Do Bilateral Investment Treaties Promote Foreign Direct Investment Inflows in Asian Countries?

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Abstract

Bilateral Investment Treaties (BITs) are legal instruments which safeguard the interest of investors and help to promote Foreign Direct Investment (FDI) in developing countries. This study analysed 19 Asian economies which had a relationship with 50 source countries from 2001-14, and found that BITs are an important determinant in promoting FDI inflows in these Asian countries. Specifically, it was noted that BITs seem to promote FDI inflows in the East and South East Asian countries, but had no influence on inflows in the South and West Asian ones. Moreover, this study found no relationship between BITs and FDI inflows in small-sized economies. In addition, the Gross Domestic Product (GDP) of the source country, distance between the countries, Regional Trade Agreements (RTAs), and the institutional quality of the countries were considered as important variables in attracting FDI inflows.

Keywords: BITs, FDI, Institutional Quality, Political Constraints, Regional Trade Agreement, Asian Countries, GMM.

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Introduction

Bilateral Investment Treaties (BITs) provide protection that help certain countries in attracting Foreign Direct Investment (FDI). Over the past two and half decades, there has been a considerable increase in the number of BITs agreed to by countries in Asia.[1] The reason that countries initiate BITs is to provide an 'international legal mechanism for the encouragement and governance of FDI.'[2] Prior studies[3] argued that the signing of a BIT increases the FDI inflows into that country. However, a question that arises is whether these treaties actually attract FDI in developing countries? As the number of BITs increased, researchers studied the relationship between BITs and FDI inflows in developed and developing countries. They developed various models to test the relationship between BITs and FDI inflows into these economies. However, this study focuses on the role of BITs in case of developing countries because such treaties seem to support FDI inflows, and hence, should be more important to host economies that are developing, and often, more volatile. To motivate and attract foreign investors, there must be legal provisions that can safeguard such investments in the host country. It is generally accepted that the prime objective of BITs is to provide security, safety, and stability to foreign investors by reducing the likelihood of unlawful government interference in their investments.[4] Some researchers have suggested that governments of developing

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[1] United Nations Conference on Trade and Development, *World Investment Report 2016: Investor Nationality: Policy Changes* (Geneva: United Nations, 2016), http://unctad.org/en/PublicationsLibrary/wir2016_en.pdf.

[2] Eric Neumayer, "Self-Interest, Foreign Need, and Good Governance: Are Bilateral Investment Treaty Programs Similar to Aid Allocation?" *Foreign Policy Analysis* 2, no. 3 (2006): 245-267, https://doi.org/10.1111/j.1743-8594.2006.00029.x.

[3] Axel Berger, Matthias Busse, Peter Nunnenkamp and Martin Roy, "More Stringent BITs, Less Ambiguous Effects on FDI? Not a Bit!" *Economic Letters* 112, no. 3 (2011): 270-272, https://doi.org/10.1016/j.econlet.2011.05.026.

[4] Kenneth J. Vandevelde, "The Political Economy of a Bilateral Investment Treaty," *The American Journal of International Law* 92, no.4 (1998): 621-641, https://doi.org/10.2307/2998126.

countries may use BITs as a signal to seek the attention of foreign firms.[5] In most instances, governments provide access to international arbitration as a proof of their commitment to improving the climate for FDI.[6]

To achieve the above objectives, 19 host countries in the East Asia, South East Asia, and South Asia regions were selected to explore whether they were able to extract FDI from 50 source countries during the 2001 to 2014 period. The Generalised Method of Moments (GMM) was applied in this analysis. To measure the relationship between BITs and FDI in Asian countries, based on the literature, the study also included the Gross Domestic Products (GDPs) of both the host and source countries and the distance between them as standard gravity variables. In the general form of the model, a lagged dependent variable and variable of interest, that is, BITs were added to model FDI inflows. Other control variables include trade openness, inflation rate, political constraints (POLCON), Regional Trade Agreements (RTAs), powerful BITs and the interaction term of POLCON x BITs. The results of this study strongly support the argument that BITs promote and facilitate FDI inflows in Asian economies. Powerful BITs, ratified between the host Asian country and large-sized source countries, which were classified on the basis of GDP, are also a useful tool for countries to attract FDI inflows. When the POLCON x BITs variable was examined, in most of the cases, both institutional quality and BITs had a positive effect on FDI inflows.

This article proceeds as follows: section two reviews the existing literature; sections three and four present an overview of BITs, the research methodology and data; section five examines the empirical findings; and the last section offers concluding remarks.

Literature Review

An earlier study[7] divided bilateral treaty relations into three categories:

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5 Jay Dixon and Paul Alexander Haslam, "Does the Quality of Investment Protection Affect FDI Flows to Developing Countries? Evidence from Latin America," *The World Economy* 39, no. 8 (2016): 1080-1108, http://dx.doi.org/10.1111/twec.12299.

6 Andrew Kerner, "Why Should I Believe You? The Costs and Consequences of Bilateral Investment Treaties," *International Studies Quarterly* 53, no.1 (2009): 73-102, https://doi.org/10.1111/j.1468-2478.2008.01524.x.

1. Countries that have created a functional legal infrastructure which have local laws that safeguard investors, but do not emphasise strong legal protection for foreign investors.
2. Developing countries with weak legal infrastructure that signed BITs which have only symbolic significance, and thus, the host countries do not attract FDI.
3. In general, BITs are ratified between developed and developing counties.

The basic rationale behind the adoption of BITs for both the host and investing country is to improve FDI inflows from richer to poorer countries. In practice, developing countries may have different kinds of problems, such as lack of institutional quality, political uncertainty, and a combination of various other risks. By ratifying a BIT, the host country is promising to provide protection to foreign capital. Thus, the ratification generates a signal that the recipient country is committed to the surety and security of the investment of the foreign country. Sometimes this signal is irrelevant because the foreign countries have already chosen their preferred investments.

The literature on investment agreements highlights that there needs to be more exploration as to whether BITs actually increase FDI inflows. Researchers studied BITs and whether they improved the host countries' chances of attracting FDI using 83 developing countries during the period 1978-2001, and found a robust relationship between these two factors, which illustrates that BITs promote FDI flows. They also found that BITs may substitute for weak domestic institutions although they did not see BITs as substitutes for unilateral capital account liberalisation.[8] Other researchers have analysed BITs with and without binding investor-state

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[7] Jennifer Tobin and Susan Rose-Ackerman, "Foreign Direct Investment and the Business Environment in Developing Countries: The Impact of Bilateral Investment Treaties" (paper no. 293, Center for Law, Economics and Public Policy, Yale Law School, New Haven, 2005), http://dx.doi.org/10.2139/ssrn.557121.

[8] Matthias Busse, Jens Königer and Peter Nunnenkamp, "FDI Promotion through Bilateral Investment Treaties: More than a Bit?" *Review of World Economics* 146, no.1 (2010): 147-177, https://doi.org/10.1007/s10290-009-0046-x.

dispute settlement. Their findings did not support the view that binding investor-state dispute settlement is perceived to enhance the effectiveness of BITs, however, they concluded that BITs are correlated with FDI.[9]

When comparing different kinds of investment treaties, BITs are treaties formed to assess issues pertaining to investment (e.g., the security of foreign assets and the process of dispute settlement). This suggests that a host country provides an environment that enables foreign investment and allows investors to set-up their business networks. As a result, BITs should help countries obtain a large share of investment flows,[10] however, some researchers have found that BITs have no statistically significant influence over FDI inflows.[11] Other studies have also identified that BITs have a significant impact on FDI inflows.[12]

On the other hand, there are studies that point out that BITs do not have an effect on FDI inflows illustrating that theories may be overestimating the effectiveness of BITs. This finding argued that BITs may be ineffective as foreign investors are unaware of legal regulations and other informal rules may be of ancillary importance to BITs.[13]

Most of the studies on BITs empirically examined their effectiveness. However, it is still difficult to determine how they really work to promote FDI flows. It is generally argued that they assist the signatory countries because they may signal their consent to provide an enabling environment to foreign investors, and their capital is fully secure

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[9] Berger, Busse, Nunnenkamp and Roy, "More Stringent BITs, Less Ambiguous Effects on FDI? Not a Bit!"

[10] Tim Büthe and Helen V. Milner, "Bilateral Investment Treaties and Foreign Direct Investment: A Political Analysis," in *The Effect of Treaties on Foreign Direct Investment: Bilateral Investment Treaties, Double Taxation Treaties and Investment Flows*, eds. Karl P. Suvant and Lisa E. Sachs (New York: Oxford University Press, 2009), 171-224.

[11] Kevin P. Gallagher and Melissa B. L. Birch, "Do Investment Agreements Attract Investment? Evidence from Latin America," *Journal of World Investment and Trade* 7, no.6 (2006): 961-976, https://doi.org/10.1163/221190006X00063.

[12] Yoram Z. Haftel,"Ratification Counts: US Investment Treaties and FDI Flows into Developing Countries," *Review of International Political Economy* 17, no. 2 (2010): 348-377, https://doi.org/10.1080/09692290903333103.

[13] Jason Webb Yackee, "Bilateral Investment Treaties, Credible Commitment and the Rule of (International) Law: Do BITs Promote Foreign Direct Investment?" *Law & Security Review* 42, no.4 (2008): 805-832, https://doi.org/10.1111/j.1540-5893.2008.00359.x.

in the host countries.[14] As a result, investors that are receiving this signal may change their evaluation of a signatory country. If this signal is to be informative, it would have to indicate which countries are likely to be genuinely compliant with the investment treaty. On the other hand, if countries are properly incorporating the rules framed by BITs into their investment policies for foreign investors and highlight true investment opportunities, BITs are likely to generate greater FDI inflows. Table 1 presents the summary of earlier studies regarding the effect of BITs on FDI inflows.

There is still some uncertainty surrounding the debate whether BITs impact investment flows and the recipient country's development due to the fact that researchers use different data sets and methodologies. Differences in these studies include, but are not limited to: sample size, time-series duration, adaptation of statistical techniques, probable endogeneity related to the signing of BITs, and how the researchers evaluated investment protection measures. To obtain more accurate findings, previous studies have increasingly emphasised two concerns:

1. process through which the investment treaties convert investor perceptions into FDI inflows.
2. other control variables that may affect the impact of BITs.

To address these issues, it is imperative that an empirical model is devised in such a way that it appropriately measures the impact of BITs on investment flows. The literature also indicates that most studies have not focused explicitly on the impact of BITs on FDI inflows in Asian countries. The current study tries to bridge this gap because many of these countries are developing market economies; and are so diverse that it is important to determine how they behave differently in order to attract foreign investment. To extend this analysis, the 'Powerful BITs' and an interactive term of 'POLCON x BITs' was incorporated, which indicates that both institutional quality and BITs play a role in obtaining FDI flows.

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[14] Büthe and Milner, "Bilateral Investment Treaties and Foreign Direct Investment: A Political Analysis."

Table-1
Summary of Earlier Studies Explaining the Relationship between BITs and FDI

Study	Sample	Model Specification	Findings
Neumayer & Spess (2005)[15]	1970-2001, list of developing of countries	Fixed and random effects	Larger the number of BITs ratified, better is the FDI inflows towards developing countries.
Mina (2009)[16]	1984-2002, impact of FDI in Gulf Cooperation Countries (GCC) which negotiate BITs	GMM estimation	Ratified BITs with high income non-Organisation for Economic Co-operation and Development (OECD) countries have a positive effect on FDI whereas ratified BITs with upper middle income countries have a negative effect.
Busse, Königer & Nunnenkamp (2010)[17]	83 developing countries	Gravity model, fixed effect and GMM	BITs do promote FDI flows to developing countries. However, a positive and significant effect of BITs on bilateral FDI flows from developed source countries to various sub-samples of developing host countries.
Haftel (2010)[18]	120 developing countries	Fixed and random effects	BIT in force increases but signed treaties have no effect on FDI inflows.
Guerin (2011)[19]	1992-2007, EU FDI outflows	Gravity model, ordinary least squares (OLS) and fixed effects	BITs encourage EU FDI outflows up to 35 per cent with a partner economy.
Berger, Busse, Nunnenkamp & Roy (2011)[20]	83 developing countries	GMM	The provision of binding investor-state dispute settlement are widely perceived to enhance the effectiveness of BITs, however, BITs are not offering credible investor protection.
Cardamone and Scoppola (2012)[21]	1995-2008, outward stock of FDI for EU	Knowledge-capital theory of the multinational enterprise	The pattern of outward FDI is a mix of vertical and horizontal FDI.
Bankole & Adewuyi (2013)[22]	All West African countries	Fixed, random effect and GMM	BITs have a strong positive impact on FDI in West Africa.
Dixon & Haslam (2016)[23]	18 Latin American countries	Least square dummy variable	Signed treaties seem to impact direct investment relations between developed and Latin American countries, but this effect disappears after controlling endogeneity of BITs.
Bhasin & Manocha (2016)[24]	2001-12, examine the impact of BITs on Indian FDI inflows	Fixed and random effects and GMM estimation	Empirical analysis confirms the positive role of BITs in attracting FDI inflows into India.

Source: Authors' compilation.

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[15] Eric Neumayer and Laura Spess, "Do Bilateral Investment Treaties Increase Foreign Direct Investment to Developing Countries?" *World Development* 33, no.10 (2005): 1567-1585, doi: 10.1016/j.worlddev.2005.07.001.

[16] Wasseem Mina, "External Commitment Mechanisms, Institutions, and FDI in GCC Countries," *Journal of International Financial Markets, Institutions and Money* 19, no. 2 (2009): 371-386, doi:10.1016/j.intfin.2008.02.001.

[17] Busse, Königer and Nunnenkamp, "FDI Promotion through Bilateral Investment Treaties: More than a Bit?"

[18] Haftel, "Ratification Counts: US Investment Treaties and FDI Flows into Developing Countries."

[19] Selen Sarisoy Guerin, "Do the European Union's Bilateral Investment Treaties Matter? The Way Forward After Lisbon," CEPS Working Document no.333 (Brussels: Centre for European Policy Studies, 2010), http://aei.pitt.edu/14577/1/WD333_Sarisoy_Guerin_on_Bilateral_Investment_Treatiesrev.pdf.

[20] Berger, Busse, Nunnenkamp and Roy, "More Stringent BITs, Less Ambiguous Effects on FDI? Not a Bit!"

[21] Paola Cardamone and Margherita Scoppola, "Tariffs and EU Countries Foreign Direct Investment: Evidence from a Dynamic Panel Model," *The Journal of International Trade & Economic Development* 24, no. 1 (2015): 1-23, http://dx.doi.org/10.1080/09638199.2013.871742.

[22] Abiodun S. Bankole and Adeolu O. Adewuyi, "Have BITs Driven FDI between ECOWAS Countries and EU?" *Journal of International Trade Law and Policy* 12, no. 2 (2013): 130-153, https://doi.org/10.1108/JITLP-Apr-2012-0008.

[23] Dixon and Haslam, "Does the Quality of Investment Protection Affect FDI Flows to Developing Countries? Evidence from Latin America."

[24] Niti Bhasin and Rinku Manocha, "Do Bilateral Investment Treaties Promote FDI Inflows? Evidence from India," *The Journal for Decision Makers* 41, no. 4 (2016): 275-287, https://doi.org/10.1177/0256090916666681.

BITs and FDI in Asia

The legal provisions of BITs state that the treaty partners will provide nondiscriminatory treatment to foreign investors, and also provide specific additional rights for the protection of their investment in the host country beyond those offered under national laws. For example, the first BIT was signed between Germany and Pakistan in 1959 and subsequently, 75 BITs were ratified by the end of the 1960s.[25] Since World War II, BITs have been enacted under the auspices of the International Monetary Fund (IMF) and the International Bank for Reconstruction and Development (The World Bank) to provide protection to overseas investors.

The purpose of BITs is to provide the companies of industrialised states with the opportunity to explore potential investments in international businesses safely and securely, with an emphasis on developing economies. Under these treaties, BITs offer potential investors a more stable international legal framework which facilitates and protects their investments. In the absence of a BIT, overseas investors rely on the host country's laws alone for protection, which increases the risk for their potential investment.

Figure 1 presents the number of annual BITs and all cumulative BITs signed by different countries. The figure illustrates that the increase in BITs activity was relatively slow in the 1980s. The number of BITs started increasing after liberalisation, deregulation, and privatisation regimes began to emerge in 1991. At the end of 2015, the total number of BITs signed and enforced was 2948 and 2366, respectively. From the perspective of governments, these treaties are very worthwhile, however, as discussed earlier empirical evidence related to the impact of BITs on FDI inflows reports mixed results. Some argue that BITs promote FDI; while others suggest that BITs fail to boost FDI inflows in developing countries.[26]

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[25] Lisa E. Sachs and Karl P. Sauvant, "BITs, DTTs, and FDI flows: An Overview," in *The Effect of Treaties on Foreign Direct Investment: Bilateral Investment Treaties, Double Taxation Treaties and Investment Flows*, eds. Karl P. Suvant and Lisa E. Sachs (New York: Oxford University Press, 2009), 27-62.

[26] Ibid.

BITs, in terms of Asian countries, are important if these countries want to facilitate and promote foreign investment. Risks related to business are also very high in these markets, therefore, to attract foreign capital, it is imperative for them to ratify BITs with other countries so investors may get a chance to explore business opportunities by injecting FDI inflows.

Figure 2 demonstrates the position of BITs and FDI inflows in Asian countries. Since 1992, the importance of BITs has increased in the Asia region. By the end of 2016, a total of 1830 BITs were ratified and signed, out of which, 1439 are enforced. The surge of BITs did not show substantial improvement immediately, however, over time, it is evident from the results that FDI inflows have significantly increased. It is important to argue that Asian countries have abundant natural resources and lucrative opportunities that can be fruitful for foreign investors.

Figure-1
Global Annual and Cumulative BITs

Figure-2
BITs and FDI Inflows in Asian Countries
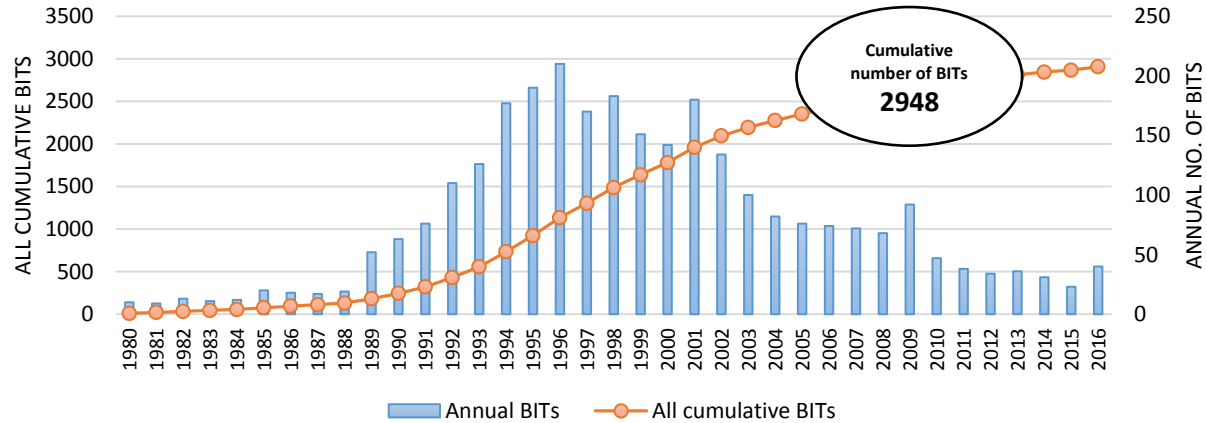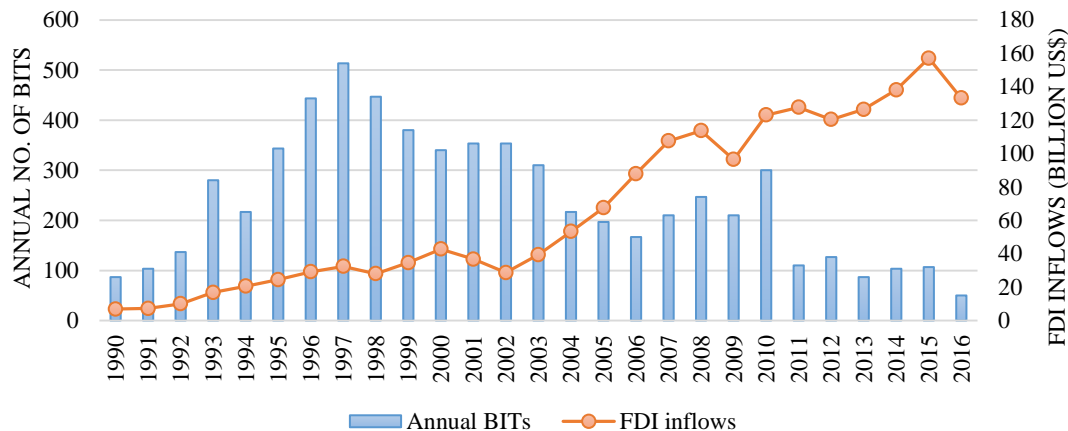
Source: United Nations Conference on Trade and Development, *World Investment Report 2016: Investor Nationality: Policy Changes.*

Methodology and Data

The methodology and data used in this study are explained in the ensuing paragraphs.

Gravity Model

Traditionally, gravity models are employed to examine the trade flows from a source country to a host country. However, these models are also used to investigate FDI flows. A few studies have used the gravity model to examine FDI flows on governance,[27] the determinants of bilateral FDI intra-Association of Southeast Asian Nations (ASEAN),[28] outward FDI and exports,[29] and responses to the size of the shadow economy.[30] The gravity model considers the prime factors comprising the relative market size of the two economies and the geographical distance between their main economic centres. This study added to the literature on BITs by employing the gravity model as the basic purpose was to examine the relationship between BITs and FDI inflows. Following Berger et al. (2011)[31] and Busse, Königer and Nunnenkamp,[32] this study modelled the following equation:

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[27] Sotirios Bellos and Turan Subasat, "Governance and Foreign Direct Investment: A Panel Gravity Model Approach," *International Review of Applied Economics* 26, no. 3 (2012), 303-328, http://dx.doi.org/10.1080/02692171.2011.587110.

[28] Hasrat Ifolala Zebua and Nasrudin, "Determinants of Bilateral Foreign Direct Investment Intra-ASEAN: Panel Gravity Model," *The East Asian Journal of Business Management* 6, no. 1 (2016): 19-24, https://doi.org/10.13106/eajbm.2016.vol6.no1.19.

[29] Zhiyuan Liu, Yue Xu, Peijie Wang, and Raphaël Akamavi, "A Pendulum Gravity Model of Outward FDI and Export," *International Business Review* 25, no. 6 (2016): 1356-1371, https://doi.org/10.1016/j.ibusrev.2016.05.001.

[30] Mohammad Ali and Alok K. Bohara, "How Does FDI Respond to the Size of Shadow Economy: An Empirical Analysis under a Gravity Model Setting," *International Economic Journal* 31, no. 2 (2017): 159-178, https://doi.org/10.1080/10168737.2017.1314533.

[31] Berger, Busse, Nunnenkamp and Roy, "More Stringent BITs, Less Ambiguous Effects on FDI? Not a Bit!"

[32] Busse, Königer and Nunnenkamp, "FDI Promotion through Bilateral Investment Treaties: More than a Bit?"

$$ln\left(\frac{FDI_{ijt}}{FDI_{it}}\right)$$

$$= \alpha_0 + \alpha_1 \, lnGDP_{jt} + \alpha_2 \, lnGDP_{it} + \alpha_3 \, lnDistance_{ij} + \alpha_4 ln\left(\frac{FDI_{ijt-1}}{FDI_{it-1}}\right)$$

$$+ \alpha_5 ln\left(\frac{FDI_{ijt-2}}{FDI_{it-2}}\right) + \alpha_6 BIT_{ijt} + \gamma X_{ijt}$$

$$+ \varepsilon_{ijt} \tag{1}$$

where FDI_{ijt} represents the bilateral FDI flows from country i to country j at time period t, FDI_{it} for the total FDI of country i from all countries included in the sample. GDP_{jt} and GDP_{it} are the GDPs of the host and source countries. The increase in GDP of a country results in attracting higher FDI. $Distance_{ij}$ is the geographical distance in kilometres between the host and source countries and is used as a proxy for information and transportation costs. If the distance between a host and source country is higher, it will increase the cost of doing business between them. These parameters have been applied in earlier studies relating to the gravity model of trade flows.[33]

Two lagged dependent variables were introduced to determine whether or not FDI inflows follow the previously reported trends in FDI.[34] BIT_{ijt} corresponds to a ratified BIT between the host country j and home country i;[35],[36] X_{ijt} represents a set of control variables; and ε_{ijt} indicates the error term. The other control variables referred to in the model include trade openness, inflation, RTA, and POLCON. Trade openness is the combination of both the imports and exports scaled by GDP. With an increase in trade opportunities, FDI inflows should be higher. The

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[33] Jérôme Trotignon, "Does Regional Integration Promote the Multilateralization of Trade Flows? A Gravity Model using Panel Data," *Journal of Economic Integration* 25, no.2 (2010): 223-251, doi: 10.2307/23000975.

[34] Berger, Busse, Nunnenkamp and Roy, "More Stringent BITs, Less Ambiguous Effects on FDI? Not a Bit!"

[35] Gordon Sirr, John Garvey and Liam A. Gallagher, "Bilateral Investment Treaties and Foreign Direct Investment: Evidence of Asymmetric Effects on Vertical and Horizontal Investments," *Development Policy Review* 35, no. 1 (2017): 93-113, doi: 10.1111/dpr.12202.

[36] Chia-yi Lee, Noel P. Johnston, "Improving Reputation BIT by BIT: Bilateral Investment Treaties and Foreign Accountability," *International Interactions* 42, no. 3 (2016): 429-451, https://doi.org/10.1080/03050629.2016.1128429.

inflation rate is a proxy for macroeconomic stability[37] which is an indicator of the cost of doing business in an economy. It is believed that there was likely to be a negative relationship between inflation and FDI inflows. RTA is a proxy for investors' protection, and their presence is likely to create a positive impact on investors and traders resulting in an increase in FDI inflows. Asian countries, which signed a trade agreement with a developed country, might receive more FDI as it is easier to export back into the developed or other countries. Such agreements sometimes also contain provisions on policies that might be beneficial to foreign investors. To evaluate the potential effect of trade agreements, this study also used the POLCON Index[38] – an indicator of the ability of political institutions to make credible commitments to an existing policy regime. This Index provides an evaluation of the extent to which political actors are constrained according to their choice of future policies with the existence of other political actors that have veto power. The score of the POLCON variable ranges from 0, illustrating that the executive has total political discretion and can change existing policies at any point of time, to 1, which indicates that a change of existing policies is totally unfeasible. A brief description of the variables and data sources used are reported in Table 2.

To further assess the impact of BITs on FDI inflows, the current study constructed another equation by incorporating two variables that influence the activities of FDIs. To segregate between BITs signed with influential countries and those signed with other countries, the Powerful BIT_{ijt}, which is a cumulative number of BITs signed with the top six largest economies, was applied. These are distinguished in terms of GDP – the United States (US), the United Kingdom (UK), Japan, Germany, France, and China.[39]

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[37] Bankole and Adewuyi, "Have BITs Driven FDI between ECOWAS Countries and EU?"

[38] Witold J. Henisz, "The Institutional Environment for Multinational Investment," *Journal of Law Economics and Organization* 16, no. 2 (2000): 334-364, https://doi.org/10.1093/jleo/16.2.334.

[39] Lee and Johnston, "Improving Reputation BIT by BIT: Bilateral Investment Treaties and Foreign Accountability."

Table-2
Definition of Variables and Data Sources

Variable	Definition	Data Source
FDI$_{ij}$	Bilateral FDI flows from source to host country in percentage of total FDI to all developing countries included in the sample including zeros.	UNCTAD (2016)
GDP$_j$	Real GDP, constant 2010 USD of the host country.[40]	World Bank (2016)
GDP$_i$	Real GDP, constant 2010 USD of the source country.	World Bank (2016)
Distance$_{ij}$	Distance is the geographical distance in kilometres between the source country and the host country.[41]	Distance Calculator
BIT	Bilateral Investment Treaty, ratified between the source country and the host country.[42]	UNCTAD (2016)
Trade Openness	Combination of exports and imports scaled by GDP of the host country.[43]	World Bank (2016)
Inflation	The inflation rate of the host country in percentage terms.[44]	World Bank (2016)
RTA	Regional Trade Agreement between host and source country, used as a dummy variable.[45]	WTO[46]
POLCON	Political constraint is obtained via Henisz database and it ranges from 0 to 1.[47]	Henisz (2017)
Powerful BITs	BITs signed by a host country with the US, the UK, Japan, Germany, France and China.[48]	UNCTAD (2016)

Note: The table presents a brief description of variables and sources of data collection used in the study.

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[40] Busse, Königer and Nunnenkamp, "FDI Promotion through Bilateral Investment Treaties: More than a Bit?"

[41] Chan-Hyun Sohn, "Does the Gravity Model Explain South Korea's Trade Flows?" *The Japanese Economic Review* 56, no. 4 (2005): 417-430, https://doi.org/10.1111/j.1468-5876.2005.00338.x.

[42] Sachs and Sauvant, "BITs, DTTs, and FDI flows: An Overview."

[43] Dixon and Haslam, "Does the Quality of Investment Protection Affect FDI Flows to Developing Countries? Evidence from Latin America."

[44] Kerner, "Why Should I Believe You? The Costs and Consequences of Bilateral Investment Treaties."

[45] Lee and Johnston, "Improving Reputation BIT by BIT: Bilateral Investment Treaties and Foreign Accountability."

[46] WTO, "Regional Trade Agreements" (Geneva: World Trade Organization), accessed July 13, 2018, www.wto.org/english/tratop_e/region_e/region_e.htm.

[47] Henisz, "The Institutional Environment for Multinational Investment."

[48] Busse, Königer and Nunnenkamp, "FDI Promotion through Bilateral Investment Treaties: More than a Bit?"

All countries remained in the top six countries according to GDP during the time horizon of the study with the exception of China. China joined this group in 2000 by becoming the sixth largest economy, which is included in the analysis. The POLCON variable is a control variable used in equation (1) to examine its impact on FDI inflows.[49] This result suggested that BITs may substitute for institutional quality in the host country. The transformed equation (2) is presented as follows:

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\begin{aligned}
ln\left(\frac{FDI_{ijt}}{FDI_{it}}\right) \\
= \alpha_0 + \alpha_1\, lnGDP_{it} + \alpha_2\, lnGDP_{jt} + \alpha_3\, lnDistance_{ij} + \alpha_4 ln\left(\frac{FDI_{ijt-1}}{FDI_{it-1}}\right) \\
+ \alpha_5 ln\left(\frac{FDI_{ijt-2}}{FDI_{it-2}}\right) + \alpha_6 BIT_{ijt} \\
+ \alpha_7 Powerful\ BIT_{ijt} + \alpha_8 POLCON\ x\ BIT_{ijt} + \gamma X_{ijt} \\
+ \varepsilon_{ijt} \qquad\qquad (2)
\end{aligned}
$$

To examine the relationship, GMM technique was used in this study.

GMM Estimation

This study used the system GMM estimator, presented by Arellano and Bover[50] and Blundell and Bond,[51] which is obtained by estimating the system of two simultaneous equations: the first one in levels (with lagged first differences as instruments); and the second one in first differences (with lagged levels as instruments). Blundell and Bond argued that the system GMM performs better than the difference GMM, as the latter can have poor finite sample characteristics and is downwards biased especially when the number of periods is small. However, the difference GMM is

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[49] Neumayer and Spess, "Do Bilateral Investment Treaties Increase Foreign Direct Investment to Developing Countries?"

[50] Manuel Arellano and Olympia Bover,"Another Look at the Instrumental Variable Estimation of Error-Component Models," *Journal of Econometrics* 68, no. 1 (1995): 29-51, https://doi.org/10.1016/0304-4076(94)01642-D.

[51] Richard Blundell and Stephen Bond, "Initial Conditions and Moment Restrictions in Dynamic Panel Data Models," *Journal of Econometrics* 87, no. 1 (1998): 115-143, https://doi.org/10.1016/S0304-4076(98)00009-8.

not appropriate for the BIT variable which changes its value only in periods of ratification.

Data

The data covered a period of 14 years from 2001 to 2014. The main purpose of considering the present sample was that the earlier studies did not explore the relationship between BITs and FDI inflows in Asian countries. Furthermore, for most Asian countries over the past two decades, there has been a considerable increase in FDI inflows and this study explores whether the ratification of BITs play any role in promoting investment opportunities. This study used a three-year moving average method of FDI inflows starting from 1999, and then took a log of the particular observation. In case of zero observation for FDI in a year, the problem was tackled by using three-year moving average. However, any disinvestment was considered as a zero value for the respective year. The sample included 19 host countries from four Asian regions which either have FDIs or for which the required data was available for carrying out the analysis:

1. East Asia (China, Hong Kong, Republic of Korea, and Mongolia).
2. South East Asia (Cambodia, Indonesia, Lao People's Democratic Republic, Malaysia, the Philippines, Singapore, and Thailand).
3. South Asia (Bangladesh, India, Iran,[52] Pakistan, and Sri Lanka).
4. West Asia (Bahrain, Saudi Arabia, and Turkey).

The 50 source countries included Australia, Austria, Bahrain, Belgium, Bermuda, Bulgaria, Canada, China, Croatia, Cyprus, Denmark, Egypt, Finland, France, Germany, Hong Kong, India, Indonesia, Ireland, Italy, Japan, Korea, Kuwait, Luxembourg, Malaysia, Mauritius, Myanmar, the Netherlands, Norway, Oman, Pakistan, Philippines, Poland, Portugal,

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[52] CIES, "List of Countries by Region-Adopted from the "Annex II: Classification of Major Areas and Regions" (Albany: Comparative & International Education Society), https://cies2018.org/wp-content/uploads/List-of-Countries-by-Region-UN-Annex-II.pdf. As per region-wise classification of countries by the UN, Iran is classified as a part of South Central Asian countries. Therefore, in this study, Iran is being classified under South Asian countries.

Qatar, Republic of Korea, Saudi Arabia, Singapore, Slovenia, Spain, Sri Lanka, Sudan, Sweden, Switzerland, Thailand, Turkey, United Arab Emirates (UAE), the UK, the US, and Vietnam.[53]

Empirical Findings

Descriptive Statistics and Correlation

The descriptive statistics of the variables used in this study are presented in Table 3. The correlation among variables (Table 4) was tested to indicate whether there is an evidence of multicollinearity. The results suggested that none of the explanatory variables was found to be highly correlated.

The literature identified that panel data models are likely to exhibit substantial cross-sectional dependence in the error terms leading to the existence of common shocks and unobserved parameters that eventually became part of the error term, spatial dependence, and idiosyncratic pairwise dependence in the distribution with no particular pattern of spatial dependence.[54] The null hypothesis suggested no cross-section dependence (correlation) in residuals.[55]

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[53] One limitation of this study is that it only considered the Asian region. For future research, another region may be selected to compare the findings and explore the reasons for such differences. Researchers may also use other explanatory variables such as Double Taxation Treaties, corruption, country risk, etc. to analyse their impact on FDI inflows and BITs.

[54] Mohammad Hashem Pesaran, "General Diagnostic Tests for Cross Section Dependence in Panels" (paper no. 0435, Faculty of Economics, University of Cambridge, Cambridge, 2004), https://doi.org/10.17863/CAM.5113.

[55] Rafael De Hoyos and Vasilis Sarafidis, "Testing for Cross-Sectional Dependence in Panel-Data Models," *The Stata Journal* 6, no. 4 (2006): 482-496.

Table-3
Descriptive Statistics

	Mean	Median	Maximum	Minimum	Std. Dev.	Skewness	Kurtosis
$\ln\left(FDI_{ijt}/FDI_{it}\right)$	0.067	0.023	0.731	0.000	0.114	3.331	13.920
$\ln\left(GDP_{jt}\right)$	16.143	13.417	21.615	10.510	6.015	-3.102	15.482
$\ln\left(GDP_{it}\right)$	27.288	27.470	30.456	22.132	1.879	-0.595	-0.126
$\ln\left(Distance_{ij}\right)$	8.503	8.687	9.704	4.948	0.787	-1.140	1.689
BITs	0.546	1.000	1.000	0.000	0.498	-0.184	-1.967
Trade Openness	0.998	0.602	4.856	0.149	0.989	2.117	3.945
Inflation	0.059	0.046	0.390	-0.029	5.391	2.004	6.879
RTA_{ij}	0.259	0.000	1.000	0.000	0.438	1.096	-0.797
POLCON	0.239	0.267	0.669	0.000	0.214	0.228	-1.318

Table-4
Correlation between Variables

	$\ln\left(\frac{FDI_{ijt}}{FDI_{it}}\right)$	$\ln\left(GDP_{jt}\right)$	$\ln\left(GDP_{it}\right)$	$\ln\left(Distance_{ij}\right)$	BITs	Trade Openness	Inflation	RTA_{ij}	POLCON
$\ln\left(FDI_{ijt}/FDI_{it}\right)$	1.000								
$\ln\left(GDP_{jt}\right)$	0.023	1.000							
$\ln\left(GDP_{it}\right)$	0.213	0.158	1.000						
$\ln\left(Distance_{ij}\right)$	-0.034	0.224	0.297	1.000					
BITs	0.066	0.079	0.193	0.005	1.000				
Trade Openness	0.000	-0.402	-0.036	0.055	-0.500	1.000			
Inflation	0.000	0.158	0.039	-0.113	0.124	-0.318	1.000		
RTA_{ij}	0.098	0.224	0.072	-0.485	0.041	-0.002	-0.008	1.000	
POLCON	0.001	0.190	0.047	0.094	0.046	-0.271	0.081	0.075	1.000

Table-5
Residual Cross-section Dependence Test

Test	Statistics	Probability
Breusch-Pagan *Lagrange Multiplier (LM)*	328.88	0.0000
Pesaran scaled LM	14.41	0.0000
Bias-correlated scaled LM	14.39	0.0000
Pesaran Cross-section Dependence (CD)	-4.40	0.0000

Note: This table presents the results of cross-section dependence (correlation) in residuals using the Fixed Effects Model which includes 47,310 observations from 19 host countries during 2001-14.

The panel data was regressed including all possible explanatory variables using the Fixed Effects Model, and the results showed the evidence to reject the null hypothesis of cross-sectional independence. In order to circumvent the problems of cross-section dependence, this study employed the GMM estimation technique.

Effect of BITs on FDI Inflows

To examine the effect of BITs on FDI inflows in Asian countries, BITs variable was considered to be exogenous. In general, FDI may affect the ratification of BITs if foreign firms intend to get some protection for their investment. Hence, the system GMM for estimating results was employed to counter endogeneity of BITs and the other explanatory variables in the analysis (Table 6). The results indicated that all specifications complied with the Sargan-Hansen statistics test (or Sargan's J Test) for overidentifying restrictions which illustrated that the instrument can be considered appropriate and valid, and the F-tests for the Arellano-Bond tests for serial correlation supported the model specification.

The Gravity Model related to Model I covers the GDPs of the host and source countries as well as the distance between them. The coefficient of GDP_{it} was positively linked with the proportion of FDI from country i to country j indicating that the size of the economy of the source country

compelled it to explore new overseas opportunities.[56] The coefficient of distance was negatively linked with FDI inflows. As the distance decreased between the host and the source countries, the probability of attracting FDI inflows increased.[57]

When BITs were included as the main variable in Model II, the results of the Gravity Model were the same. The coefficient of BITs was positive and the variable significantly influenced FDI inflows in Asian countries. This explains that in the wake of an investment treaty, Asian countries were attracting and receiving a higher amount of FDI inflows. Thus, BITs are providing a certain conducive and enabling environment to multinational firms that are contemplating investment in this region, thereby, positively affecting their decision to invest in Asian countries. This finding is consistent with earlier studies.[58]

Model III included other control variables to examine their impact on FDI inflows. The objective of including one- and two-year lagged dependent variables was to observe whether FDI inflows follow the previous trends. The coefficient of both lagged variables was positive and statistically significant suggesting that FDI inflows follow earlier trends.[59] This also suggested that previous investment trends encourage investors to invest funds in subsequent years. The results showed a negative association between trade openness and FDI inflow indicating that a reduction in openness increases the potential to inject FDI inflows into Asian countries. There was an inverse relationship between inflation and FDI inflows, but it was insignificant. The RTAs, under the World Trade Organization (WTO), include provisions of trade-related investment measures (TRIMs) which safeguard and protect investors. The results associated with RTAs suggested statistical significance and posited that in

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[56] Berger, Busse, Nunnenkamp and Roy, "More Stringent BITs, Less Ambiguous Effects on FDI? Not a Bit!"

[57] Bellos and Subasat, "Governance and Foreign Direct Investment: A Panel Gravity Model Approach."

[58] Andrew Kerner and Jane Lawrence "What's the Risk? Bilateral Investment Treaties, Political Risk and Fixed Capital Accumulation," *British Journal of Political Science* 44, no. 1 (2014): 107-121, https://doi.org/10.1017/S0007123412000725.

[59] Lee and Johnston, "Improving Reputation BIT by BIT: Bilateral Investment Treaties and Foreign Accountability."

the presence of regional promises, FDI inflows will increase.[60] The POLCON variable was statistically significant, which illustrated that institutional quality impacts FDI inflows. This implies that higher institutional quality leads to lower political constraints, which promotes foreign investment.

Model IV introduced the Powerful BITs variable. The results suggest that the Asian countries that sign BITs with the largest economies may obtain a higher $ln\left(\frac{FDI_{ijt}}{FDI_{it}}\right)$ level of FDI inflows. The rationale behind this was that investors in richer economies have more resources in the presence of an investment treaty, and so protection leads to an increase in the flow of investments.

In Model V, BITs variable interacted with the POLCON variable and reported a significant effect between these variables and FDI.[61] This suggests that institutional quality and the presence of BITs both help to attract foreign investment.

Model VI included both Powerful BITs and the interacted term of POLCON x BIT, and it found that institutional quality has more importance than the Powerful BITs (see Table 6).

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[60] Berger, Busse, Nunnenkamp and Roy, "More Stringent BITs, Less Ambiguous Effects on FDI? Not a Bit!"
[61] Bear F. Braumoeller, "Hypothesis Testing and Multiplicative Interaction Terms," *International Organization* 58, no. 4 (2004): 807-820, doi: 10.1017/S0020818304040251.

Table-6
System GMM Estimation Results

Explanatory Variable	Expected Sign	I	II	III	IV	V	VI
ln (FDI$_{t-1}$)	+			0.0741*** (2.80)	0.0761*** (2.88)	0.0642** (2.42)	0.0668** (2.52)
ln (FDI$_{t-2}$)	+			0.0495* (1.96)	0.0511** (2.02)	0.0521** (2.05)	0.0522** (2.06)
ln (GDP$_{jt}$)	+	0.0010 (1.21)	0.0012 (1.31)	0.0004 (0.53)	0.0001 (0.10)	0.0000 (0.02)	0.0001 (0.18)
ln (GDP$_{it}$)	+	0.0131*** (8.13)	0.0190*** (9.80)	0.0207*** (12.69)	0.0207*** (12.66)	0.0204*** (12.39)	0.0204*** (12.38)
ln (Distance$_{ij}$)	−	-0.0134*** (-4.92)	-0.0168*** (-5.88)	-0.0133*** (-3.53)	-0.137*** (-3.63)	-0.0131*** (-3.47)	-0.0134*** (-3.53)
Trade Openness	+/−			-0.0069* (-1.92)	-0.0032 (-0.82)	-0.0018 (-0.46)	-0.0026 (-0.66)
Inflation	+/−			-0.0003 (-0.50)	-0.0006 (-1.01)	-0.0004 (-0.70)	-0.0004 (-0.77)
RTA$_{ijt}$	+			0.0182** (2.08)	0.0193** (2.21)	0.0199** (2.28)	0.0204** (2.32)
POLCON	+			0.0492*** (3.30)	0.0659*** (4.08)	0.0554*** (2.79)	0.0616*** (2.94)
BITs	+		0.0270*** (6.57)	0.0271*** (6.80)	0.0273*** (6.85)	0.0368*** (5.90)	0.0367*** (5.87)
Powerful BITs	+				0.0010*** (2.67)		0.0079** (2.10)
POLCON x BITs	+					0.0413** (2.12)	0.0405** (2.07)
Constant		-0.1820*** (-4.34)	-0.3024*** (-6.38)	-0.3502*** (-7.61)	-0.3778*** (-8.01)	-0.3445*** (-7.44)	-0.3687*** (-7.77)
Observations		11,970	15,960	39,045	43,035	43,035	47,310
Country pairs		750	750	750	750	750	750
Sargan (*p*-value)[a]		0.18	0.11	0.12	0.19	0.31	0.22
AB 2 (*p*-value)[b]		0.14	0.12	0.15	0.16	0.20	0.18
Instruments		161	172	201	211	211	214
(No. of lags)		(2–3)	(2–3)	(2–3)	(2–3)	(2–3)	(2–3)
F-test		24.43***	28.58***	20.95***	19.73***	18.14***	16.63***

Notes: Dependent variable: $ln\left(\frac{FDI_{ijt}}{FDI_{it}}\right)$. The sample includes 19 host countries from 50 source countries from 2001-14.

t-values are reported in parenthesis. ***, ** and * denote significance level at 1, 5 and 10 per cent, respectively.
[a] Sargan-test of overidentification.
[b] Arellano-Bond-test that second order autocorrelation in residuals is 0.

Effect of BITs on FDI Inflows: A Region-wise Comparison

Do BITs promote FDI inflows in different regions? To address this inquiry, the data for the sample countries was segregated on the basis of their corresponding regions. Table 7 shows the GMM estimation results of FDI inflows. The models included cover BITs, Powerful BITs, and POLCON x BITs.

For the East Asian countries, four models were considered. China, being the second largest economy in the world can distort the results, therefore, China was excluded from the sample (Model III) and an evaluation of BITs and FDI inflows in China was done separately (Model IV). In Model I, the first two lags of FDI inflows have a significantly positive effect on FDI, which indicates that the previous years' trend may be followed in the current year, and the trend from the second lag has a lasting impact on FDI. The GDP of the source country affected FDI inflows in a positive way. As the distance between the host and source countries decreased, the possibilities of obtaining FDI inflows also increased.[62]

To explore the main focus of the study, the impact of BITs on generating foreign investment was examined, and it was found that investment treaties act as a catalyst for countries to obtain FDI.[63] These BITs seem to provide satisfaction from an investors' perspective in a sense that if a violation of rules occurs by the host country, the counterparty may take them to the International Centre for Settlement of Investment Disputes (ICSID). The RTAs also promote trade activities by protecting and safeguarding investments, hence, helping to promote FDI inflows. The results suggested that the POLCON variable was positive, and significantly affected the flows of foreign investment.[64] When Asian

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[62] Bellos and Subasat, "Governance and Foreign Direct Investment: A Panel Gravity Model Approach."

[63] Jeffrey M. Wooldridge, Econometric Analysis of Cross Section and Panel Data (Cambridge: MIT Press, 2002), https://jrvargas.files.wordpress.com/2011/01/wooldridge_j-_2002_econometric_ analysis_of_cross_section_and_panel_data.pdf.

[64] Busse, Königer and Nunnenkamp, "FDI Promotion through Bilateral Investment Treaties: More than a Bit?"

countries signed BITs with the six largest economies (Model II), the protection level of investors increased and the surge of FDI from large economies increased in East Asian countries. Excluding China (Model III), the current study found that East Asian countries have no relationship between FDI inflows and RTAs, but the first two lags of FDI, the GDP of the source country, POLCON and BITs variables have a significant and positive relationship with FDI; moreover, the interaction term between POLCON and BITs has a positive effect on FDI. The Distance variable still has a negative effect on FDI in Models III and IV. In Model IV, the ratification of BITs by China plays a pivotal role in attracting FDI inflows. However, POLCON, Powerful BITs, and POLCON x BITs were insignificant variables, and appear to have no influence in obtaining FDI inflows, but the second lag of FDI seems to have a significant and positive effect on FDI.

Next, the South East Asian countries (Cambodia, Indonesia, Lao People's Democratic Republic, Malaysia, Philippines, Singapore, and Thailand) were evaluated. The results of Model V and VI were almost the same. Interestingly, when BITs were applied alone (Model V), it was a robust predictor in capturing favourable FDI. Once Powerful BITs and POLCON x BITs as an interaction term were added, the effect of BITs variable was insignificant (Model VI); however, the statistical significance and the positive relationship between the interaction term POLCON x BIT variable and FDI could explain that good institutional quality promotes FDI inflows.

Table-7
System GMM Estimation Results Using Different Regions

	I	II	III	IV	V	VI	VII	VIII	IX	X
	East Asia				South East Asia		South Asia		West Asia	
	Entire Sample	Entire Sample	Excluding China	China	Entire Sample	Entire Sample	Entire Sample	Entire Sample	Entire Sample	Entire Sample
ln (FDI$_{t-1}$)	0.1939*** (5.65)	0.1924*** (5.68)	0.1717*** (4.11)	0.0176 (0.49)	0.1453*** (6.05)	0.1368*** (4.89)	0.0689** (2.29)	0.0704** (2.33)	0.0075* (1.72)	0.0710 (1.62)
ln (FDI$_{t-2}$)	0.0688** (2.05)	0.0715** (2.24)	0.0822** (2.03)	0.0633** (2.55)	0.0092 (0.38)	0.0110 (0.42)	0.0324 (1.09)	0.0335 (1.13)	0.0566 (1.43)	0.0536 (1.35)
ln (GDP$_j$)	0.0005 (0.38)	-0.0012 (-0.69)	-0.0003 (-0.21)	0.0002 (0.09)	0.0005 (0.53)	0.0013 (1.24)	0.0006 (0.42)	0.0005 (0.32)	0.0002 (0.13)	0.0002 (0.14)
ln (GDP$_k$)	0.0057*** (3.07)	0.0075*** (4.01)	0.0121*** (5.22)	-0.0002 (-0.15)	0.0152*** (10.48)	0.0142*** (9.10)	0.0274*** (11.36)	0.0276*** (11.35)	0.0170*** (4.64)	0.0174*** (4.72)
ln (Distance$_{ij}$)	-0.0962*** (-11.79)	-0.0958*** (-11.83)	-0.0730*** (-7.25)	-0.0464*** (-4.61)	-0.0013 (-0.30)	-0.0025 (-0.51)	-0.0165** (-2.14)	-0.0176** (-2.26)	-0.0011** (-0.15)	0.0004 (0.06)
Trade Openness	0.0010 (0.30)	0.0037 (0.75)	0.0028 (0.49)	0.0087 (0.05)	-0.0025 (-0.86)	0.0018 (0.52)	-0.0063 (-0.19)	-0.0076 (-0.22)	0.0117 (0.24)	0.0123 (0.77)
Inflation	-0.0012 (-1.26)	-0.0010 (-0.98)	-0.0010 (-0.89)	-0.0002 (-0.07)	-0.0001 (-0.13)	-0.0009 (-1.01)	-0.0005 (-0.74)	-0.0031 (-0.42)	-0.0018 (-0.83)	-0.0015 (-0.68)
RTA$_{ijt}$	0.0944*** (5.73)	0.1004*** (6.14)	0.0188 (0.95)	0.3824*** (18.69)	0.0459*** (5.93)	0.0427*** (4.95)	0.0066 (0.74)	0.0092 (0.99)	0.0100 (-0.41)	0.0089 (0.37)
POLCON	0.0458* (1.75)	0.0782** (2.17)	0.1124* (1.65)	0.1073 (1.19)	0.0048 (0.35)	0.0488** (2.30)	0.0048 (0.28)	0.0014 (0.06)	0.0552 (0.96)	-0.0416 (-0.35)
BITs	0.0533*** (6.21)	0.0897*** (7.93)	0.0878*** (5.42)	0.0458*** (5.78)	0.0289*** (5.67)	0.0008 (0.09)	0.0140 (1.50)	0.0147 (1.20)	0.0076 (0.66)	0.0152 (1.17)
Powerful BITs		0.2006*** (4.82)	0.0225 (1.20)	0.0416 (0.26)		0.0024 (0.38)		0.0097** (0.99)		0.0006 (0.13)
POLCON x BITs		0.0098 (1.16)	0.1735*** (3.31)	-0.1449 (-1.45)		0.1039*** (4.11)		-0.0009 (-0.03)		0.1189 (1.46)
Constant	0.7976*** (8.93)	0.7254*** (7.78)	0.3685*** (2.97)	0.2685 (0.38)	-0.3266*** (-7.42)	-0.3179*** (-6.41)	-0.5159*** (-7.17)	-0.4774*** (-5.83)	-0.3862*** (-4.52)	-0.4067*** (-4.19)
Observations	8,220	9,900	7,425	2,475	14,385	17,325	10,275	12,375	6,165	7,425
Country pairs	60	60	45	15	105	105	75	75	45	45
Sargan (*p*-value)[a]	0.22	0.19	0.14	-	0.29	0.20	0.15	0.20	0.19	0.32
AB 2 (*p*-value)[b]	0.17	0.13	0.24	-	0.35	0.13	0.28	0.45	0.32	0.39
Instruments	150	152	148	-	164	166	159	163	145	147
(No. of lags)	(2–3)	(2–3)	(2–3)	-	(2–3)	(2–3)	(2–3)	(2–3)	(2–3)	(2–3)
F-test	26.98***	25.16***	9.09***	128.39***	23.94***	17.13***	14.06***	16.23***	3.70***	3.25***

Notes: Dependent variable: $ln\left(\frac{FDI_{ijt}}{FDI_{it}}\right)$. The sample includes 19 host countries from 50 source countries during 2001-14.

t-values are reported in parenthesis. ***, **and * denote significance level at 1, 5 and 10 per cent, respectively.

[a] Sargan-test of overidentification.

[b] Arellano-Bond-test that second order autocorrelation in residuals is 0.

Transitioning to South Asian countries, the BITs variable becomes insignificant (Model VII). However, in Model VIII, after the Powerful BITs variable was incorporated, the model generated a positive and statistically significant relationship between the Powerful BITs variable and FDI. Model IX and X included the West Asian countries (Saudi Arabia, Turkey, and Bahrain).

In both models, the results suggested that BITs are not positively related to FDI, but the GDP of the source country has a positive and statistically significant effect on FDI. Considering all of the ten models, Model IX and Model X were much weaker but still, these countries are obtaining a higher level of investment due to their abundant oil resources.

Effect of BITs on FDI Inflows: On the Basis of Economy's Size

To examine the factors affecting FDI inflows, the sample was divided into three parts on the basis of the size of the host economy (i.e., small, medium, and high GDP). The aim of conducting these analyses was to examine how BITs are affected by the different sizes of the host economies.

In this study, small-sized economies included Bahrain, Bangladesh, Cambodia, Lao People's Democratic Republic, Mongolia, and Sri Lanka. Models I and II suggest that the GDP of the source country is significant in attracting foreign investors. Due to the small size of the economy, investors perceive it as an opportunity to establish their businesses, and avail the incentives that these countries may offer. Interestingly, BITs did not have a statistically significant effect on their FDI; however, the RTA variable was positive and statistically significant which may indicate that for these countries RTAs are an alternative to BITs, and they provide enough protection for traders and investors to increase the possibilities associated with trade opportunities. Moreover, the second lag of FDI and the GDP of the source country seem to have a significant positive influence on FDI, and the distance variable has a negative and statistically significant influence on FDI.

Table-8
System GMM Estimation Results Using Size of Economy

	I	II	III	IV	V	VI
	Small-Sized Economy		Medium-Sized Economy		Large-Sized Economy	
ln (FDI$_{t-1}$)	0.0468 (1.55)	0.0490 (1.62)	0.0802*** (2.78)	0.0734** (2.52)	0.1102*** (3.81)	0.1064*** (3.66)
ln (FDI$_{t-2}$)	0.0973*** (3.39)	0.0957*** (3.33)	0.0052 (0.19)	0.0076 (0.28)	0.0075 (0.27)	0.0038 (0.14)
ln (GDP$_{jt}$)	0.0014 (1.01)	0.0012 (0.85)	0.0006 (0.59)	0.0006 (0.61)	0.0001 (0.18)	0.0005 (0.62)
ln (GDP$_{it}$)	0.0156*** (6.49)	0.0155*** (6.44)	0.0180*** (11.44)	0.0177*** (11.12)	0.0161*** (8.87)	0.0186*** (9.99)
ln (Distance$_{ij}$)	-0.0187*** (-3.44)	-0.0180*** (-3.27)	-0.0050 (-0.98)	-0.0049 (-0.96)	-0.0258*** (-5.10)	-0.0285*** (-5.57)
Trade Openness	0.0047 (0.53)	0.0029 (0.32)	-0.0003 (-0.11)	0.0002 (0.09)	0.0174 (1.46)	0.0144 (1.22)
Inflation	0.0001 (0.06)	-0.0002 (-0.19)	0.0001 (0.25)	-0.0003 (-0.40)	-0.0016* (-1.71)	-0.0017* (-1.79)
RTA$_{ijt}$	0.0277*** (2.99)	0.0293*** (3.11)	0.0099 (1.09)	0.0105 (1.10)	0.0450*** (5.41)	0.0414*** (4.96)
POLCON	0.0066 (0.29)	-0.0227 (-0.67)	0.0107 (0.65)	0.0211 (0.90)	0.0591*** (3.20)	0.0098 (1.30)
BITs	0.0080 (0.99)	0.0045 (0.36)	0.0513*** (8.17)	0.0383*** (4.60)	0.0335*** (5.97)	0.0578*** (6.67)
Powerful BITs		0.0094 (0.69)		0.0019 (0.20)		0.0171*** (3.69)
POLCON x BITs		0.0531 (1.23)		0.0595** (2.22)		0.0693*** (3.03)
Constant	-0.2032*** (-3.10)	-0.2310*** (-2.95)	-0.3398*** (-6.22)	-0.3456*** (-5.76)	-0.1315** (-2.45)	-0.2257*** (-4.04)
Observations	12,330	14,850	14,385	17,325	12,330	14,850
Country pairs	90	90	105	105	90	90
Sargan (*p*-value)[a]	0.22	0.19	0.14	0.31	0.43	0.21
AB 2 (*p*-value)[b]	0.17	0.13	0.24	0.42	0.50	0.24
Instruments	163	164	164	166	163	164
(No. of lags)	(2–3)	(2–3)	(2–3)	(2-3)	(2–3)	(2–3)
F-test	8.68***	7.38***	13.62***	15.82***	11.63***	18.27***

Notes: Distribution of size of the economy for 19 host countries is based on their GDP in 2014. USD 150 billion, USD 151-500 billion and over USD 500 billion are used to categorise the size of the economy as small, medium and large respectively.
*, ** and *** denote significance level at 1, 5 and 10 per cent, respectively.
[a] Sargan-test of overidentification.
[b] Arellano-Bond-test that second order autocorrelation in residuals is 0.

Model III and IV presented the results of medium-sized economies covering Hong Kong, Iran, Malaysia, Pakistan, the Philippines, Singapore, and Thailand. Both the models predicted that first lag of FDI inflows follow in subsequent years. The GDP of the source country was an important factor in determining FDI inflows; moreover, BITs were an important determinant in attracting overseas investment, which illustrates that investors consider protection and security of their proposed investment in these countries, and the interaction term between the POLCON and BITs variable had a positive and statistically significant effect on FDI.

The results of Model V and VI focused explicitly on the large-sized economies which included China, Indonesia, Republic of Korea, Saudi Arabia, and Turkey. The first lag of FDI, GDP of the source country, RTA, POLCON, and BITs variables were all positive and statistically significant determinants of FDI in Model V; moreover, the inflation and distance variables have a statistically significant, but negative relationship with FDI in this model. Model VI incorporated the Powerful BITs variable and the interaction term between BITs and POLCON; here, the statistical significance of the POLCON variable fades to insignificant. The finding suggests that FDI inflows will increase in the presence of BITs and lower political constraints. The positive relationship and statistical significance associated with the lagged dependent variable illustrated that the previous year trend follows in subsequent years. This implies that either they receive a similar amount of FDI or it increases. The study's variable of concern, BITs showed robustness towards overseas investment. Similarly, Powerful BITs also played a pivotal role in exploring overseas investment.

Comparing the Results of the Current Study vs. Earlier Studies

This section compares the findings of this study with earlier ones and analyses if there are any differences in the results. Prior studies identified mixed evidence in terms of the correlation between BITs and FDI inflows. On the other hand, this study has specifically selected Asian countries to

analyse the impact of BITs on FDI inflows. Previously, Lejour and Salfi[65] and others[66] find that in terms of generating FDI, this region, in particular, seems to benefit significantly from the use of BITs. In line with earlier studies, the system GMM technique was used and found that BITs positively influenced FDI inflows in Asian countries. This finding corroborates earlier studies (e.g., Busse et al.,[67] Bhasin and Manocha,[68] and Neumayer and Spess[69]). By further segmenting the data geographically, this study was able to illustrate that BITs have a positive effect on FDI inflows in the East and South East Asian countries, but have no impact on South and West Asian countries. In addition, by segregating the sample on the basis of small-, medium- and large-sized economies, it was found that the ratification of BITs significantly affects medium- and large-sized economies, but has no effect on small-sized economies. This is an important finding from a public policy standpoint because smaller-sized countries in Asia should focus more on establishing RTAs and less on BITs when attempting to generate additional FDI. This study found that the existence of higher institutional quality (measured by Henisz[70]) helps attract higher FDI inflows. However, the results of Busse et al. (2010) and Neumayer and Spess (2005) suggest that institutional quality did not play any role in obtaining FDI flows. Powerful BITs are also an effective tool that countries could deploy to obtain FDI from developed economies; however, the results indicate that regionally there are caveats to this general finding. More specifically, countries in West and South

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[65] Arjan Lejour and Maria Salfi "The Regional Impact of Bilateral Investment Treaties on Foreign Direct Investment" (paper no. 298, CPB Netherlands Bureau of Economic Policy Analysis, The Hague, 2015), https://www.cpb.nl/sites/default/files/publicaties/download/cpb-discussion-paper-298-regional-impact-bilateral-investment-treaties-foreign-direct-investment.pdf.

[66] Niti Bhasin and Rinku Manocha, "Do Bilateral Investment Treaties Promote FDI Inflows? Evidence from India."

[67] Busse, Königer and Nunnenkamp, "FDI Promotion through Bilateral Investment Treaties: More than a Bit?"

[68] Niti Bhasin and Rinku Manocha, "Do Bilateral Investment Treaties Promote FDI Inflows? Evidence from India."

[69] Neumayer and Spess, "Do Bilateral Investment Treaties Increase Foreign Direct Investment to Developing Countries?"

[70] Henisz, "The Institutional Environment for Multinational Investment."

East Asia and countries that are smaller in size benefit less from Powerful BITs. In the presence of good institutional quality and BITs, FDI inflows to Asian countries increase. This finding is consistent with Busse et al. (2010). The present study also indicates that FDI inflows follow earlier trends. According to Busse et al. (2010), the GDP of the host country is a crucial factor in promoting FDI, however, this was not true in this study. The GDP of the source country was an important determinant of FDI. Trade openness and inflation were also insignificant variables, except when large-sized economies were examined and the relationship between inflation and FDI was negative.

Conclusion

The literature provided sufficient evidence that BITs promote FDI activities in developing and developed countries; however, some of the evidence is mixed. To evaluate this relationship, 19 host countries and 50 source countries were examined with data from 2001-14. After finding evidence of cross-sectional dependence, the GMM estimator was applied to further evaluate the results. The relationship between BITs and FDI was analysed over three dimensions:

1. impact of BITs on FDI inflows;
2. region-wise analysis of the impact of BITs on FDI inflows; and
3. an evaluation of whether size of the host economy affects the strength of BITs and the FDI inflows.

The determinants under the Gravity Models are robust in nature and provide some suggestions as to how countries in these regions should design their strategies to attract more foreign investments. The findings associated with the segmented analysis of the determinants of FDI vary; however, the impact of BITs on FDI inflows was more or less the same. BITs provide protection to foreign investors, therefore when applied, FDI inflows increase towards Asian countries. However, the flow of investment depends upon the size of a country and its geographic location.

As far as geographic location is concerned, an initial review of the general results of East Asian countries indicated that they should pursue RTAs, because initially this variable had a positive and statistically

significant effect on FDI; however, after the sample was decomposed and China was removed, it is apparent that these countries should focus more on establishing BITs and sound political regimes if they want to increase FDI. Further, initial evaluation of South East Asian countries seemed to indicate that BITs, on their own, were a key determinant of FDI and that establishing sound political regimes was relatively unimportant; however, as the interaction term between BITs and POLCON was incorporated, it indicated that in addition to RTAs, these countries should also focus on establishing sound political regimes and BITs to increase their FDI inflows. Moreover, when examining the relationship between BITs and FDI, initially, it seemed as though BITs were not a significant determinant of FDI; however, after the Powerful BITs variable was incorporated, a positive relationship was uncovered, which indicates that the South East Asian economies should pursue BITs with powerful countries if they want to increase their FDI inflows. Finally, in West Asian economies, it seems that BITs, Powerful BITs, and the POLCON variables do not have a statistically significant relationship with FDI, and countries in this region have to improve their GDP to increase their FDI inflows.

In small-sized economies, BITs were not positive determinants of FDI inflows, but RTAs had a significant and positive relationship; therefore, these countries should pay more attention to developing RTAs. For large-sized economies, countries can develop past a point where sound political regimes (POLCON) are important, which is illustrative, but somewhat disappointing from a public policy standpoint. Finally, for medium-sized economies, even though the POLCON variable was insignificant, the interaction term between the POLCON and BITs variable was statistically significant and has a positive relationship with FDI inflows. This finding indicates, at least in some respect, that the countries that wish to obtain additional FDI inflows should focus on pursuing both BITs and establishing sound political regimes.

The results of this study offer many suggestions for potential policy improvements and highlight interesting relationships that can be explored in future research projects. First, previous studies of FDI inflows illustrated that once the inflow occurs, it is likely to re-occur in subsequent

years. However, this result may not hold in case of small host economies. Second, the GDP of the source country is an important determinant of whether the host nation can attract overseas investment. Third, RTAs help to create trading activities which ultimately increase FDI inflows. Fourth, the BITs variable is statistically significant in almost all the cases, which indicates that, overall, investment treaties provide sufficient protection for countries to explore international investments. Fifth, higher institutional quality leads to lower political constraints which motivates overseas investors to expand their international network and invest. Also, powerful BITs indicate that treaties ratified between the host and a large-sized economy (identified on the basis of their GDP)[71] have a positive impact on attracting FDI inflows. Finally, the interaction of the POLCON x BITs variables indicates that in the presence of institutional quality, BITs play an important role in building the confidence of overseas investors, which leads to additional investment in the host country.

Based on this analysis, countries should pursue policies that indicate that the investment protections they provide are sincere and credible. Once the prospective investor believes that the country, as an institution, is credible, the effects of BITs and Powerful BITs become more apparent. A key policy implication of this study is to emphasise the importance of BITs in attracting overseas investment, especially in case of South and West Asian countries, but more importantly, to highlight potential differences in how one country should think about developing its strategy to obtain and acquire FDI, and whether it should pursue BITs or attend to other priorities first. If smaller countries do not increase their institutional quality, actions taken to increase foreign investment produce short-term or no results so they need to focus on strengthening their institutions, and then attempt to attract capital.

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[71] Lee and Johnston, "Improving Reputation BIT by BIT: Bilateral Investment Treaties and Foreign Accountability."