunkness, which is proxied by capital intensity, of investments in these sectors.

As noted above, very few studies examined the issue at disaggregated sector levels. Studies analyzing at the company level are even fewer because of the difficulty in obtaining company-level data. Egger and Merlo (2012) examined the impact of BITs on investment activities of 5,616 German multinational companies in 86 host economies using the company-level data covering the period 1996–2005. They found that signing and ratifying BITs increase the number of firms entering the host economy and the number of plants per firm.

A large interest in the impact of BITs on FDI has resulted in considerable empirical studies with mixed results. In light of the situation, Brada, Drabek, and Iwasaki (2021) undertook a very interesting and important study, “summarizing” the results of these empirical studies. Specifically, they conducted a meta-analysis of 74 studies, yielding 2107 estimates, of the effects of IIAs on FDI. They found that all types of international treaties, BITs, multilateral investment treaties, bilateral trade agreements, and multilateral trade agreements have effects on FDI that are so small as to be considered negligible or zero. They gave two possible reasons for the results. First, the protection provided to investors by IIAs is insufficient to alter their investment decisions. The second possible reason is the proliferation of IIAs. Early IIAs were signed between the investor and host economies with attractiveness. However, as the number of IIAs increased, IIAs involving the host economies with less attractiveness began to be signed, thereby reducing the effectiveness of IIAs in promoting FDI. The authors point out several important issues concerning the empirical studies on the impact of IIAs on FDI. First, a lack of a theoretical model explaining the relationship between IIAs and FDI causes various problems related to the specification of estimated equations, including the selection of dependent and explanatory variables. Another problem is the differences in the impact depending on the investors and host economies, indicating the need for detailed analysis by considering these differences.

A survey of literature brings out several important findings and policy implications. First, the impact of BITs on the FDI varies in that, in some cases, BITs are found to increase FDI and, in other cases, such effects are not found. However, even when a positive impact is observed, the impact is found to be very small. Second, high-quality BITs with low flexibility by the host country governments are effective in promoting FDI. Specifically, BITs with strong dispute settlement provisions are shown to promote FDI. The government needs to comply with the commitments agreed in BITs to continue attracting FDI. Considering that effective BITs tie the hands of the government in formulating and implementing policies, the government has to make a serious effort in formulating strategies for the discussion and negotiation of the BITs. Third, mixed results are obtained regarding the relationship between BITs and the institutional quality of the host country. Some studies found a complementary relationship, whereas others found a substitutability relationship. This issue is important, and thus, further studies are warranted.

Before closing this section, it should be emphasized that many empirical studies found fundamental conditions, such as stable political situation; good business environment reflected in open, free, and fair market conditions; well-developed and well-functioning hard and soft infrastructure; and the availability of capable human resources playing very important roles in attracting FDI.

3. Japanese Firms’ FDI

Figures 3 and 4 show Japanese firms’ FDI from 2000 to 2019 by industry and region,

respectively, in terms of the number of cases. The total number of Japanese firms' FDI cases increased from 396 in 2000 to 744 in 2004. This number then declined and hit bottom at 452 in 2009. After the recovery reached 1,068 in 2012, it continued to decline to register 232 in 2019. The fluctuations in the number of Japanese firms' FDI cases more or less are influenced by the developments of the Japanese and the world economy. The Japanese economy and world economy recovered from sluggish growth, resulting from the bursting of the IT bubble, in the early 2000s, leading to an increase in FDI cases. Then, the Japanese and world economy experienced negative growth in the late 2000s because of the Global Financial Crisis, causing a decline in the rate of growth of FDI cases. As the Japanese and world economy recovered from the crisis, FDI cases increased sharply. However, this trend did not last as the Japanese economy continued to experience low economic growth since the mid-2010s.

The sectoral distribution of Japanese firms' FDI cases shows more or less equal distribution for manufacturing and services until the mid-2000s, but then FDI cases in services increased more rapidly than those in manufacturing. Looking at sectoral shares for a 5-year average, manufacturing and services accounted for approximately 50% of the total each for 2000–2004 (Table 1). Their shares diverged since then to result in 27.3% and 69.1%, respectively, for 2015–2019. Among services sub-sectors, wholesale trade registers by far the largest share, approximately one-third of the total throughout 2000–2019. Services of various kinds, such as travel and advertisement, show a relatively large share. Among manufacturing sub-sectors, transport equipment, chemical products, and electrical and electronic products exhibit relatively large shares, but their shares during 2000–2019 declined. Others, including agriculture, mining, infrastructure, and construction, account for a very small portion of Japanese firms' FDI.

Among destinations of Japanese FDI, Asia is by far the region with the largest share, accounting for approximately three-quarters of the total more or less from 2000 to 2019. Among Asian sub-regions, Eastern and Southeastern Asia account for 39.3% and 30.6% of the total, respectively. As for countries, China received the largest share of Japanese firms' FDI, accounting for 31.6% of the total, followed by Thailand at 9.4%. During the 2000–2019 period, China and Thailand attracted 3,936 and 1,174 cases of Japanese firms' FDI, respectively. Compared with Asia, America (North America, and Latin America and the Caribbean) and Europe received a significantly smaller number of FDI cases of Japanese firms. For more or less all regions, large shares of FDI cases are found in wholesale services, transport equipment, and services. In America, Europe, and Oceania, the financial sector attracted a relatively large share of FDI from Japan.

4. Quality of IIAs

Several studies found that the quality of IIAs affects their impact on FDI, as noted above in Section 2. Two approaches have been applied to incorporate the quality of IIAs in an empirical analysis of the assessment of the impact of IIAs on FDI. One is to construct an index based on the information obtained from the text/provisions in IIAs. Haslam (2007) constructed an index to assess

the flexibility of BITs given to host countries based on the information provided by provisions in BITs. From the point of view of investors, a limited flexibility given to the host government is desirable because investors can conduct business under a certain business environment with clearly defined rules. Haslam examined the quality of IIAs from four broad aspects: objective, substantive provisions, applications, and overall structure (special and differential treatment). Substantive provisions, applications, and overall structure are made up of several categories. Haslam constructed the index by using the scores obtained from assessing the quality of the categories. Dixon and Haslam (2016) used this index in their analysis of the impact of IIAs on FDI.

Another approach is to focus on specific provisions of BITs, which is, in many cases, the provision on disputes. Frenkel and Walter (2018) examined the impact of the strength of international dispute settlement provisions on inward FDI. Aisbett, Busse, and Nunnenkamp (2018) examined the impact on FDI of the compensation claims against developing host economies brought to dispute settlement by investors for alleged violation of BIT obligations. Berger et al. (2013) focused on three provisions, namely, national treatment (NT), MFN, and ISDS, on FDI, with an assumption that they are important for the investors in making their decision on FDI.

We take a somewhat different approach. We construct three variables to indicate the quality of IIAs by using the information presented in a document published by the Ministry of Economy, Trade and Industry of the Japanese government titled *The 2021 Report on Compliance by Major Trading Partners with Trade Agreements - WTO, EPA/FTA and IIA-*. Table 2 shows the list of provisions presented in the report. There are 20 provisions, treating all the items included in performance requirements as one provision. IIA-1 is computed as the sum of the number of provisions and scaled in such a way that an IIA with 20 provisions is 1. Therefore, IIA-1 ranges between 0 and 1. For 14 items under performance requirements, a similar treatment as the one computed for IIA-1 is applied. When all performance requirements are included in the provisions, a value of 1 is given; the value for the performance requirement ranges between 0 and 1. IIA-1 indicates comprehensiveness in the coverage of IIA without giving different weights on various provisions. IIA-2 is constructed by selecting important provisions concerning liberalization and protection of FDI based on interviews with company executives and consulting firms engaged in FDI. For liberalization, PENT, technology requirement (performance requirement), and reservation list (negative list) are selected. Then, for the protection of FDI expropriation and compensation, ISDS are selected. IIA-2 is constructed to range from 0 to 1 in that a value of 1 is given to an IIA that has all five provisions. In addition to IIA-1 and IIA-2, we introduce PENT and ISDS as dummy variables. These provisions are particularly important for investors and have been controversial not only at the stage of IIA negotiation but also even after an IIA enters into force. PENT and ISDS are included to represent the level of liberalization and protection provided in IIAs.

Table 3 shows the quality of Japan's IIAs (BITs and FTAs) using IIA-1, IIA-2, PENT, and ISDS. As explained, the values for the IIA-1 and IIA-2 are adjusted to take between 0 and 1. The higher the value, the more comprehensive and higher the quality is. Investment provisions in FTAs are shown to be more comprehensive and of higher quality compared with those in BITs in terms of

IIA-1 and IIA-2. These differences are largely because of BITs before 2001, which are of limited coverage and low quality. BITs after 2002 are comparable to FTAs. The change in coverage and quality in BITs appears to reflect the recognition of the importance of greater coverage and high quality on the part of the Japanese government. The pattern of PENT is similar to that of IIA-1 or IIA2, whereas ISDS is quite different. PENT is included in all FTAs, whereas no BITs before 2001 and only approximately a half of BITs after 2002 included PENT. Although almost all BITs have ISDS provision, several FTAs do not. Specifically, FTAs with Australia and the Philippines do not have ISDS provision, and FTAs with Malaysia, Thailand, Brunei, and Singapore contain ISDS with conditions, such as excluding the case of PENT.

5. Methodology and Data

In this study, we use conditional logit estimation that was used by Urata (2015) in studying the locational determinants of FDI by Japanese firms. Assume the determinants of the locational attractiveness for Japanese firms depend on country-specific characteristics and that Japanese firms undertake FDI in a country where they can maximize their profits after evaluating relevant characteristics of alternative locations. In such case, the profit (π) of firm i obtained from undertaking FDI in country j is expressed as follows:

$$\pi_{ij} = a_0 X_{1j}^{a_1} \dots X_{mj}^{a_m} \times e^{u_{ij}}, \quad (1)$$

where a 's are unknown parameters, X_{sj} ($s=1, \dots, m$) are variables describing the characteristics of country j ($j = 1, \dots, n$), and u_{ij} is a random disturbance term.

Given profit Equation (1) and assuming that u_{ij} is independently and identically distributed with Weibull density functions, we obtain that the probability of undertaking FDI in country j is given by Equation (2) (McFadden, 1974).

$$P_{ij} = \frac{\exp(\sum_{s=1}^m a_s \ln X_{sj})}{\sum_{j=1}^n \exp(\sum_{s=1}^m a_s \ln X_{sj})}. \quad (2)$$

Expressing the number of FDI selections made by Japanese firms in country j as w_j ($j = 1, \dots, n$), we obtain the probability of observing such an FDI pattern as Equation (3).

$$L = \prod_i \prod_{j=1}^n P_{ij}^{w_j}. \quad (3)$$

This type of model is called the conditional logit model. The parameters (a 's), which indicate the characteristics of potential host countries to Japanese FDI, are estimated by the maximum likelihood estimation method, which maximizes the likelihood function (3).

The methodological issue of this model is the independence of irrelevant alternatives

assumption. In our study, this assumption may not be justified because we consider a large number of countries, which can be grouped into several sub-groups such as Asia and North America, as FDI destinations of Japanese firms. Under such circumstances, countries in Asia are considered close alternatives, whereas countries in Asia and those in North America are not close alternatives. To overcome this issue, the nested logit model is available because it relaxes the independence of irrelevant alternatives assumption. However, the nested logit model, which excludes the nests consisting of unchosen alternatives in the model, is not suitable for our study. The reason is that our main interest is to examine the impact of country-specific characteristics that are expected to vary depending on the size or industry of a Japanese firm on FDI. As such, the number of alternative FDI destination is limited to the number of FDI destinations actually selected by relevant Japanese firms in the nested logit models. Since the number of alternative FDI destinations for large firms is different than those for small and medium-sized enterprises (SMEs), we cannot make a meaningful comparison between these two types of firms on the determinants of FDI location by using the nested logit model. Nevertheless, the results from the conditional logit model might constitute a good approximation after all (Procher, 2011). The violation of the independence of irrelevant alternatives assumption might be less of a concern if the primary interest resides in average preferences rather than predictions on the odds ratios owing to varying choice characteristics (Train, 2003).

We use the data on the number and characteristics⁵ of FDI cases obtained from Toyo Keizai Inc.'s Overseas Japanese Companies Database (2020 version). This database is constructed annually based on the responses to the questionnaire survey carried out by Toyo Keizai Inc. and contains information on overseas affiliated companies and parent companies (Urata, 2015). Our analysis covers 12,445 overseas affiliates⁶ and 3,838 parent companies⁷ from 2000 to 2019. As each FDI case faces 94 potential location choices, we have 1,169,830 observations ($12,445 \times 94$) for the overall sample.

Alternative-specific variables representing the characteristics of the host country include the following: $\ln\text{GDP}$, $\ln\text{GDPP}$, GDPG , $\ln\text{DIST}$, $\ln\text{CFDI}$, $\ln\text{DISPUTES}$, Regulatory quality, IIA, IIA1, IIA2, PENT, and ISDS. The key variables IIA, IIA-1, IIA-2, PENT, and ISDS represent IIAs and their quality, as mentioned in Section 4.

The natural log of GDP ($\ln\text{GDP}$) and the economic growth rate (GDPG) indicate the market size and market potential, respectively. These two variables are expected to have a positive sign if the motive of FDI is to expand local sales. The natural log of GDP per capita ($\ln\text{GDPP}$) is a proxy for wages. The expected sign of the estimated coefficient on $\ln\text{GDPP}$ is negative, and the effect is

⁵ It contains information on overseas affiliated companies (name, location, the year of establishment, number of employees, description of business, and others) and parent companies (name, location, paid-in capital, and others).

⁶ Japanese affiliate is defined as a subsidiary, which a Japanese parent company invested capital of 10% or more, and we do not restrict sample affiliates belonging only to the first investor to ensure enough observations.

⁷ Approximately 57% of parent companies have two or more overseas affiliated companies.

expected to be large for Japanese FDI in developing countries. $\ln\text{DIST}$ is the geographical distance between the host country and Japan, and the negative effect is expected because it reflects transportation costs and social and cultural proximity. $\ln\text{CFDI}$ is the number of cumulative FDI cases by Japanese firms in the host country and measures the extent of agglomeration by Japanese firms. We expect $\ln\text{CFDI}$ to have a positive sign. $\ln\text{DISPUTES}$ represents the extent of past involvement in disputes, and the negative effect is expected as investors avoid disputes⁸. Regulatory quality captures perceptions of the ability of the government to formulate and implement sound policies and regulations that permit and promote private sector development⁹. This index ranges from -2.5 to 2.5, and the higher value indicates higher regulatory quality. The expected effect is positive as the regulatory quality reduces the fixed costs for FDI.

Our data sources are as follows¹⁰. The Japanese FDI data necessary to construct our dependent variables and calculate CFDI are obtained from Toyo Keizai Inc.'s Overseas Japanese Companies Database. The data on GDP, GDP per capita, and GDP growth rate are obtained from the World Development Indicators. The geographical distance between the host country and Japan is obtained from the CEPII geographical database, whereas the case number of investment dispute is available in UNCTAD's Investment Dispute Settlement Navigator. The regulatory quality index is obtainable from World Bank's Worldwide Governance Indicators.

6. Results and Discussions

Tables 4–6 show the results of conditional logit estimations. In the estimation, all independent variables are lagged by one year to minimize the possibility of reverse causality. We would like to focus our discussions on the results concerning IIAs, their quality, past record of being involved in disputes, and the institutional quality of the host country. We note that the estimated coefficients on control variables, GDP, GDP per capita, and GDP growth rates, are mostly consistent with our expectations and earlier studies, possibly with the exception of the estimated coefficient on distance. Our results show a positive impact, indicating that geographical distance does not discourage FDI because it does not incur transportation costs, unlike trade in goods. This finding may reflect the behavior of Japanese firms that prefer local production in the host country by FDI to exporting products to save transportation costs.

IIA, IIA-1, IIA-2, PENT, and ISDS are found to have a positive and statistically significant impact on FDI. The computation of the odds ratio from the estimated results in Table 4 shows that enacting an IIA with Japan increases the probability of being selected as an FDI destination by Japanese firms by 74% ($1.74 = \exp(0.553)$) for all firms and 151% ($2.51 = \exp(0.920)$) for SMEs. We cannot make a simple comparison of the degree of importance of the variables regarding IIA and

⁸ For $\ln\text{CFDI}$ and $\ln\text{DISPUTES}$, we add 10^{-9} to the number of cases before taking the log.

⁹ For more details, refer to metadata in the Worldwide Governance Indicators.

¹⁰ For the computing and data source on IIA, see Section 4.

IIA qualities because of the differences in the units applied to construct these variables. However, we can argue that IIAs and comprehensive and high-quality (high level of liberalization and protection) IIAs increase the attractiveness of the IIA partner country as a host to Japanese FDI. A comparison of the estimated coefficients on PENT and ISDS appears to show that Japanese firms are more sensitive to liberalization compared with the protection of FDI provided in IIAs. We may argue that enacting an IIA triggers a ripple effect in that FDI from Japan would induce FDI from Japan. This observation is supported by our finding on the positive and significant estimated coefficient on cumulative FDI from Japan (lnCFDI). Past involvement in disputes is found to discourage FDI from Japan, whereas a high regulatory quality increases the probability of being chosen as an FDI destination of Japanese FDI.

A comparison of the results for all firms with those for SMEs reveals that SMEs are more sensitive compared with large firms in terms of IIAs, quality, and past involvement in disputes. These findings seem to reflect that SMEs limited with human and financial resources cannot deal with possible risks, such as unexpected changes in government policy. Thus, SMEs rely more heavily on international rules and agreements compared with large firms.

Table 5 shows the results with interaction terms between those related to IIAs and regulatory quality. As noted above, there are debates as to the relationship between IIAs and institutional quality, either substitutes or complements. The estimated coefficients are negative and statistically significant for the cases of all firms and SMEs. These findings seem to indicate that they are substitutes in that IIAs have a strong effect on attracting FDI in a country where the regulatory quality is low. This result does not mean that the regulatory quality is not important, but the degree of the effectiveness of IIAs in increasing the probability of attracting FDI declines as the level of regulatory quality in the host country rises. This finding is consistent with the findings of Neumayer and Spess (2005) and Busse et al. (2010).

Table 6 shows the results of estimation for manufacturing and services firms. In this estimation, we test if a firm conducting a large FDI in terms of value is more sensitive to IIAs because such a firm is more eager to avoid risk. In the absence of the data on the size of FDI by firms, we use sectoral information, that is, manufacturing and services, to capture the differences in the size of FDI. We obtain the data on the overall FDI value for manufacturing and services by Japanese firms from the balance of payment statistics¹¹ and the information on the number of FDI cases. Using these data, we computed an average value of FDI for manufacturing and services for 2014–2019, for which data on the balance of payments are available. An average FDI value for manufacturing was found to be 489 million yen, which is significantly greater compared with 288 million yen for services.

The results of the estimation in Table 6 show that FDI in manufacturing is more sensitive in terms of IIAs, quality, and past involvement in disputes compared with FDI in services. This finding supports our conjecture that a firm conducting large FDI is more sensitive to IIAs and is consistent with Colen et al. (2016), who found that BITs are effective in sectors with a high capital–labor ratio

¹¹ The Bank of Japan, Statistics, https://www.boj.or.jp/statistics/br/bop_06/bpdata/index.htm/

or high sunk cost. The estimated coefficients on the regulatory quality are different between manufacturing and services. Services are more sensitive to regulatory quality than manufacturing. This finding may seem inconsistent with earlier findings on IIAs. However, the finding may reflect that the service sector is subject to regulation to a greater extent than manufacturing.

7. Concluding Remarks

Policy makers' interest in IIAs seems to be declining as the rate of increase in the number of IIAs in the world has been slowing down after it hits a peak in the mid-1990s. Several reasons may be pointed out for this phenomenon. One is a declining opportunity for establishing IIAs as attractive opportunities have been reduced because of the rapid increase in IIAs. Another reason is the increasing concern on the part of the host country government about the reduction of policy space brought about by IIAs, although policymakers realize various benefits that FDI would bring. In addition, growing skepticism about the effectiveness of IIAs in attracting FDI has emerged among not only policymakers but also researchers.

Against this backdrop, this study analyzes the impact of IIAs on FDI for the case of Japanese firms by considering the quality of IIAs. The analysis found that Japan's IIAs increase the probability of attracting FDI from Japanese firms. Furthermore, comprehensive and high-quality IIAs are effective in increasing this probability. The effectiveness of IIAs in attracting FDI is particularly significant in a country with a low regulatory quality. In addition, a country with a low incidence of disputes and a high regulatory quality is found to have a high chance of attracting FDI.

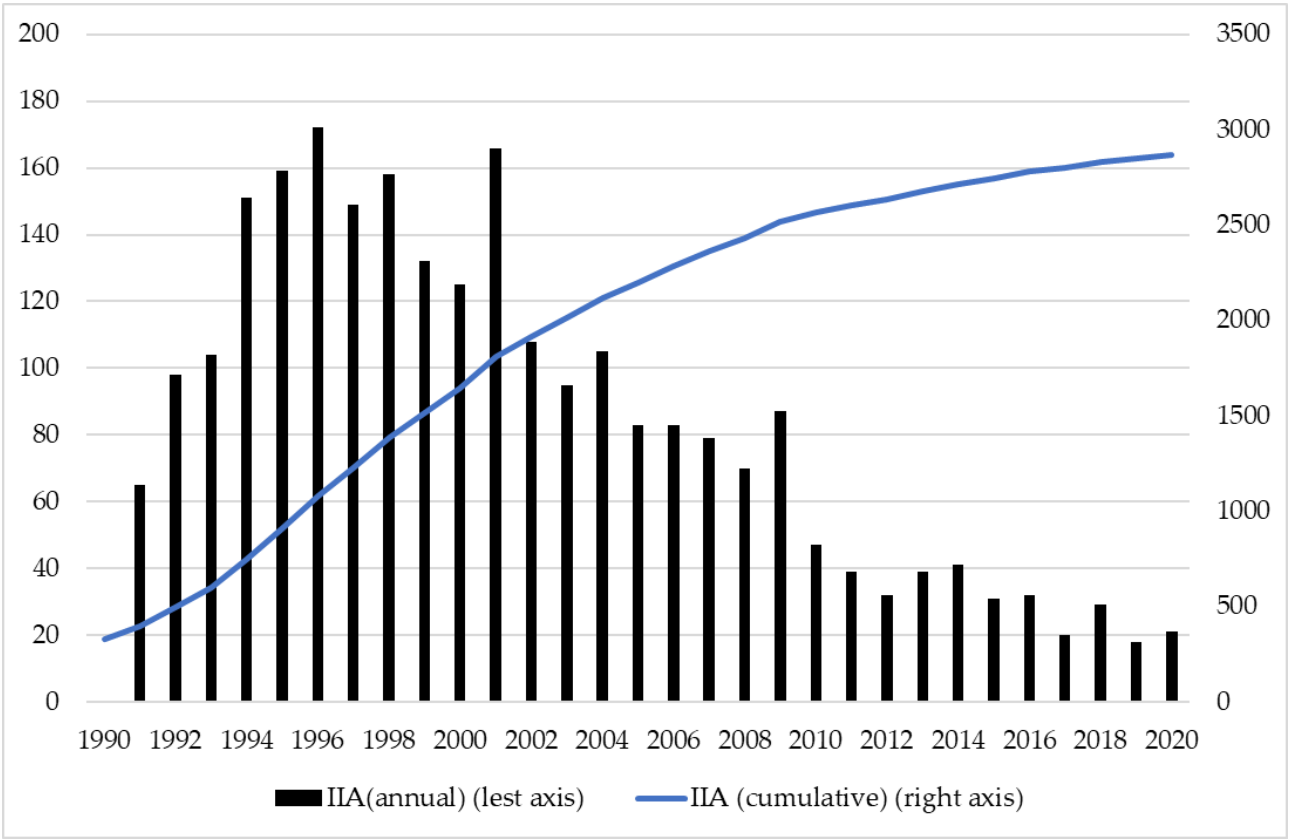
Several policy recommendations may be drawn from the results of the analysis. First, governments are advised to establish IIAs. For the home country government, IIAs can provide their firms with a business-friendly environment with clearly defined rules and regulations. Then, for the host country government, IIAs can attract FDI, which would contribute greatly to economic development/growth. Second, the host country government needs to negotiate IIAs carefully and thoroughly to avoid misunderstanding, which may cause disputes to reduce its attractiveness as an FDI destination. Third, the host government needs to improve the quality of institutions, such as the government and regulatory system, to increase its attractiveness to foreign investors. To achieve this goal, governments may need to implement a policy reform, such as a regulatory reform.

References

- Aisbett, E., M. Busse, and P. Nunnenkamp. (2018). "Bilateral investment treaties as deterrents of hostcountry discretion: the impact of investor-state disputes on foreign direct investment in developing countries." *Review of World Economics*, 154: 119-155.
- Berger, A., M. Busse, P. Nunnenkamp, and M. Roy. (2013). "Do trade and investment agreements lead to more FDI? Accounting for key provisions inside the black box." *International Economics and Economic Policy*, 10: 247-275.
- Brada, J. C., Z. Drabek, and I. Iwasaki. (2021). "Does Investor Protection Increase Foreign Direct Investment? A Meta-analysis." *Journal of Economic Surveys*, Vol. 35, No. 1, pp. 34–70.
- Busse, M., J. Koeniger, and P. Nunnenkamp. (2010). "FDI promotion through bilateral investment treaties: more than a bit?" *Review of World Economics*, 146: 147-177.
- Colen, L., D. Persyn, and A. Guariso. (2016). "Bilateral Investment Treaties and FDI: Does the Sector Matter?" *World Development*, Vol. 83, pp. 193–206.
- Dixon, J., and P.A.Haslam. (2016). "Does the Quality of Investment Protection Affect FDI Flows to Developing Countries? Evidence from Latin America." *World Economy*, vol. 39, issue 8, pp. 1080-1108.
- Egger, P., and V. Merlo. (2012). "BITs Bite: An Anatomy of the Impact of Bilateral Investment Treaties on Multinational Firms." *Scandinavian Journal of Economics* 114(4), 1240–1266.
- Frenkel, M., and B. Walter. (2019). "Do bilateral investment treaties attract foreign direct investment? The role of international dispute settlement provisions." *World Economy*, 42:1316–1342.
- Hallward-Driemeier, M. (2003). "Do bilateral investment treaties attract FDI?" World Bank Research Working Paper 3121.
- Haslam, P.A. (2007). "A 'Flexibility for Development' Index: Can International Investment Agreements be Compared Quantitatively?" *European Journal of Development Research*, 19, 2, 251–73.
- Jacobs, M. N. (2017). "Do bilateral investment treaties attract foreign direct investment to developing countries? A review of the empirical literature." *International Relations and Diplomacy*, Vol. 5, No. 10, 583-593.
- Neumayer, E., and L. Spess. (2005). "Do Bilateral Treaties Increase Foreign Direct Investment to Developing Countries?" *World Development*, vol.33, no.10, 1567-1585.
- Pohl, J. (2018). "Societal benefits and costs of international investment agreements: A critical review of aspects and available empirical evidence." OECD Working Paper on International Investment No. 2018/01. OECD: Paris.
- Procher, V. (2011). "Agglomeration effects and the location of FDI: evidence from French first-time movers." *The Annals of Regional Science*, 46(2), 295-312.
- Tobin, J., and S. Rose-Ackerman. (2005). "Foreign direct investment and the business environment in developing countries: The impact of bilateral investment treaties." Yale Law & Economics Research Paper, (293).

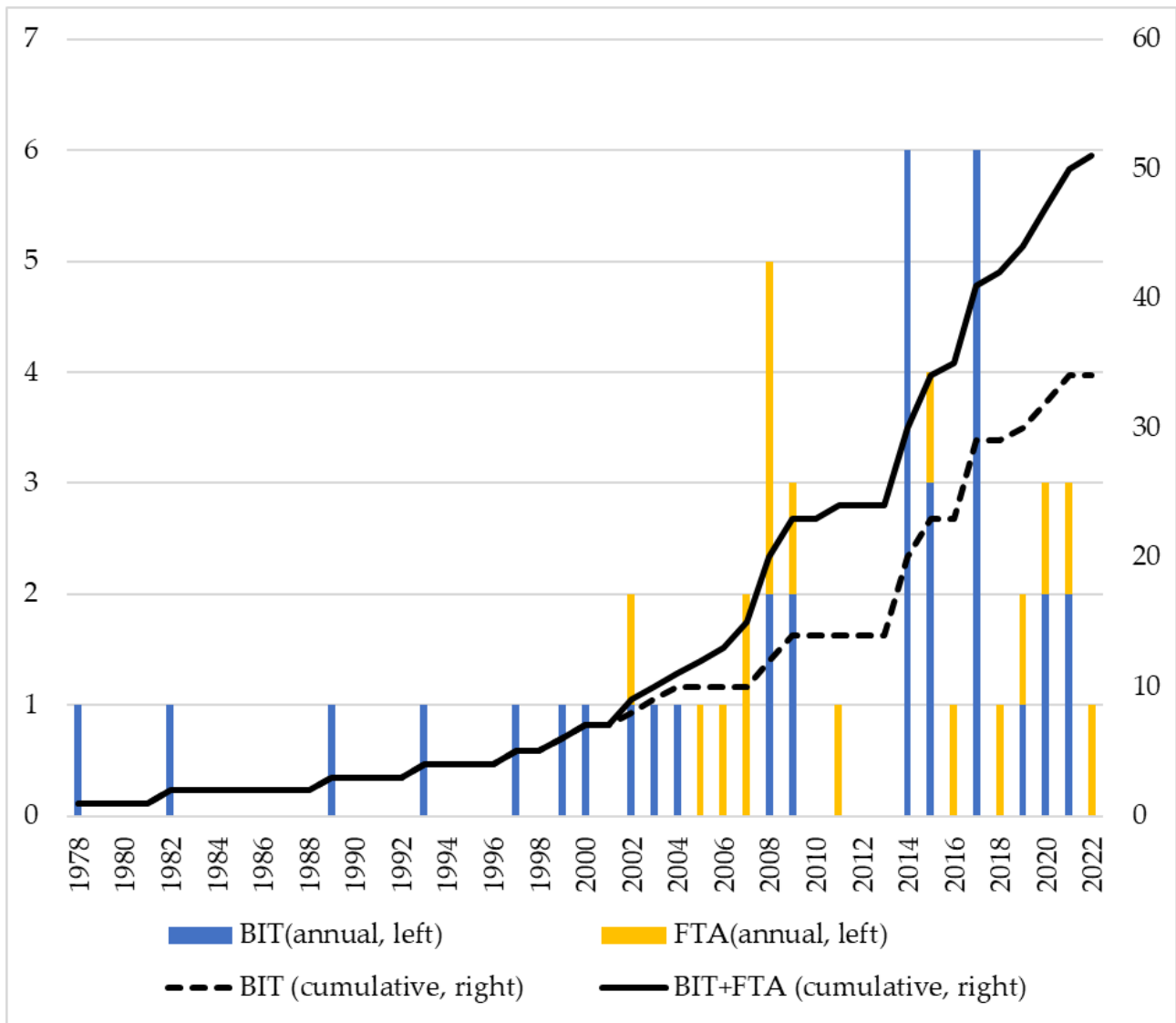
- Train, K. (2003). *Discrete choice method with simulation*. Cambridge University Press, Cambridge.
- Urata, S. (2015). "Impacts of FTAs and BITs on the Locational Choice of Foreign Direct Investment: The case of Japanese firms." RIETI Discussion Paper Series 15-E-066, RIETI.

Figure 1: International Investment Agreements (IIAs) in the World, As of December 2021



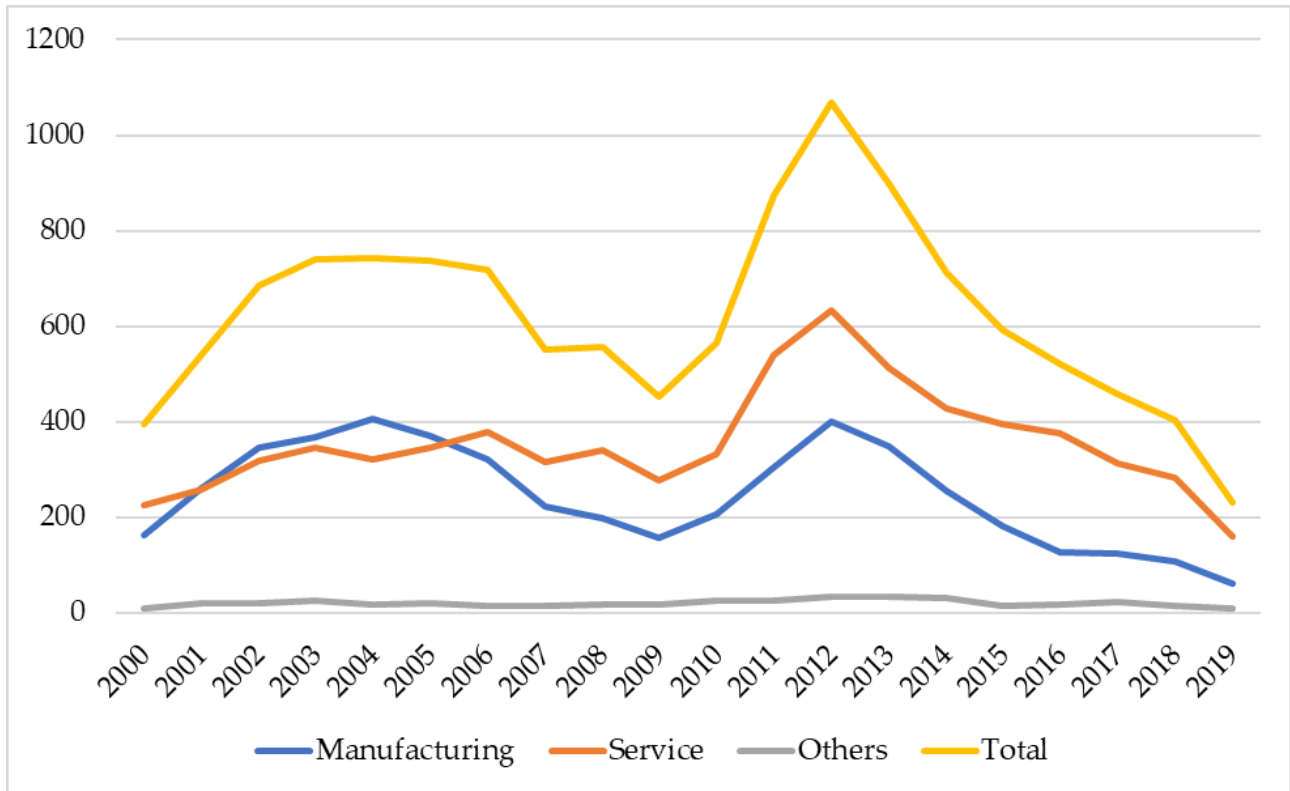
Source: Authors' computation.

Figure 2: Japan's International Investment Agreements (IIAs), As of February 2022



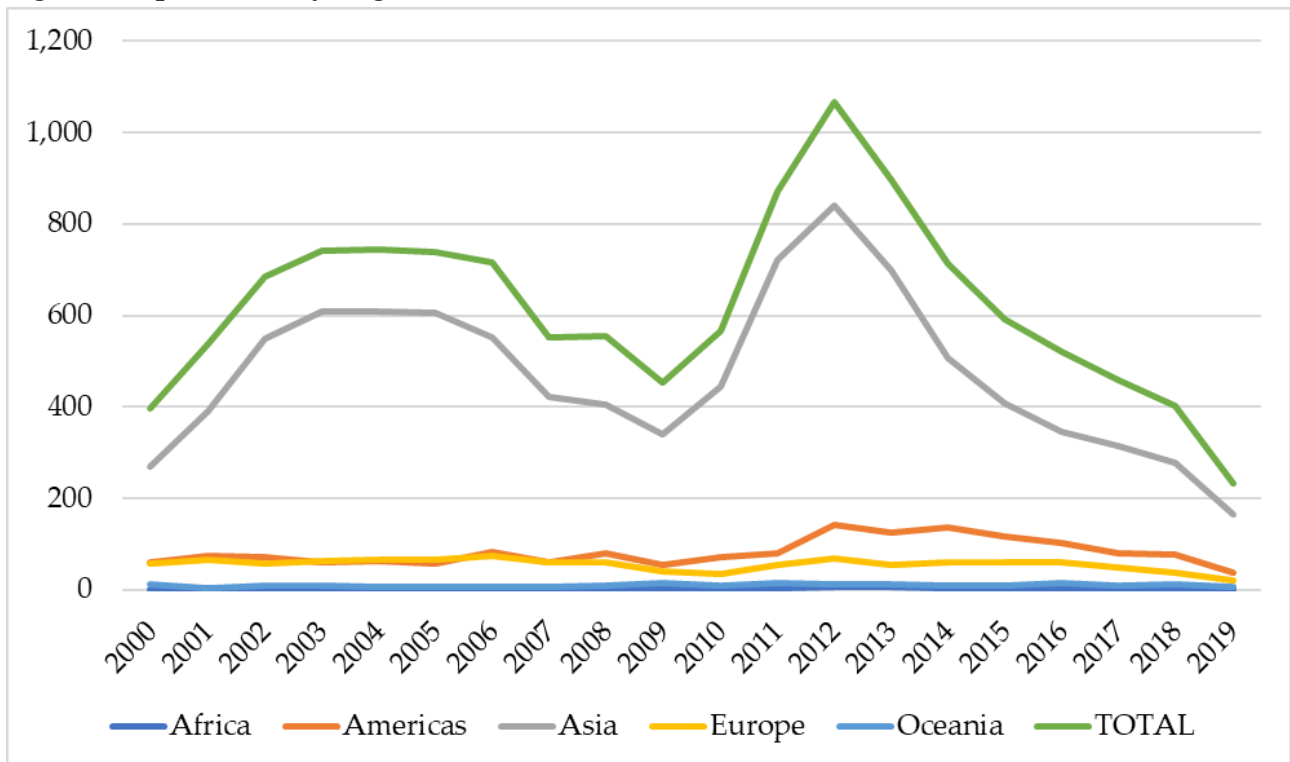
Source: Authors' computation.

Figure 3: Japan's FDI by Industry (# of cases)



Source: Authors' computation.

Figure 4: Japan's FDI by Region (# of cases)



Source: Authors' computation.

Table 1: Japan's FDI by Industry (# of cases, %)

Industry	2000-04	2005-09	2010-14	2015-19	2000-19	2000-04	2005-09	2010-14	2015-19	2000-19
Manufacturing	1544	1269	1518	602	4933	49.7	42.1	36.9	27.3	39.6
Ceramic, stone and clay products	22	18	23	14	77	0.7	0.6	0.6	0.6	0.6
Chemical products	229	209	240	107	785	7.4	6.9	5.8	4.8	6.3
Electric and electronic products	223	173	160	71	627	7.2	5.7	3.9	3.2	5.0
Fabricated metal products	104	102	127	43	376	3.4	3.4	3.1	1.9	3.0
Food, beverages, tobacco	50	42	61	47	200	1.6	1.4	1.5	2.1	1.6
General machinery	212	150	180	66	608	6.8	5.0	4.4	3.0	4.9
Iron and steel	38	69	85	28	220	1.2	2.3	2.1	1.3	1.8
Medicine	36	24	23	20	103	1.2	0.8	0.6	0.9	0.8
Non-ferrous metal products	45	40	52	11	148	1.4	1.3	1.3	0.5	1.2
Other manufacturing	90	54	62	36	242	2.9	1.8	1.5	1.6	1.9
Petroleum and coal products	2	2	1	1	6	0.1	0.1	0.0	0.0	0.0
Precision instruments	46	29	43	20	138	1.5	1.0	1.0	0.9	1.1
Pulp and paper products	18	12	14	6	50	0.6	0.4	0.3	0.3	0.4
Rubber products	53	30	49	12	144	1.7	1.0	1.2	0.5	1.2
Textiles and apparel	67	48	58	24	197	2.2	1.6	1.4	1.1	1.6
Transportation equipment	309	267	340	96	1012	10.0	8.9	8.3	4.3	8.1
Service	1471	1662	2446	1526	7105	47.4	55.1	59.4	69.1	57.1
Communication service	121	110	222	136	589	3.9	3.6	5.4	6.2	4.7
Finance and insurance	73	109	170	134	486	2.4	3.6	4.1	6.1	3.9
Hotel and restaurants	11	23	53	36	123	0.4	0.8	1.3	1.6	1.0
Real estate	5	28	55	58	146	0.2	0.9	1.3	2.6	1.2
Retail trade	18	35	59	37	149	0.6	1.2	1.4	1.7	1.2
Services	158	215	387	292	1052	5.1	7.1	9.4	13.2	8.5
Transportation service	114	128	146	122	510	3.7	4.2	3.5	5.5	4.1
Wholesale trade	971	1014	1354	711	4050	31.3	33.6	32.9	32.2	32.5
Others	89	84	154	80	407	2.9	2.8	3.7	3.6	3.3
Construction	53	35	82	41	211	1.7	1.2	2.0	1.9	1.7
Electricity, gas, and water	6	15	16	13	50	0.2	0.5	0.4	0.6	0.4
Mining and quarrying	22	29	43	16	110	0.7	1.0	1.0	0.7	0.9
Agriculture, forestry, fisheries	8	5	13	10	36	0.3	0.2	0.3	0.5	0.3
TOTAL	3104	3015	4118	2208	12445	100	100	100	100	100

Source: Authors' computation.

Table 2: Provisions of International Investment Agreements

National Treatment	<i>Pre-establishment</i>
	Post-establishment
MFN	Pre-establishment
	Post-establishment
Prohibition of Performance requirement	
	Export restrictions
	Local content requirement
	Local purchase requirement for good & services
	Export and import balance requirement
	Export requirement
	Domestic sales restriction requirement
	Senior management & board of directors
	Local citizen employment requirement
	Headquarter location requirement
	R&D requirement
	<i>Technology transfer requirement</i>
	Royalty requirement
	Specific region supply requirement
	Use of specified technology/request for use restrictions
<i>Reservation list (negative list)</i>	
Fair and equitable treatment full protection and security	
Umbrella clause	
<i>Expropriation and compensation</i>	
NT & MFN of protection from strife	
Transfers of fund	
Entry of investors	
Transparency	
Public comments	
Against corruption	
General exception	
National security exceptions	
<i>ISDS</i>	
SSDS	
Joint committee	
Others	

Source: Authors' computation.

Table 3: Quality of IIAs

			Average Scores			
		# of cases	IIA-1	IIA-2	PENT	ISDS
BIT	1978-2018	29	0.73	0.67	0.45	0.95
	1978-2001	7	0.50	0.37	0	0.93
	2002-2018	22	0.81	0.76	0.59	0.95
FTA	2002-2018	13	0.85	0.83	1	0.69

Source: Authors' computation.

Table 4: Results of Estimation, Baseline

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	All Firms					SMEs				
lnGDP	0.131*** [0.00948]	0.171*** [0.01000]	0.164*** [0.00978]	0.180*** [0.0100]	0.128*** [0.00940]	0.0692** [0.0285]	0.131*** [0.0294]	0.117*** [0.0286]	0.138*** [0.0293]	0.0739*** [0.0278]
lnGDPP	-0.351*** [0.0241]	-0.367*** [0.0240]	-0.339*** [0.0239]	-0.318*** [0.0241]	-0.368*** [0.0236]	-0.530*** [0.0779]	-0.551*** [0.0775]	-0.522*** [0.0769]	-0.491*** [0.0775]	-0.564*** [0.0755]
GDGP	0.0457*** [0.00428]	0.0588*** [0.00414]	0.0626*** [0.00410]	0.0699*** [0.00408]	0.0560*** [0.00417]	0.00134 [0.0138]	0.0252* [0.0134]	0.0305** [0.0134]	0.0430*** [0.0134]	0.0182 [0.0136]
lnDIST	0.0920*** [0.0242]	0.0359 [0.0224]	0.0267 [0.0219]	-0.0538*** [0.0207]	0.0235 [0.0230]	0.189** [0.0770]	0.0662 [0.0699]	0.0328 [0.0684]	-0.0830 [0.0639]	0.0358 [0.0714]
lnCFDI	0.749*** [0.0103]	0.734*** [0.0105]	0.762*** [0.0103]	0.744*** [0.0103]	0.771*** [0.0102]	0.950*** [0.0327]	0.934*** [0.0331]	0.986*** [0.0337]	0.954*** [0.0328]	0.985*** [0.0331]
lnDISPUTES	-0.00851*** [0.00119]	-0.0115*** [0.00121]	-0.0123*** [0.00121]	-0.0122*** [0.00121]	-0.00940*** [0.00119]	-0.0172*** [0.00370]	-0.0213*** [0.00376]	-0.0216*** [0.00374]	-0.0211*** [0.00373]	-0.0179*** [0.00366]
Regulatory Quality	0.189*** [0.0343]	0.225*** [0.0346]	0.159*** [0.0346]	0.153*** [0.0350]	0.189*** [0.0339]	0.0911 [0.111]	0.153 [0.112]	0.0765 [0.112]	0.0686 [0.114]	0.108 [0.109]
IIA	0.553*** [0.0301]					0.920*** [0.0893]				
IIA-1		0.727*** [0.0385]					1.104*** [0.115]			
IIA-2			0.633*** [0.0341]					0.878*** [0.104]		
PENT				0.520*** [0.0275]					0.692*** [0.0843]	
ISDS					0.417*** [0.0287]					0.665*** [0.0869]
# of Observations	1,169,830	1,169,830	1,169,830	1,169,830	1,169,830	148,990	148,990	148,990	148,990	148,990
# of Cases	12445	12445	12445	12445	12445	1585	1585	1585	1585	1585
Pseudo R2	0.3834	0.3835	0.3833	0.3835	0.3822	0.4857	0.4847	0.483	0.4828	0.4822

Notes: ***, **, and * indicate the 1%, 5%, and 10% levels of statistical significance, respectively.

Table 5: Results of Estimation, Interaction

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	All Firms					SMEs				
lnGDP	0.0985*** [0.0103]	0.161*** [0.0103]	0.159*** [0.00991]	0.178*** [0.0100]	0.112*** [0.00988]	0.0282 [0.0308]	0.116*** [0.0302]	0.109*** [0.0289]	0.134*** [0.0293]	0.0578** [0.0289]
lnGDPP	-0.354*** [0.0245]	-0.364*** [0.0242]	-0.332*** [0.0241]	-0.306*** [0.0246]	-0.375*** [0.0239]	-0.537*** [0.0802]	-0.549*** [0.0786]	-0.510*** [0.0779]	-0.454*** [0.0795]	-0.574*** [0.0769]
GDPG	0.0447*** [0.00429]	0.0605*** [0.00416]	0.0647*** [0.00416]	0.0718*** [0.00415]	0.0571*** [0.00418]	-0.000197 [0.0139]	0.0267** [0.0136]	0.0334** [0.0136]	0.0468*** [0.0136]	0.0189 [0.0137]
lnDIST	0.0717*** [0.0248]	0.0210 [0.0229]	0.0175 [0.0222]	-0.0617*** [0.0210]	0.000684 [0.0236]	0.152* [0.0795]	0.0364 [0.0722]	0.00824 [0.0704]	-0.112* [0.0655]	0.000111 [0.0744]
lnCFDI	0.761*** [0.0104]	0.736*** [0.0105]	0.763*** [0.0104]	0.745*** [0.0103]	0.778*** [0.0103]	0.963*** [0.0331]	0.938*** [0.0334]	0.988*** [0.0339]	0.956*** [0.0331]	0.991*** [0.0332]
lnDISPUTES	-0.00958*** [0.00121]	-0.0120*** [0.00122]	-0.0126*** [0.00122]	-0.0123*** [0.00122]	-0.0103*** [0.00121]	-0.0193*** [0.00378]	-0.0223*** [0.00380]	-0.0223*** [0.00378]	-0.0217*** [0.00377]	-0.0192*** [0.00373]
Regulatory Quality	0.331*** [0.0392]	0.286*** [0.0377]	0.189*** [0.0362]	0.163*** [0.0352]	0.279*** [0.0386]	0.302** [0.130]	0.255** [0.124]	0.141 [0.118]	0.0982 [0.115]	0.229* [0.126]
IIA	0.653*** [0.0332]					1.011*** [0.0952]				
IIA-1		0.782*** [0.0409]					1.156*** [0.118]			
IIA-2			0.674*** [0.0369]					0.927*** [0.108]		
PENT				0.548*** [0.0297]					0.758*** [0.0885]	
ISDS					0.481*** [0.0314]					0.717*** [0.0911]
IIA × Regulatory Quality	-0.226*** [0.0280]					-0.310*** [0.0892]				
IIA-1 × Regulatory Quality		-0.147*** [0.0350]					-0.238** [0.112]			
IIA-2 × Regulatory Quality			-0.0893*** [0.0300]					-0.178* [0.0952]		
PENT × Regulatory Quality				-0.0658** [0.0268]					-0.220** [0.0874]	
ISDS × Regulatory Quality					-0.145*** [0.0282]					-0.177** [0.0886]
# of Observations	1,169,830	1,169,830	1,169,830	1,169,830	1,169,830	148,990	148,990	148,990	148,990	148,990
# of Cases	12445	12445	12445	12445	12445	1585	1585	1585	1585	1585
Pseudo R2	0.3839	0.3837	0.3834	0.3836	0.3824	0.4866	0.485	0.4833	0.4833	0.4825

Notes: ***, **, and * indicate the 1%, 5%, and 10% levels of statistical significance, respectively.]

Table 6: Results of Estimation, by Industry (All Firms)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	All Firms									
	Manufacturing					Service				
lnGDP	0.227*** [0.0160]	0.299*** [0.0166]	0.289*** [0.0162]	0.325*** [0.0167]	0.232*** [0.0157]	0.0621*** [0.0123]	0.0867*** [0.0131]	0.0857*** [0.0128]	0.0962*** [0.0131]	0.0590*** [0.0123]
lnGDPP	-0.612*** [0.0395]	-0.599*** [0.0393]	-0.538*** [0.0391]	-0.477*** [0.0396]	-0.612*** [0.0384]	-0.150*** [0.0315]	-0.167*** [0.0316]	-0.151*** [0.0315]	-0.140*** [0.0317]	-0.167*** [0.0311]
GDPG	0.0121 [0.00811]	0.0333*** [0.00789]	0.0426*** [0.00782]	0.0545*** [0.00782]	0.0293*** [0.00795]	0.0528*** [0.00519]	0.0608*** [0.00504]	0.0625*** [0.00501]	0.0679*** [0.00498]	0.0587*** [0.00507]
lnDIST	0.208*** [0.0441]	0.125*** [0.0401]	0.0931** [0.0389]	-0.0199 [0.0366]	0.0788* [0.0409]	0.0536* [0.0304]	0.0181 [0.0283]	0.0223 [0.0278]	-0.0440* [0.0263]	0.0228 [0.0292]
lnCFDI	0.797*** [0.0177]	0.762*** [0.0179]	0.806*** [0.0180]	0.770*** [0.0177]	0.821*** [0.0177]	0.775*** [0.0137]	0.766*** [0.0139]	0.785*** [0.0136]	0.774*** [0.0136]	0.791*** [0.0135]
lnDISPUTES	-0.00830*** [0.00205]	-0.0127*** [0.00208]	-0.0132*** [0.00207]	-0.0131*** [0.00207]	-0.00986*** [0.00203]	-0.00798*** [0.00155]	-0.0102*** [0.00157]	-0.0113*** [0.00159]	-0.0112*** [0.00159]	-0.00874*** [0.00155]
Regulatory Quality	0.0355 [0.0586]	0.0403 [0.0593]	-0.0787 [0.0592]	-0.148** [0.0608]	0.0185 [0.0575]	0.169*** [0.0437]	0.203*** [0.0442]	0.158*** [0.0443]	0.165*** [0.0446]	0.169*** [0.0435]
IIA	0.834*** [0.0493]					0.383*** [0.0403]				
IIA-1		1.191*** [0.0645]					0.503*** [0.0502]			
IIA-2			1.003*** [0.0587]					0.484*** [0.0439]		
PENT				0.863*** [0.0487]					0.392*** [0.0347]	
ISDS					0.665*** [0.0491]					0.320*** [0.0377]
# of Observations	463,702	463,702	463,702	463,702	463,702	667,870	667,870	667,870	667,870	667,870
# of Cases	4933	4933	4933	4933	4933	7105	7105	7105	7105	7105
Pseudo R2	0.4804	0.4817	0.4803	0.4809	0.478	0.3474	0.3476	0.3479	0.348	0.3471

Notes: ***, **, and * indicate the 1%, 5%, and 10% levels of statistical significance, respectively.

Appendix Table 1: Japan's FDI by Region

region	subregion	country	2000-19	region	subregion	country	2000-19	region	subregion	country	2000-19
Asia	Central Asia	Kazakhstan	5	Europe	Eastern Europe	Bulgaria	3	Africa	Northern Africa	Algeria	1
	Eastern Asia	China	3936		Czechia	53	Egypt		5		
		Hong Kong	438		Hungary	16	Morocco		5		
		Korea	507		Poland	36	Tunisia		1		
		Macau	2		Romania	7	Sub-Saharan Africa		Ghana	1	
		Mongolia	9		Russian Federation	91			Kenya	4	
	South-eastern Asia	Brunei Darussalam	2		Slovakia	6			Mauritius	1	
		Indonesia	646		Ukraine	6			Nigeria	5	
		Cambodia	55		Northern Europe	Denmark			11	Senegal	1
		Laos	10			Finland			9	Uganda	2
		Myanmar	97			United Kingdom			210	South Africa	24
		Malaysia	240			Ireland	14	Americas	Latin America and the Caribbean	Argentina	3
		Philippines	208		Norway	9	Bahamas			16	
		Singapore	558		Sweden	15	Brazil			140	
		Thailand	1174		Southern Europe	Spain	28			Chile	25
		Viet Nam	818			Greece	1			Colombia	12
	Southern Asia	Bangladesh	21			Italy	45			Costa Rica	1
		India	589		Montenegro	1	Cayman Islands			36	
		Sri Lanka	9		Portugal	4	Ecuador			2	
		Maldives	1		Western Europe	Austria	4			Jamaica	1
		Nepal	2			Belgium	42			Mexico	303
		Pakistan	3			Switzerland	20			Panama	37
	Western Asia	United Arab Emirates	64			Germany	229			Peru	6
		Bahrain	3			France	81			Puerto Rico	2
		Cyprus	1			Luxembourg	10			Paraguay	2
		Georgia	2			Netherlands	157			Uruguay	6
		Israel	5	Oceania	Australia and New Zealand	Australia	147		Northern America	Bermuda	4
		Jordan	1			New Zealand	28			Canada	62
		Kuwait	2		Melanesia	Fiji	1			United States	966
		Lebanon	2			Micronesia	2			TOTAL	
		Qatar	5			Guam	8				
		Saudi Arabia	24		Polynesia	Samoa	1				
		Turkey	37								

Source: Authors' computation.

Appendix Table 2: Basic statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
chosen	1,169,830	0.0106	0.1026	0	1
lnGDP	1,169,830	25.3978	1.9764	19.5078	30.6041
lnGDPP	1,169,830	9.2054	1.3666	5.5639	11.7657
GDPG	1,169,830	3.8017	4.0673	-21.5786	31.3228
lnDIST	1,169,830	9.0133	0.5056	7.0533	9.8302
lnCFDI	1,169,830	0.3147	7.5676	-20.7233	8.5039
lnDISPUTES	1,169,830	-8.5905	10.9286	-20.7233	4.6821
Regulatory Quality	1,169,830	0.4645	0.8819	-2.3441	2.2605
IIA	1,169,830	0.1926	0.3944	0	1
IIA-1	1,169,830	0.1356	0.2904	0	0.9929
IIA-2	1,169,830	0.1298	0.2903	0	1
PENT	1,169,830	0.1147	0.3186	0	1
ISDS	1,169,830	0.1692	0.3638	0	1

Source: Authors' computation.

Appendix Table 3: Correlation Coefficients

	chosen	lnGDP	lnGDPP	GDPG	lnDIST	lnCFDI	lnDIS~S	Regul~y	IIA	IIA-1	IIA-2	PENT	ISDS
chosen	1												
lnGDP	0.1285	1											
lnGDPP	-0.0228	0.3035	1										
GDPG	0.0577	-0.0534	-0.2330	1									
lnDIST	-0.1408	0.0623	0.1106	-0.1775	1								
lnCFDI	0.0856	0.5046	0.2538	-0.0194	-0.2326	1							
lnDISPUTES	0.0069	0.3080	-0.1095	0.0391	0.1073	0.1665	1						
Regulatory Quality	-0.0147	0.3203	0.8329	-0.2294	0.1070	0.2454	-0.1065	1					
IIA	0.1276	0.2301	-0.1774	0.1196	-0.3940	0.2599	0.2116	-0.1410	1				
IIA-1	0.1078	0.2002	-0.1494	0.1027	-0.3748	0.2557	0.1980	-0.1122	0.9559	1			
IIA-2	0.0825	0.1794	-0.1386	0.0935	-0.3475	0.2430	0.1977	-0.0879	0.9128	0.9764	1		
PENT	0.0647	0.1267	-0.1027	0.0618	-0.2903	0.2048	0.1514	-0.0469	0.7367	0.8638	0.9130	1	
ISDS	0.0886	0.2066	-0.1870	0.1142	-0.3370	0.2364	0.2219	-0.1517	0.9521	0.8986	0.8801	0.6573	1

Source: Authors' computation.