MISSING INVESTMENT TREATIES

Rodrigo Polanco, Valentino Desilvestro, Azernoosh Bazrafkan[*]

Abstract

This article presents the situation of 'Missing Investment Treaties' (MITs), defined as those International Investment Agreements (IIAs) that have been concluded by States, but their text (and in some cases their existence) are not publicly available or are incomplete.

In order to determine the number of MITs, we examined the text and language availability of IIAs concluded by countries, that are available in public databases, and we complemented that information with country-specific search from international, governmental and private sources.

In turn, the article explores possible explanations to this State's behaviour, using the following questions as guidelines: Why would countries sign agreements that are supposedly negotiated to promote, protect or liberalize foreign investment without making those texts available? Why would countries make available only some parts of IIAs? Is there any reason behind the language availability of an investment agreement? If a text is publicly available, does it correspond to the language of both contracting parties, only one of them, or of a third country? Is it possible to achieve IIAs' objectives if the text of the treaty is not available, is partially available, or is available only in one language?

I. Introduction

The purpose of International Investment Agreements (IIAs) is the promotion and protection and/or liberalisation of cross-border investment flows. Yet, empirical studies on the effects of IIAs on increased investment flows often show contradictory results. Much of the critique against the current international investment regime is based on the implications of IIAs for the policy space of sovereign states, the asymmetries in rights and obligations conferred by those treaties to both States and foreign investors, the complexity of a regime that is based on more than 3500 Bilateral Investment Treaties (BITs) and other layers of international and domestic law, and the non-transparent settings under which the negotiations of new agreements take place.

---

[*] All World Trade Institute (WTI) researchers in the 2015 Swiss Network for International Studies (SNIS) Project 'Diffusion of International Law: A Textual Analysis of International Investment Agreements'.

However, to this date, the literature has paid little consideration to the fact that the text of an important share of existing BITs is currently not publicly available, further referred to as 'Missing Investment Treaties' (MITs). This paper draws the attention to the MITs and its objective is twofold. First, we show that while some MITs could be found by looking into not-easily accessible governmental publications, some others could not be retrieved at all. Second, we show that MITs are not missing at random. We consider a number of factors that could explain MITs and test our hypothesis using linear regression. These indicators include socio-economic characteristics of the contracting parties and countries' ranking in the 'Rule of Law' score as defined by the World Bank Development Indicators. Overall, our results predict MITs with 86% accuracy. We also examine language availability of IIAs, showing that very often treaties are available in only the language of one party. Given these findings, we question whether IIAs can achieve their objective of mutually promoting and protecting investment.

This article is structured as follows: after this introduction, the second section provides a background review on the effect of IIAs on foreign direct investment (FDI) flows and whether the availability of IIAs has been considered in the existing literature. The third section details the number of IIAs that is publicly available, and the methodology used to find missing treaties from different sources. The fourth section provides descriptive statistics of MITs and econometric evidence on their determinants. The fifth section focuses on the language availability of IIAs. In section six we map the common features of IIAs from countries with the largest number of MITs and in the final section we advance some preliminary conclusions.

II. Effects of IIAs on FDI Flows: A Literature Review

In spite of a growing body of literature, the extent to which IIAs and particularly BITs promote FDI remains unclear. A comprehensive summary of the literature is beyond the scope of this article. Interested readers can refer to the work of the United Nations Conference on Trade and Development (UNCTAD),[1] and Sauvant and Sachs[2] for a detailed overview of the literature on the effects of BITs on FDI flows. Instead, this section will show that availability of BITs texts – which represent the large majority of IIAs (around 90%) – has been largely overlooked by existing research. Yet, it can be argued that whether investors can easily ascertain the depth of commitments of potential host states could influence their investment decisions. In turn, this has implications for the empirical literature on the effects of BITs on FDI.

---

[1] UNCTAD, *The Role of International Investment Agreements in Attracting Foreign Direct Investment to Developing Countries* (New York: United Nations, 2010).
[2] Karl P Sauvant and Lisa E Sachs (eds), *The Effect of Treaties on Foreign Direct Investment* (Oxford University Press, 2009).

There are different causal mechanisms that can result in BITs increasing FDI.[3] Some indicate that BITs provide investors with *ex-ante* information, as countries advertise their agreements, and therefore the commitments they are willing to make to foreign investors. The relevancy of unavailable texts in determining FDI is however unclear, as the extent to which investors use BITs when taking investment decisions remains an open question. In his summary of qualitative surveys with investors, Poulsen[4] provides evidence that BITs are important in presence of discord with the host state after the investment has been made, rather than in the establishment phase. He obtained similar results when interviewing BIT-negotiators representing countries accounting for more than 40% of world total outward FDI, and in his research, Double Taxation Agreements (DTAs) were found to be more important in the pre-establishment phase. Also, the World Bank[5] provides some evidence that investors become interested in BITs only after frictions arise. The general knowledge of the existence of BITs has also been subject to debate. For instance, according to Poulsen in one survey by the European Commission with 300 European investors, only 10% confirmed to use BITs in their decision, while to 50% of the participants BITs were unknown.[6] In contrast, UNCTAD[7] has provided survey evidence that BITs are significant investment decision factors, especially for investors in transition economies.

The pertinence of BITs for investors depends on their size and economic sector in which investors are involved (See, for instance, Yackee;[8] Colen, Persyn, and Guariso;[9] and UNCTAD).[10] In particular, small and medium-sized enterprises (SMEs) are believed to be the likely beneficiaries of BITs, insofar as larger companies would be frequently in a position to directly negotiate agreements with the host state. Consequently, they are also the most likely to be affected by the unavailability of BITs texts. The implications for the empirical literature on the effects of BITs on FDI are difficult to pinpoint. On the one hand, as described above, there are reasons to believe that BITs, in general, are of secondary importance in determining FDI. On the other hand, it is counter-intuitive to assume that unavailability of BITs text has no effect on the investment climate, and on the decisions of investors.

---

[3] Tim Buethe and Helen V Milner, 'Bilateral Investment Treaties and Foreign Direct Investment: A Political Analysis', in Karl P Sauvant and Lisa E Sachs (eds), *Eff Treaties Foreign Direct Invest* (Oxford University Press, 2009).

[4] Lauge N Skovgaard Poulsen, 'The Importance of BITs for Foreign Direct Investment and Political Risk Insurance: Revisiting the Evidence', in Karl Sauvant (ed), *Yearb Int Invest Law Policy 2009-2010* (OUP USA, 2010).

[5] World Bank, *World Development Report 2005: A Better Investment Climate for Everyone* (The World Bank, 2004).

[6] See Poulsen, above n 5.

[7] See UNCTAD, above n 2.

[8] Jason Webb Yackee, 'Conceptual Difficulties in the Empirical Study of Bilateral Investment Treaties', Brooklyn J Int Law 33 (2007), at https://www.researchgate.net/publication/228135818_Conceptual_Difficulties_in_the_Empirical_Study_of_Bilateral_Investment_Treaties.

[9] Liesbeth Colen, Damiaan Persyn and Andrea Guariso, 'Bilateral Investment Treaties and FDI: Does the Sector Matter?', World Dev at http://www.sciencedirect.com/science/article/pii/S0305750X16300523.

[10] See UNCTAD, above n 2.

Empirical evidence on the effect of BITs on FDI is highly dependent on model and variables specification and on the degree to which reverse causality is dealt with. Studies also vary with respect to the channel through which BITs are expected to increase FDI. As BITs are signed between a pair of countries, bilateral FDI flows between the signatories can be expected to increase following the signature/entry into force of a BIT. However, BITs can also be used to signal improved property rights, resulting in the dependent variable being total FDI rather than bilateral FDI. A summary of key results is provided next.

Hallward-Driemeier analyses bilateral FDI flows for the years 1980-2000 and finds that there is no statistically significant effect of BITs on FDI.[11] She concludes that BITs are complements to good institutions, rather than substitutes. Using bilateral stock of FDI during 1982-1997,[12] Egger and Pfaffermayr find that BITs have a positive impact. These authors show that the effect is estimated with more precision when taking into account only BITs in force. This is important because there is a time lag between the signature and the ratification of the agreements. Indeed, according to the UNCTAD database, only 74% of the BITs signed up to June 2017 have entered into force. The percentage is however likely to be higher, due to missing information in the UNCTAD database.

Rose-Ackermann and Tobin,[13] using total FDI for the period 1975-2000 found that BITs have little impact on FDI. Interestingly, the effect is negative for countries characterized by high political risk, and positive for countries with lower risk. This introduces doubts to the extent to which BITs can substitute for weak investment environment. Model specification has been shown to be very important. For instance, Neumayer and Spess[14] use total inflows of FDI from 1970 to 2001 and the total number of BITs signed with OECD countries as dependent and explanatory variable respectively. The authors find a very large effect of BITs on investment, with the effect being stronger for countries with lower institutional quality. The robustness of these results was questioned by Yackee.[15] After replicating the econometric models used by Neumayer and Spess [16] with some minor modifications, he increased the sample size including data up to the year 2003, and including also

[11] Mary Hallward-Driemeier, *Do Bilateral Investment Treaties Attract Foreign Direct Investment? Only a Bit ? and They Could Bite* (The World Bank, 2003).

[12] Peter Egger and Michael Pfaffermayr, 'The impact of bilateral investment treaties on foreign direct investment', 4 J Comp Econ 32 (2004), at 788.

[13] Susan Rose-Ackerman and Jennifer Tobin, *Foreign Direct Investment and the Business Environment in Developing Countries: The Impact of Bilateral Investment Treaties*, SSRN Scholarly Paper ID 557121 (Rochester, NY: Social Science Research Network, 2005) http://papers.ssrn.com/abstract=557121.

[14] Eric Neumayer and Laura Spess, 'Do bilateral investment treaties increase foreign direct investment to developing countries?', 10 World Dev 33 (2005), at 1567.

[15] Jason W Yackee, 'Do BITs Really Work? Revisiting the Empirical Link Between Investment Treaties and Foreign Direct Investment', in Karl P Sauvant and Lisa E Sachs (eds), *Eff Treaties Foreign Direct Invest* (Oxford University Press, 2009).

[16] See Neumayer and Spess, above n 15.

other agreements that are in practice very similar to BITs. This resulted in the vanishing of the large effect of BITs on FDI flows and the reversing of the relationship with the quality of institutions.

One of the shortcomings of the empirical literature on the effects of BITs on FDI is endogeneity. Aisbett[17] shows that BITs are likely to be signed in presence of increased FDI flows and in the context of general changes in domestic policy of FDI destination countries. Once these factors are taken into account, the correlation between BITs and FDI vanishes. The fact that BITs are signed in the context of much larger development initiatives is supported by anecdotal evidence. For instance, interviews with BIT-negotiators for Pakistan confirm that the vast majority of recent BITs were signed as a supplement to major investment initiatives with foreign countries and companies in specific sectors.[18]

A second shortcoming of the vast majority of the BITs-FDI literature is that BITs are considered as all alike, and therefore explanatory variables take the form of either counts of BITs, based on the signature date or entry into force date. In other words, the explanatory variable is an indicator for whether and/or how many BITs exist, rather than an indicator for absence/presence of specific rights granted to investors. It has been argued that the bulk of BITs present very similar provisions, with the most important change over time being the transfer of disputes from national to international institutions (See, for instance, Rose-Ackerman and Tobin).[19] This position has been however questioned. For instance, Allee and Peinhardt [20] show and motivate the considerable variation that can be found in 1500 BITs with the respect to delegation of arbitration to the ICSID. Similarly,[21] Yackee argues that the objective should be to investigate whether actual commitments of countries to investors lead to more FDI. The use of BITs counts based on UNCTAD database is inappropriate for this purpose insofar as that methodology does not take into account content variation across BITs and does not control for other investment agreements that have very similar content and purpose to BITs. Concerning the first point, the author argues that while the substantial promises to investors are to a certain extent similar, their credibility varies greatly. In particular, BITs display different degrees of guarantees with respect to enforcement. In order to address this shortcoming, he classifies approximately one thousand BITs according to whether disputes settlement provisions are included and to which extend investors can have access to it, illustrating a very important shift over time towards stronger commitment devices, especially from the 90s. This

---

[17] Emma Aisbett, 'Bilateral Investment Treaties and Foreign direct Investment: Correlation versus Causation', in Karl P Sauvant and Lisa E Sachs (eds), *Eff Treaties Foreign Direct Invest* (Oxford University Press, 2009).

[18] See Poulsen, above n 5.

[19] See Rose-Ackerman and Tobin, above n 14, Foreign Direct Investment and the Business Environment in Developing Countries.

[20] Todd Allee and Clint Peinhardt, 'Delegating Differences: Bilateral Investment Treaties and Bargaining Over Dispute Resolution Provisions', 1 Int Stud Q 54 (2010), at 1.

[21] See Yackee, above n 9.

classification is used by Berger[22] to study whether variation in the provisions included in BITs affects FDI flows. His results show that FDI increases if BITs include pre-establishment national treatment and/or most-favoured-nation provisions. Investor-state dispute settlement provisions are found to be of minor significance. In a similar research setup, Berger and others[23] do not find any evidence for stricter dispute settlement provisions in BITs having a consistent effect on FDI.

To our knowledge, the only contributions to the literature trying to estimate the effect of variation across BITs content on FDI flows come from Berger[24] and Berger and others.[25] Although these studies move in the right direction, they are very limited with respect to the number of BITs taken into consideration. This is also partly due to the fact that an important share of BITs text is currently unavailable (474 treaties in total, around 15% of the known treaties in existing databases or governmental websites), resulting in the literature using counts for the existence of BITs or, as in this case, using reduced sample sizes. As missing treaties texts are not randomly distributed across countries, reduced sample sizes are likely to have a non-negligible effect on results. Even in treaties are available, as it will be explained later, in the majority of cases the texts are found in only one language, a factor that also may difficult a detailed analysis of their provisions, if the language is not a "lingua franca" (e.g. English) or any other language commonly used in this field of research.

III. Searching for MITs

Currently, there is no comprehensive database of IIAs. For the purposes of this research, we define IIAs as treaties concluded under international law between two or more states or economies, which, in whole or in part, contain substantive obligations to promote, protect and/or liberalise foreign investment either generally or sector specific.

The most complete IIAs database is administered by UNCTAD, which by November 2017 includes information of 3608 IIAs signed, however lacking texts for 474 treaties (around 15% of the total). From this group of agreements, 455 are BITs – 165 of them in force, and 19 are treaties with investment provisions (TIPs) – 7 of them in force.[26] To determine the actual number of MITs, we

---

[22] Axel Berger et al, 'Do trade and investment agreements lead to more FDI? Accounting for key provisions inside the black box', 2 Int Econ Econ Policy 10 (2012), at 247.
[23] Axel Berger et al, 'More stringent BITs, less ambiguous effects on FDI? Not a bit!', 3 Econ Lett 112 (2011), at 270.
[24] Ibid.
[25] See Berger et al, above n 23, Do trade and investment agreements lead to more FDI?
[26] United Nations Conference on Trade and Development (UNCTAD), 'International Investment Agreements by Economy', *Invest Policy Hub* http://investmentpolicyhub.unctad.org/IIA/IiasByCountry#iiaInnerMenu (visited 30 November 2017). By December 2015, the same database included information of 3475 IIAs signed, missing 903 treaty texts (26% of the total).

complemented the data found at UNCTAD's database with the treaty texts gathered during the set-up of the World Trade Institute (WTI) Electronic Database of Investment Treaties (EDIT).[27]

A. Methodology

The notion of IIAs traditionally encompasses BITs and TIPs. For the scope of EDIT, our definition of IIAs includes naturally BITs, but we have clarified which TIPs are relevant enough to be considered as part of our definition of IIAs. Having this in mind, we have included preferential trade agreements (PTAs), and regional investment agreements (RIAs) with investment provisions. We have also included some agreements that have been largely excluded from the traditional definition of investment treaties, like the Friendship, Commerce and Navigation Agreements (FCNs), or that complement existing treaties, like side or additional agreements on investment. For the purpose of this article, we have labeled all IIAs that are not BITs or FCNs as "Other Investment Agreements" (OIAs). We have also excluded from the scope of EDIT other types of agreements that have been included in existing databases such as some multilateral agreements (e.g. ICSID, Mauritius Convention, TRIMs), Trade and Investment Framework Agreements (TIFAs), Framework Agreements on Economic Cooperation, as well as public and international investment insurance schemes (e.g. OPIC and MIGA), because they largely do not provide substantive binding commitments to promote, protect and/or liberalise foreign investment.

Table 1 illustrates the composition of EDIT. The column N reports the total count of signed treaties, that are/have been in force and NoForce for treaties that have not (yet) entered into force. The remaining columns provide the count and percentage of treaties for which no text could be found. Few IIAs included in EDIT are not listed in UNCTAD or any other database. Similarly, a small number of available treaties is incomplete, being largely PTAs or RIAs, which are only included in databases with their investment chapter, omitting relevant parts of the same agreement that are applicable to an investment such as chapters relating to trade in services, financial services and general exceptions – including taxation issues.

Table 1: EDIT database

Type	N	Force	Force %	NoForce	NoForce %	Miss	Miss %	MissForce	MissForce %
BIT	3,163	2,527	79.89	636	20.11	183	5.79	22	0.70
FCN	46	46	100	0	0	0	0	0	0
OIA	312	262	83.97	50	16.03	8	2.56	5	1.60
Sum	3,521	2,835	80.52	686	19.48	191	5.42	27	0.77

This table shows the composition of the EDIT database.

---

[27] WTI SNIS project, "Diffusion of International Law: A Textual Analysis of International Investment Agreements", http://www.wti.org/research/projects/#20820-snis-project.

The search of IIAs was performed looking for the official texts of agreements concluded until December 2016, regardless of them being in force or not, although the ratification status was considered for the purposes of MITs determinants.

As the purpose of the study is to identify the existence of a text for negotiated IIAs, terminated and renegotiated IIAs were also included in the sample. When the text was not available in English, the study of IIAs was done by researchers knowledgeable on both investment law and the language of the agreement.

In order to obtain a consolidated list of IIAs and its texts, a standardised three steps research procedure was followed:

(i)   Searching in existing public and private databases, both digital and physical.[28]

(ii) Searching in governmental websites and in international organisations websites (e.g. United Nations, World Bank, OECD). For that purpose a comprehensive list of 139 different websites of ministries, agencies and public institutions was developed, after extensive inspection of websites.

(iii) Formally contacting governments in order to obtain a copy of the official text of the agreement.

B. Challenges finding MITs

The major difficulties we encountered during our quest to retrieve MITs were:

(i)   **IIAs are a moving target.** New treaties are signed every year to an average of 38 treaties during the past three years. Existing databases – particularly UNCTAD's International Investment Agreements – have updated their content, addressing the gap of the MITs. For example, by early 2015, UNCTAD reported 3489 IIAs with 817 missing texts (386 of them in force). After an important update on 22 September 2016, UNCTAD reported 3604 IIAs, 491 without text (187 in force).[29]

(ii) **Information about IIAs is not always available.** During this research, the authors have acknowledged that sometimes the very existence of an investment treaty is publicly unknown, due to several reasons: First, some governmental websites or official repositories

---

[28] The main databases used to populate our database are the following: UNCTAD's International Investment Agreements [http://investmentpolicyhub.unctad.org/IIA], United Nations Treaty Collection [https://treaties.un.org/], Kluwer Arbitration "BITs" [http://www.kluwerarbitration.com/CommonUI/BITs-countries.aspx], Oxford's "Investment Claims" [http://oxia.ouplaw.com/#], Investor-Law Guide – ISLG [http://www.investorstatelawguide.com/], Investment Treaty Arbitration – ITA [http://www.italaw.com/investment-treaties], and ICSID's "Investment Laws of the World" (only in printed loose-leaf).

[29] These changes have important effects on our analysis. For example, until the latest update of UNCTAD database, the text of 18-19% of BITs in force signed by Finland and Sweden were unavailable. Today All Finnish BITs are available on UNCTAD and only 7% of Swedish BITs are missing.

are often incomplete or only include a list of agreements without providing their text.[30] Second, for a number of countries (mostly developing ones), the official government website has not been updated and does not include more recent treaties, such as is the case of Mauritania,[31] Senegal,[32] and Jordan.[33] Third, texts of IIAs are difficult to find even if on dedicated websites of Investment Promotion Agencies (IPAs) that are supposed to promote IIAs. Some IPAs that have published their domestic legislation with regard to the treatment of foreign investment (Investment Codes) but remain silent on the signed IIAs, such as Cambodia.[34] This holds true not only for developing countries but also for OECD countries. In contrast, DTAs in general are easily found.[35] This could imply that host States (developed and developing alike) perceive the Double Taxation Agreements as more relevant instruments to attract foreign investment. Fourth, several countries tend to make public only those IIAs that are in force, and this factor can be signalled as one important determinant of MITs.[36] Finally, when contacting public officials, some governments were reluctant to share information, and either denied access to the texts or never answered our requests.

(iii) **Civil unrest or disturbances strife seem to influence treaty availability.** For the countries that are facing civil unrest such as Libya,[37] Sudan,[38] Syria,[39] Yemen,[40] and Afghanistan,[41] it

---

[30] The most notable example is the list of the bilateral investment agreements referred to in Article 4(1) of Regulation (EU) No 1219/2012 of the European Parliament and of the Council of 12 December 2012 establishing transitional arrangements for bilateral investment agreements between Member States and third countries, which contains a full list of BITs concluded by EU member states, but no text of them. Other examples of mere lists of IIAs are: Burkina Faso <http://www.apexb.bf/les-accords-bilateraux-regissant-les-exportations>, Cuba <https://cubatravelcorp.wordpress.com/2016/01/03/acuerdos-de-promocion-y-proteccion-reciproca-de-inversiones-appri/>, Mozambique <http://www.inm.gov.mz/?q=pt-pt/centro-de-promo%C3%A7%C3%A3o-de-investimentos-cpi>, and Yemen < http://investinyemen.org/> all accessed on 6 December 2017.

[31] Mauritania, Ministry of Economy and Finance, General Directorate of Private Sector Promotion <http://www.investinmauritania.gov.mr/spip.php?article93> accessed on 6 December 2017.

[32] République du Sénégal. Primature Secrétariat General du Gouvernement, <http://www.jo.gouv.sn> accessed on 6 December 2017.

[33] As of June 2017, the website on which the Jordanian government published its investment agreements is no longer available. On the website of the Jordanian Department for International Trade, there is a link mentioned for investment agreements which is also not available <http://mit.gov.jo/Pages/viewpage.aspx?pageID=309> accessed on 6 December 2017.

[34] Council for the Development of Cambodia <http://www.cambodiainvestment.gov.kh> accessed on 6 December 2017.

[35] Kuwait as even some BITs included among their database on DTAs <http://www.mof.gov.kw/TaxationFAQ/AgrrementsMap.aspx#> accessed on 6 December 2017.

[36] For example, all BITs signed by Côte d'Ivoire which are not in force are not only missing on UNCTAD but also missing on the websites of the partner countries. Singapore does not publish its BITs which are not in force but notes that IIAs with Colombia, Burkina Faso, Côte d'Ivoire, Mozambique and Nigeria have been signed, but are not yet into force <https://www.mti.gov.sg/MTIInsights/Pages/IIAs.aspx>. Same holds true for Mauritius: <http://www.investmauritius.com/downloads/ippa.aspx> both accessed on 6 December 2017.

[37] For example, the 2001 Libya-Ukraine BIT could be found through Ukraine <http://www.ukrexport.gov.ua/i/imgsupload/libya> and the 2003 Libya-Malta BIT through Malta https://foreignaffairs.gov.mt/en/Treaties%20Series/Pages/Treaties%20Search%20Page.aspx> both accessed on 6 December 2017.

[38] The 1997 China-Sudan BIT could be retrieved through China <http://tfs.mofcom.gov.cn/aarticle/h/aw/201002/20100206778963.html> accessed on 6 December 2017.

[39] The 2002 Syria-Ukraine BIT could be found through Ukraine <http://www.ukrexport.gov.ua/i/imgsupload/sirya>, the 1998 Iran-Syria BIT through Iran <http://rc.majlis.ir/fa/law/show/93875> all accessed on 6 March 2017.

was largely not possible to find the IIAs through their governmental websites but through their treaty partners.[42] The non-publication of IIAs is, however, not only limited to countries associated with civil disturbances.

(iv) **Countries of certain regions and development status are more prone to have MITs.** A wide range of African countries of developing or least-developed status do not have an important number of their IIAs available to public, although some are available through the governmental websites of their treaty partners. This is the case of Benin,[43] the Democratic Republic of Congo,[44] Djibouti,[45] Equatorial Guinea,[46] Gabon[47], Guinea,[48] Malawi,[49] Mauritania,[50] Mozambique,[51] Namibia,[52] Nigeria,[53] Zambia[54] and Zimbabwe.[55] It must be

---

[40] The 2001 Ukraine-Yemen BIT could be retrieved through Ukraine <http://zakon3.rada.gov.ua/laws/show/887_006?test=4/UMfPEGznhheI8.ZiG1Y8TkHI4mss80msh8Ie6>, the 1998 China-Yemen BIT through China <http://tfs.mofcom.gov.cn/aarticle/h/at/201002/20100206778924.html>, the 1998 Malaysia-Yemen BIT through Malaysia <http://www.miti.gov.my/miti/resources/auto%20download%20images/5567e08baf761.pdf> all accessed on 6 December 2017.

[41] The 2006 Afghanistan-Iran BIT could be found through Iran <http://rc.majlis.ir/fa/law/show/97998> accessed on 6 December 2017.

[42] For example, the 1999 Malaysia-Senegal BIT could be retrieved through Malaysia <http://www.miti.gov.my/miti/resources/auto%20download%20images/5567e0a00527c.pdf> accessed on 6 December 2017.

[43] The 2008 Benin-Kuwait BIT could be found through Kuwait <http://www.mof.gov.kw/TaxationFAQ/AgreementViewer.aspx?pdfpath=Benin//231fd9d9-be1e-49ff-9c4f-26c19578e320.pdf> accessed on 14 June 2017.

[44] The 2000 Democratic Republic of the Congo-Ukraine BIT could be retrieved through Ukraine <http://arbitration.kiev.ua/uploads/kucher/16.%20Congo%20-%20UKR.pdf> accessed on 6 December 2017.

[45] The 2009 Djibouti-Kuwait BIT could be found through Kuwait <http://www.mof.gov.kw/TaxationFAQ/AgreementViewer.aspx?pdfpath=Djibouti//9f7b40a2-99a7-4f3c-bcf3-b05ac31d2335.pdf> , accessed on 6 December 2017.

[46] The 2015 Equatorial Guinea-Ukraine BIT could be found through Ukraine <http://arbitration.kiev.ua/uploads/kucher/23.%20Equatorial%20G%20-%20UKR.pdf> and the 2005 China-Equatorial Guinea BIT could be retrieved through China <http://tfs.mofcom.gov.cn/aarticle/h/aw/201002/20100206785036.html> both accessed on 14 June 2017.

[47] The 1979 Gabon-Romania BIT could be retrieved through Romania <www.mae.ro/sites/default/files/tratate/descarcare.php?doc=2282_44.var>, and the 1997 China-Gabon through China < http://tfs.mofcom.gov.cn/aarticle/h/aw/201002/20100206778962.html> both accessed on 6 December 2017.

[48] The 1996 Guinea-Malaysia BIT could be retrieved through Malaysia <http://www.miti.gov.my/miti/resources/auto%20download%20images/5567e070248a5.pdf> accessed on 6 December 2017.

[49] The 1995 Malawi-Taiwan BIT could be retrieved through Taiwan < http://no06.mofa.gov.tw/mofatreatys/> accessed on 6 March 2017.

[50] The 1988 Mauritania-Romania BIT could be found through Romania <http://www.cdep.ro/pls/legis/legis_pck.htp_act_text?idt=10993> accessed on 6 December 2017.

[51] The 2001 China-Mozambique BIT could be retrieved through China <http://www.fdi.gov.cn/1800000121_39_2387_0_7.html> accessed on 6 March 2017.

[52] The 1994 Malaysia-Namibia BIT could be retrieved through Malaysia <http://www.miti.gov.my/miti/resources/auto%20download%20images/5567e053e17fe.pdf> accessed on 6 December 2017.

[53] The 2002 Nigeria-Sweden BIT could be found through Sweden <http://www.regeringen.se/contentassets/eb52242e93124fb6afe43987bb2d38c9/avtal-med-nigeria-om-omsesidigt-framjande-och-skydd-av-investeringar>, and the 1994 Nigeria-Taiwan BIT through Taiwan < http://no06.mofa.gov.tw/mofatreatys/> both accessed on 6 December 2017.

[54] The 2015 Mauritius-Zambia BIT could be retrieved through Mauritius <http://www.investmauritius.com/downloads/ippa.aspx> accessed on 6 December 2017.

[55] The 1999 Italy-Zimbabwe BIT could be found through Italy <http://www.gazzettaufficiale.it/do/atto/serie_generale/caricaPdf?cdimg=001G016000200010110001&dgu=2001-04-12&art.dataPubblicazioneGazzetta=2001-04-12&art.codiceRedazione=001G0160&art.num=1&art.tiposerie=SG>, the

noted that the lack of publicly available IIAs goes beyond the suspected countries on the African continent and unstable states. Furthermore, it seems that countries that are less open to the global market economy are also reluctant to provide information about their signed agreements, such as North Korea[56] and Cuba.[57] For a number of Caribbean countries there is few data available, such as Guyana and Haiti. Overall, Least-Developed Countries (LDCs) are the most recurrent countries without publicly available text of IIAs.

(v)   **Some IIAs were wrongly indexed in existing databases**. There is also a number of BITs that do not contain any investment related provisions, but are named as such. Those include double taxation agreements,[58] economic cooperation agreements,[59] Memoranda of Understanding,[60] among others.[61]   In addition, some treaties were represented as a new IIA replacing the previous IIA, but in reality, they were not replacing the previous treaty but adding an additional protocol to it. Some agreements were listed as two separate treaties, whereas in reality these had identical texts. This was the case for treaties signed by countries that split up in various states (e.g. Serbia and Montenegro and other countries that formed Yugoslavia). Finally, some errors in the metadata of IIAs (date of signature, date of entry into force), also made difficult to locate the treaties. On some occasions, the signature date of the IIA is not correctly mentioned in the UNCTAD database, such as the Slovenia-Uzbekistan BIT (10 April 2003 instead of 7 October 2003), and the Bangladesh-Pakistan BIT (signed 13 October 1998, not 24 October 1995).

1999   Iran-Zimbabwe   through   Iran <http://rc.majlis.ir/fa/law/show/98003?keyword=%D8%B2%DB%8C%D9%85%D8%A8%D8%A7%D8%A8%D9%88%D9%87>, the   2000   Kuwait-Zimbabwe   BIT   through   Kuwait <http://www.mof.gov.kw/TaxationFAQ/AgreementViewer.aspx?pdfpath=Zimbabwe//488b1ace-18ba-413c-93fe-7eddfe7ef17a.pdf>,   and   the   1994   Malaysia-Zimbabwe   BIT   through   Malaysia <http://www.miti.gov.my/miti/resources/auto%20download%20images/5567e050ab25a.pdf>, all accessed on 6 December 2017.
[56]   The   1998   North   Korea-Malaysia   BIT   through   Malaysia <http://www.miti.gov.my/miti/resources/auto%20download%20images/5567e08677e42.pdf> accessed on 6 March 2017.
[57] The 1998 Bulgaria-Cuba BIT through Bulgaria <http://old.mi.government.bg/trade/regional/docs.html?id=90602> accessed on 6 March 2017.
[58] For example, UNCTAD lists BITs concluded by Qatar with Mauritania, Syria, Sudan and Yemen, but these agreements are in fact DTAs. See the 2003 Mauritania-Qatar <http://www.almeezan.qa/AgreementsPage.aspx?id=1787&language=ar>, the 2003 Qatar-Syria <http://www.almeezan.qa/AgreementsPage.aspx?id=1250&language=ar>, the 1998 Qatar-Sudan BIT <http://www.almeezan.qa/AgreementsPage.aspx?id=1520&language=ar>,   and   the   2000   Qatar-Yemen <http://www.almeezan.qa/AgreementsPage.aspx?id=1255&language=ar>, all accessed on 6 December 2017. Similarly, the 2001   Kuwait-Syria   BIT   is   not   a   BIT,   but   a   DTA <http://www.mof.gov.kw/TaxationFAQ/AgreementViewer.aspx?pdfpath=Syria//394d9a14-ad28-448f-b63d-30a4986aec42.pdf>,
[59] The 1996 Armenia-Turkmenistan is not a BIT, but two agreements: one on cooperation in the field of public health and the   other   on   exchange   of   legal   information <http://www.parliament.am/library/erkoxm/1996-1998/7.pdf>   and <http://www.parliament.am/library/erkoxm/1996-1998/8.pdf> all accessed on 6 December 2017.
[60] The 2000 Indonesia-Venezuela BIT is not a BIT, but a Memorandum of Understanding for the implementation of bilateral consultations <http://treaty.kemlu.go.id/uploads-pub/1904_VEN-2000-0005%20.pdf> accessed on 6 December 2017.
[61] The 2006 Djibouti-Italy BIT is not a BIT, although it is titled at such. It is an agreement for converting debt into public investments <http://itra.esteri.it/Ricerca_Documenti/wfrmRicerca_Documenti.aspx> accessed on 6 December 2017.

IV. Determinants of MITs

This section describes which (groups of) countries have the most MITs and offers possible reasons why particularly the texts of IIAs from these countries are missing.

A. Descriptive statistics

In this section, we restrict our analysis to BITs, which represent the large majority of signed IIAs (around 90%). For each of the 3163 BITs listed in EDIT we checked if the text of the treaty is available in the UNCTAD database.[62] 16% of the unique BITs listed in EDIT are missing in the UNCTAD database. Interestingly, 50% of the missing treaties are BITs that are/have been in force.

Figure 1: Missing Treaties: The Usual Suspects (1/2)
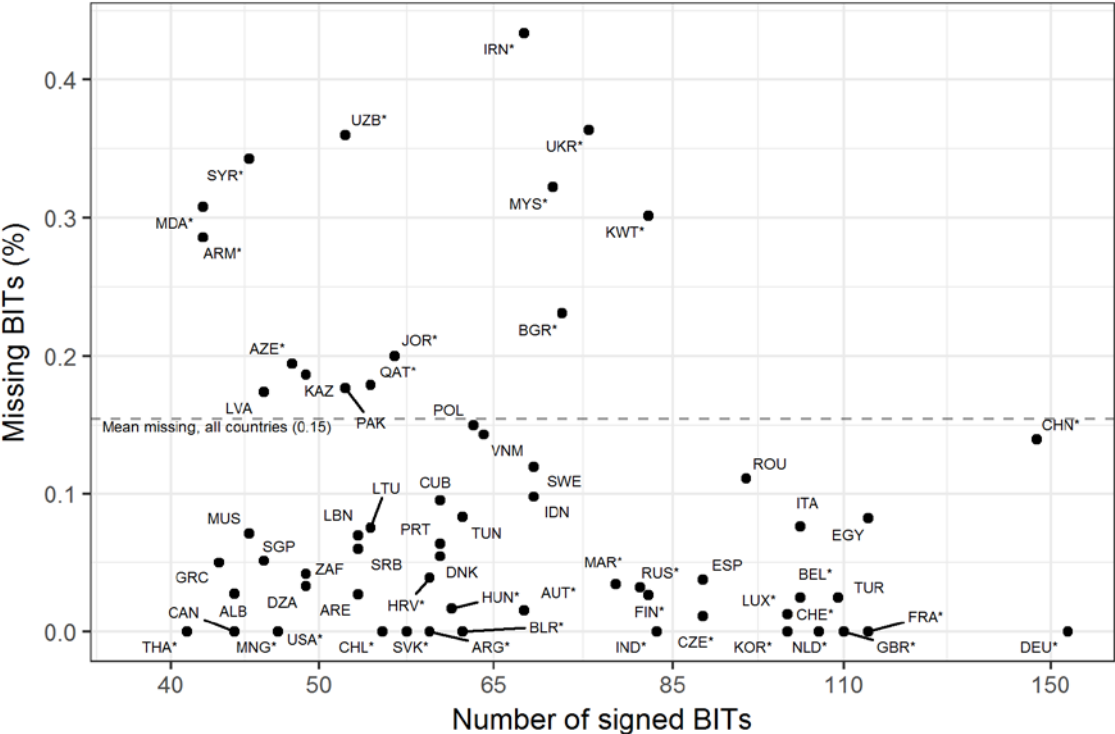
This figure displays the proportion of missing treaties for countries that have signed more than 40 BITs. The sample share of missing treaties is indicated by the horizontal dashed line. The star on the names indicates whether, for a given country, its share of missing treaties is statistically different from the average. P-values are obtained using a binomial distribution with n being the number of signed BITs and p the share of missing treaties in the data, 15%.

---

[62] EDIT lists unique treaties while in UNCTAD certain BITs are listed multiple times, e.g. BITs signed by the Union of Soviet Socialist Republics (USSR). This explains the discrepancy in the total number of signed treaties between the two databases.

If BITs would be missing at random, we could expect a specific country to have the average share of missing treaties given the total number of signed BITs by this country is not too small. This does not correspond to the practice. For instance, both Iran and Kuwait have signed more than 65 BITs, but the text of those treaties is missing in the UNCTAD database on 43% and 30% occasions, respectively. As it can be seen in Figure 1, for some countries almost all BITs are available while for others a substantial amount of treaties is not available to the public. Given that BITs are usually signed by two countries, whether they become available to the public depends on characteristics of both countries.

Table 2: Missing BITs, by regional coverage

Region	N	Force	Force %	N, miss	N, miss%	Force, miss	Force, miss%
North	499	477	95.59	35	7.01	31	6.50
Africa	169	46	27.22	51	30.18	9	19.57
Africa-S.America/Carr	27	13	48.15	8	29.63	3	23.08
Africa-Asia	260	135	51.92	90	34.62	27	20
Africa-North	430	342	79.53	48	11.16	14	4.09
S.America/Carr	94	68	72.34	14	14.89	2	2.94
S.America/Carr-Asia	103	76	73.79	14	13.59	4	5.26
S.America/Carr-North	323	281	87	7	2.17	2	0.71
Asia	424	333	78.54	127	29.95	78	23.42
Asia-North	834	756	90.65	101	12.11	69	9.13
Sum	3,163	2,527	79.89	495	15.65	239	9.46

N reports the number of signed treaties, NoForce the subset of N not yet entered into force. N, miss and N, miss % report the number and percentage of missing treaties.
Only Bilateral Investment Agreements listed in EDIT are included. Region indicates regional coverage. North includes N.America, Oceania and Europe.

Table 3: Missing BITs, by income group

Income	N	Force	Force %	N, miss	N, miss%	Force, miss	Force, miss%
High/High	441	419	95.01	27	6.12	20	4.77
High/Low	175	123	70.29	32	18.29	7	5.69
High/Middle	1,602	1,392	86.89	174	10.86	96	6.90
Low/Low	22	1	4.55	13	59.09	0	0
Low/Middle	166	58	34.94	60	36.14	16	27.59
Middle/Middle	757	534	70.54	189	24.97	100	18.73
Sum	3,163	2,527	79.89	495	15.65	239	9.46

N reports the gross count of signed treaties, NoForce the subset of N not yet entered into force. N, miss and N, miss % report the number and percentage of missing treaties.
Only unique Bilateral Investment Agreements are included.

Tables 2 and 3 break down the missing treaties according to geographical characteristics and World Bank Development Indicators (WDI) income group of the signatories. Table 2 illustrates that 499 of the 3163 BITs are signed among countries in the North (North America, Oceania, and Europe) and 834 between one country in the North and one country in Asia. Remarkably, only 27% of signed BITs among African countries are in force. Treaties signed by an Asian and an African country are most likely to be missing (35%). However, only 20% of BITs in force between countries belonging to

these two geographical regions are missing. When considering only BITs in force, the most likely treaties to be missing are the ones signed between two Asian countries and between an African and a country from South America/Caribbean (23%).

Figure 1: Missing Treaties: The Usual Suspects (2/2)
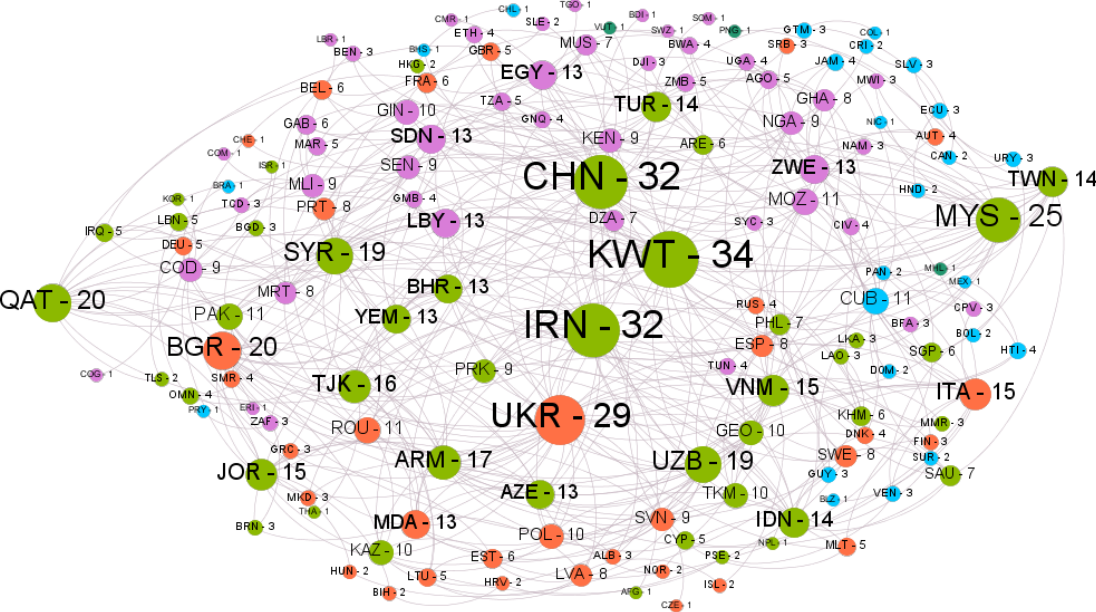
This figure displays the network of missing treaties. The number in the graph corresponds to the number of missing treaties. Countries with less than 3 missing treaties excluded from the graph, but included in the counts.

1602 of the 3163 BITs in EDIT are signed by countries classified as high income with middle-income countries (using the WDI classification). The second most common group are BITs signed by two middle-income countries with 70% of their treaties in force. Treaties signed between two low-income countries are the least common with 22 agreements and only one in force. Approximately 28% of BITs in force are signed by one low and one middle-income country and 19% of BITs in force signed by two middle-income countries are missing in the UNCTAD database.

B. Missing text determinants

This section investigates which characteristics of countries are significally associated with lower or higher probability of a BITs being missing. We fit 4 general linear regression models to the data and compare their performance. As dependent variable, a binary indicator that takes the value of one when the BIT is missing from the UNCTAD database and zero otherwise. As explanatory variables, a set of categorical and numerical indicators that we hypothesize could influence whether the BIT is missing. Summary statistics for these variables are displayed in Table 4.

(i) Colonial relation: a dummy variable that takes the value of 1 if one of the two parties was a former colony of the other one. Approximately 5% of BITs are signed between two such countries, according to the data from the CEPII database.[63]

(ii) Common (official) language: a dummy variable being equal to 1 if two countries have the same official language, according to the Central Intelligence Agency (CIA) World Factbook.[64] 14% of BITs are signed between countries that have the same official language.

(iii) Contiguity: a dummy variable equal to 1 if two countries share a border. Data from the Centre d'études prospectives et d'informations internationales (CEPII) database.

(iv) Regional coverage dummies using data from the World Bank's World Development Indicators (WDI).[65] We collapse North America, Oceania, and Europe into a single category, denominated North. BITs signed between North countries are the omitted category in the models and account for approximately 17% of the observations.

(v) Distance: in logs, using data from the CEPII database.

(vi) In force: a binary indicator that takes the value of 1 if the treaty is in force. Treaties are published in governmental publications only after entry into force.

(vii) Gross domestic product (GDP): measured at purchasing power parity, both per capita and total, in logs, using data from the WDI. For both variables, we compute the sum of the values for the two countries and construct an asymmetry index, which allows us to capture economic size differences and differences in the level of development. The index is computed as $Asy = 1 - \left(\frac{y_1}{y_1+y_2}\right)^2 - \left(\frac{y_2}{y_1+y_2}\right)^2$ and therefore takes values between 0 (asymmetry) and 0.5 (perfect symmetry). In order to maximise data coverage, we take the mean, for each country, of all data points available between 2006 and 2015. Due to GDP missing data the sample is reduced to 2987 BITs. We expect countries having lower GDP to be more likely to fail to make BITs available, because of lack of resources.

(viii) Signed after 1997: a binary indicator that takes the value of 1 if the treaty is signed after 1997, which is the year of the first NAFTA investor-State arbitration claim initiated (*Azinian* v. *Mexico*), around 20 years ago. The decision only came out two years later, but the case already triggered some fears about investor-State dispute settlement (ISDS), especially as in the same year, other two cases were filed (*Ethyl* v. *Canada* and *Metalclad* v. *Mexico*). This prompted a series of investment arbitration disputes which in 1998 for the first time reached

---

[63] CEPII database <http://www.cepii.fr/cepii/en/bdd_modele/bdd.asp> accessed on 6 December 2017.

[64] CIA The World Factbook < https://www.cia.gov/library/publications/the-world-factbook> accessed on 6 December 2017.

[65] World Bank, World Development Indicators, <https://data.worldbank.org/data-catalog/world-development-indicators> accessed on 6 December 2017.

more than 10 cases, a tendency that increased every year. Approximately 50% of BITs were signed after the year 1997.

(ix)   The percentage of oil and raw materials in total exports of merchandise. The variable is included both as sum and asymmetry index, as for GDP. In order to maximize data coverage, we take the mean, for each country, of all data points available between 2006 and 2015. Data from the WDI. The expected effect of these variables is unclear as; on the one hand, we could expect countries relying on natural resources to be more likely to be willing to attract investors. At the same time, however, countries might prefer not to advertise rights granted to investors that are already operating in their countries.

(x)   Political stability and absence of violence, from the World Bank's World Governance Indicators.[66] In order to make interpretation of results easier, we rescale the data such that all observations are positive. The variable is included both as the sum of the values of the two parties and in its asymmetry index, as described for GDP. BITs are signed with the objective of promoting and protecting investment, and therefore can be considered to be more important for countries with higher risk of civil strife and low levels of political stability.

(xi)   Rule of law, from the World Governance Indicators. "Rule of law captures perceptions of the extent to which agents have confidence in and abide by the rules of society, and in particular the quality of contract enforcement, property rights, the police, and the courts, as well as the likelihood of crime and violence".[67] In order to make interpretation of results easier, we rescale the data such that all observations are positive. The variable is included both as the sum of the values of the two parties and in its asymmetry index, as described for GDP.

Table 4: Explanatory variables summary statistics

	Min.	1st Qu.	Median	Mean	3rd Qu.	Max.	sd
Colonial relation	0	0	0	0.05	0	1	0.21
Common language	0	0	0	0.14	0	1	0.34
Contiguity	0	0	0	0.04	0	1	0.2
Africa	0	0	0	0.05	0	1	0.23
Africa-S.America/Carr	0	0	0	0.01	0	1	0.08
Africa-Asia	0	0	0	0.08	0	1	0.27
Africa-North	0	0	0	0.14	0	1	0.35
S.America/Carr	0	0	0	0.02	0	1	0.15
S.America/Carr-Asia	0	0	0	0.03	0	1	0.16
S.America/Carr-North	0	0	0	0.1	0	1	0.3
Asia	0	0	0	0.13	0	1	0.33
Asia-North	0	0	0	0.27	1	1	0.44
Distance (log)	4.09	7.63	8.41	8.24	8.98	9.89	0.9
In force dummy	0	1	1	0.81	1	1	0.4
GDP (Sum, log)	2.07	6.1	6.89	6.95	7.81	9.89	1.3

---

[66] See World Bank's Governance Indicators: <http://info.worldbank.org/governance/wgi/pdf/rl.pdf> accessed on 6 December 2017.
[67] Id.

GDP (Asy)	0	0.07	0.22	0.24	0.41	0.5	0.17
GDP per capita (Sum, log)	7.69	10.27	10.71	10.58	10.96	12.09	0.63
GDP per capita (Asy)	0.02	0.24	0.38	0.34	0.46	0.5	0.14
Signed after 1997	0	0	0	0.5	1	1	0.5
% raw mat. and oil in exports (Sum)	0	17.26	33.67	42.55	65.22	167.9	31.57
% raw mat. and oil in exports (Asy)	0	0.21	0.36	0.32	0.46	0.5	0.16
Political stability (Sum)	4.91	9.14	10.04	9.91	10.8	12.58	1.25
Political stability (Asy)	0.4	0.49	0.5	0.49	0.5	0.5	0.01
Rule of law (Sum)	6.28	9.74	10.74	10.63	11.53	13.86	1.27
Rule of law (Asy)	0.41	0.49	0.49	0.49	0.5	0.5	0.01

This table reports descriptive statistics for the variables used in the models.

Table 5 displays the results.[68] All standard errors are robust to heteroscedasticity.[69] Column 1 reports coefficients from a GLM model using a Gaussian distribution for the dependent variable, and is therefore equivalent to a linear probability model. Column 2 reports results from estimating the same model, after having performed variables selection via LASSO.[70] Coefficients in both column 1 and 2 are to be interpreted as marginal effects. Models in columns 3 and 4 are the equivalent of the first two, however, estimated using logistic regression. Logistic regression allows for dependent variables that are not normally distributed and restricts predicted values between 0 and 1. Therefore, in the first two columns, variables with a negative sign are associated with a lower probability of the treaty being missing. In columns 3 and 4 instead, the coefficients represent odds, and therefore variables are associated with a lower probability of being missing if coefficients are smaller than 1[71]. Odds ratios are defined as:

$$Odds = \frac{P(Y=1)}{P(Y=0)} = \frac{P(BIT\ is\ missing)}{P(BIT\ is\ available)}.$$

The regional coverage variables indicate whether, once taken in account other characteristics, BITs signed by countries in given geographical areas are systematically more or less likely to be missing relative to others. We therefore choose a category of reference, namely treaties signed by countries in the North (North America, Europe and Oceania). For instance, columns 1 and 2 indicate that treaties signed between an Asian and an African country are approximately 10% more likely to be missing. Similar results are obtained using the logistic specification, in columns 3 and 4. The change in the odds ratio of the treaty being missing if the two signatories are from Asia and Africa is 114 and 119% respectively

---

[68] All results are obtained using: R Core Team (2016). R: A language and environment for statistical computing. R Foundation for Statistical Computing, Vienna, Austria <https://www.R-project.org/> accessed on 6 December 2017.

[69] White (1980) errors obtained using the option HC0 in the "sandwich" package. Achim Zeileis (2004). Econometric Computing with HC and HAC Covariances Matrix Estimators. Journal of Statistical Software 11(10), 1-17. <http://www.jstatsoft.org/v11/i10/> accessed on 6 December 2017. Achim Zeileis (2006). Object-Oriented Computation of Sandwich Estimators. Journal of Statistical Sofware 16(9), 1-16 <http://www.jstatsoft.org/v16/i09/> accessed on 6 December 2017.

[70] Implemented using the package "glmnet". Jerome Friedman, Trevor Hastie, Robert Tibshirani (2010). Regularization Paths for Generalized Linear Models via Coordinate Descent. Journal of Statistical Software, 33(1), 1-22 <http://www.jstatsoft.org/v33/i01/> accessed on 6 December 2017.

[71] Coefficients from logistic regression can be reported as marginal effects at the mean (MEMs) or/and average marginal effects (AMEs). However, we prefer to report odds ratios, as marginal effects from logistic regression are also not comparable to marginal effects of a linear probability model.

((2.14-1)*100 and (2.19-1)*100), relative to when the signatories are both from the North. Like results hold also for treaties signed between two countries in Asia, with coefficients being statistically significant at the 0.01% level. Interestingly, also the treaties signed between a country in Asia and one in the North are less likely to be available from the UNCTAD database, but the coefficients have lower magnitude. Contrary to expectations, when controlling for other characteristics, treaties between two African countries are more likely to be available than treaties between two countries in the North, with coefficients being statistically significant in 3 of the 4 models. BITs signed by countries that are geographically further away, still controlling for regional coverage and other characteristics, are more likely to be available, while country contiguity is a negative predictor of treaty availability, with the effect being significant in all 4 regressions at the 0.01% level.

In the linear probability models, treaties that are in force are approximately 25% more likely to be available, with the coefficients being significant at the 0.01% level. In columns 3 and 4 the variable is a negative predictor of the treaty being missing, but not statistically different from zero. Cumulative economic size of the two parties involved is negatively correlated with the likelihood of the treaty being missing; the coefficients are significant in all 4 models at the 0.01% level. For an increase of one standard deviation (1.3) in the GDP (Sum, log) variable in column 1, there is a 5.7% decrease in the probability of the treaty being missing. Interestingly, in columns 1 and 2, for a given level of total GDP, a treaty is more likely to be missing if the economic size of the two countries is very asymmetric. This might be related to investment flows going only one direction. The effect of GDP per capita on the likelihood of a treaty being missing is positive, but the coefficients are not estimated with precision. The same holds true for differences in GDP per capita. BITs signed by countries that have a higher percentage of oil and raw materials value in total exports are more likely to be missing, with coefficients being significant in columns 2, 3 and 4. For instance, in column 4, an increase of one standard deviation (31.57) is associated with an increase in the odds of the treaty being missing by approximately 13% ((1.004^31.57)-1). There is some evidence in columns 1 and 2 that when the presence of oil and minerals in exports of the two countries differs, the BIT is more likely to be missing.

The rule of law indicator is a negative predictor of the likelihood of the treaty being missing, holding all other variables in the model constant. The coefficients are significant in all 4 models at the 0.01% level. In columns 1 and 2, an increase of one standard deviation in the cumulative rule of law indicator (1.27) is associated with a reduction in the likelihood of the BIT being missing by 7.2 and 5.1%. In columns 3 and 4, the corresponding change in the odds ratio is - 46 and - 40%. In column 3 the coefficient on the asymmetry in rule of law suggests, that keeping all other variables constant (and therefore also rule of law (Sum)), a treaty is more likely to be missing if the two countries differ in the rule of law indicator. The magnitude of the coefficient is to be attributed to the scale of the variable. For instance,

take two treaties signed by two pairs of countries that are equal in all variables except for a one standard deviation divergence in the asymmetry of rule of law (0.01). The odds that the BITs signed by the two countries differing in the rule of law indicator is missing is 3% ((24.001^0.01)-1) higher than the other pair of countries.

To conclude this section, a brief summary of the predictive power of the 4 models is presented. For each of the observations, the models return a value for the probability that the treaty is missing. For columns 3 and 4, the range of the value is [0,1] while for the linear probability models the value can be lower than 0 and higher than 1 for some extreme observations. For all models, predicted probabilities are converted into binary indicators using a cut-off of 0.5.

Table 5: Missing BITs determinants

	Dependent variable:			
	BIT text is missing (1=Yes)			
	normal		*logistic*	
	(1)	(2)	(3)	(4)
Colonial relation	-0.004		0.853**	
Common language	-0.020	-0.025	0.766***	0.736***
Contiguity	0.104***	0.102***	2.007***	2.003***
Africa	-0.092**	-0.090***	0.529	0.512*
Africa-S.America/Carr	-0.059		0.902	
Africa-Asia	0.102***	0.116***	2.143***	2.199***
Africa-North	-0.021		0.913***	
S.America/Carr	-0.075	-0.066	0.595	0.619
S.America/Carr-Asia	0.006		1.217**	
S.America/Carr-North	-0.032	-0.018	0.337	0.351
Asia	0.102***	0.113***	2.216***	2.292***
Asia-North	0.043*	0.055***	1.620***	1.675***
Distance (log)	-0.011	-0.015*	0.880***	0.882***
In force dummy	-0.241***	-0.235***	0.210	0.216
GDP (Sum, log)	-0.044***	-0.041***	0.687***	0.690***
GDP (Asy)	-0.097**	-0.091**	0.387	0.413
GDP per capita (Sum, log)	0.026		1.136***	
GDP per capita (Asy)	-0.117**	-0.101**	0.369	0.349
Signed after 1997	-0.018		0.939***	
% raw mat. and oil in exports (Sum)	0.0003	0.0004**	1.004***	1.005***
% raw mat. and oil in exports (Asy)	-0.070*	-0.069*	0.537	0.528
Political stability (Sum)	0.007		1.042***	
Political stability (Asy)	-0.205		0.355	
Rule of law (Sum)	-0.057***	-0.040***	0.616***	0.665***
Rule of law (Asy)	0.997		24.001***	
McFadden	0.3	0.3	0.23	0.23
Observations	2,987	2,987	2,987	2,987
Log Likelihood	-775.933	-780.714	-948.741	-950.118
Akaike Inf. Crit.	1,603.865	1,595.429	1,949.482	1,934.236

Note: *p**p***p<0.01

Region omitted category: North-North.

North includes N.America, Oceania and Europe.

Model: GLM using gaussian in columns 1 and 2.

Table 6 reports some indices that can be used to evaluate the predictive power of the models. In the first row, accuracy measures the percentage of observations that are correctly predicted, and is equal to approximately 86% for all 4 models. Cohen's Kappa on the second row, is an indicator that is especially useful when the categories are not balanced, as in our case (only approximately 15% of treaties are missing). In other words, a class with few observations is more likely to have more miss-classifications. Sensitivity and Specificity report, respectively, the percentage of correctly identified positive (BIT is missing) and negative (BIT is available). For instance, in the first column, 87% of the treaties that are missing are correctly identified as such, while only 63% of the treaties that are available are predicted to be available. It can be noted that sensitivity can be improved at the cost of decreasing specificity, and opposite; this is achieved by altering the cut-off threshold. Finally, Positive and Negative Predicted Values indicate the % of positive (missing) and negative (available) predicted values that are indeed positive and negative.

Table 6: Predictive power of missing BITs models

	(1)	(2)	(3)	(4)
Accuracy	0.865	0.864	0.863	0.863
Cohen's Kappa	0.187	0.174	0.260	0.267
Sensitivity (recall)	0.872	0.871	0.882	0.883
Specificity	0.632	0.640	0.554	0.559
Pos Pred Value (precison)	0.986	0.988	0.970	0.969
Neg Pred Value	0.140	0.128	0.226	0.233

Each colum reports performance measures for the models presented in table 6.
All models evaluated using a cut-off of 0.5.

V. Language availability

After determining how many investment treaties are "missing" and what the possible causes are of their lack of availability, we now turn to the treaties that are publicly available but enjoy a limited diffusion due to the language(s) in which are publicly found. In this section we examine in how many and which languages the BITs can be obtained.

Although from reading their final provisions we know that investment treaties are usually signed in more than language, on average, when BITs are available, in 81% of cases they are available in only one language (see Table 7, third column, last row).

Table 7: Language availability, by region

Region	Available	1Lang	1Lang %	3rd %	Common %	Either %
North	464	366	79	58	2	43
Africa	118	109	92	15	28	57
Africa-S.America/Carr	19	16	84	25	12	62
Africa-Asia	170	154	91	42	23	35
Africa-North	382	299	78	29	14	58
S.America/Carr	80	70	88	1	89	10
S.America/Carr-Asia	89	76	85	50	1	49
S.America/Carr-North	316	233	74	29	13	59
Asia	297	257	87	62	5	33
Asia-North	733	578	79	58	3	40
Sum	2,668	2,158	81	46	11	44

Available indicates the total number of treaties signed, at least one text available.
1Lang indicates the count of treaties available in only one language, 1Lang % the percentage. The remaining columns break down the composition of 1Lang into:
- % of treaties available in a third language (3rd);
- % of treaties available in a common (official) language (Common);
- % of treaties available in either official language (Either).

When a treaty is available in only one language, it can either be the language of one of the countries, a common language, or a language of a third party. Treaties signed between an Asian and an African country are the most likely to be available only in the language of one country. A large group of countries have their IIAs largely available only in their own official language, such as Armenia,[72] Belarus,[73] Indonesia,[74] Iran,[75] Moldova[76], Mongolia,[77] Qatar,[78] Serbia,[79] and Vietnam.[80] Other countries do have the text of their IIAs available in English, but they are only accessible after several pages in their official language, that makes difficult to find these treaties if the researcher is not aware of the exact translation in that language. This is notably the case of member countries of the European Union (among others: Bulgaria,[81] Denmark,[82] Finland,[83] Greece,[84] Italy,[85] Latvia,[86] Lithuania,[87] Portugal,[88] Spain,[89] and Sweden),[90] as well as countries like Norway,[91] and South Korea.[92]

---

[72] National Assembly of the Republic of Armenia <http://www.parliament.am> accessed on 6 December 2017.

[73] Legislation of the Republic of Belarus, <http://naviny.org> accessed 6 December 2017.

[74] Basis Data Perjanjian Internasional <http://treaty.kemlu.go.id/index.php/treaty/index> accessed on 6 December 2017.

[75] Islamic Parliament Research Center of the Islamic Republic of Iran <http://rc.majlis.ir/fa/law/> accessed on 6 December 2017.

[76] Registrul de Stat. Al Actelor Juridice Al Republicii Moldova <http://lex.justice.md> accessed on 6 December 2017.

[77] Legal Info Mongolia <http://www.legalinfo.mn/law> accessed on 6 December 2017.

[78] Qatar Legal Portal <http://www.almeezan.qa > accessed on 6 December 2017.

[79] National Serbian Goods and Services Market, http://www.trzistesrbije.com> accessed on 6 December 2017.

[80] Vietnam, Ministry of Foreign Affairs, Directorate of State Protocol <https://stateprotocol.mofa.gov.vn> accessed on 6 December 2017.

[81] Republic of Bulgaria, Ministry of Economy <http://mi.government.bg/en> accessed on 6 December 2017.

[82] Retsinformation.dk <https://www.retsinformation.dk> accessed on 6 December 2017.

[83] Finlex Data Bank <http://www.finlex.fi/en> accessed on 6 December 2017.

Table 8 provides statistics for treaties that are available in only one language, restricting the analysis to cases in which the language of the treaty is one of the languages of the two parties (common language cases are excluded). For instance, there are 233 BITs signed by Asian countries with a country in the North that are available only in one of the official languages of the two parties (excluding common language). In 71% of those cases, the text is available only in the language of the country in the North. Similar calculations can be done by using income level classifications. 77% of BITs signed by a low-income country with a middle-income country is available only in the language of the low-income country.

Table 8: BITs available in language of either party

Party1-Party2	N (only either lang)	Lang Party1	Lang Party2	Lang Party1 %	Lang Party2 %
Africa-S.America/Carr	10	2	8	20	80
Africa-Asia	54	38	16	70.37	29.63
Africa-North	172	76	96	44.19	55.81
S.America/Carr	7	6	1	85.71	14.29
S.America/Carr-Asia	37	33	4	89.19	10.81
S.America/Carr-North	137	59	78	43.07	56.93
Asia-North	233	68	165	29.18	70.82
High-Low	64	27	37	42.19	57.81
High-Middle	480	315	165	65.62	34.38
Low-Middle	62	48	14	77.42	22.58

The column N displays the number of treaties that are available in only one of the languages of the two parties. The remaining indicates in which language of the two parties the treaty is available.

Treaties signed between an Asian country and a country in the North are most likely to be available in a third language. 77% of treaties available in English in the UNCTAD database is available only in English, and 65% of those use English as a *lingua franca*. Countries like China, Latvia, United Arab Emirates and Algeria have the majority of their IIAs available in English. All Canadian IIAs are bilinguals and the large majority of Swiss BITs too (but French/English, not German or Italian!). The most common languages are English, French, Spanish, Arabic, Russian and German (See Table 9).

---

[84] Hellenic Parliament <http://www.hellenicparliament.gr/> accessed on 6 December 2017.

[85] Italy, Archivio dei Trattati Internazionali Online <http://itra.esteri.it/Ricerca_Documenti/wfrmRicerca_Documenti.aspx> accessed on 6 December 2017.

[86] <https://www.vestnesis.lv> accessed on 6 March 2017.

[87] <https://www.urm.lt/default/en/foreign-policy/treaties/bilateral> accessed on 6 March 2017.

[88] Portugal, Diário da República Electronico, <https://dre.pt> accessed on 6 December 2017.

[89] Spain, Acuerdos de Promoción y Protección Recíproca de Inversiones (APPRIs) <http://www.comercio.es/acuerdos> accessed on 6 December 2017.

[90] Regeringskansliet <http://www.regeringen.se > accessed on 6 December 2017.

[91] Norges traktater <https://lovdata.no/register/traktater> accessed on 6 December 2017.

[92] Ministry of Foreign Affairs, Republic of Korea <http://www.mofa.go.kr/trade/treatylaw/treatyinformation/bilateral/index.jsp?menu=m_30_50_40&tabmenu=t_1> accessed on 6 December 2017.

Table 9: Most common languages

Language	N	N %	N,only	N,only %	3rd %	Common %	Either %
en	1,850	58.49	1,424	76.97	64.96	4.42	30.62
fr	465	14.70	280	60.22	17.86	10.36	71.79
es	278	8.79	186	66.91	0	42.47	57.53
ar	144	4.55	59	40.97	0	89.83	10.17
ru	141	4.46	73	51.77	2.74	2.74	94.52
de	108	3.41	35	32.41	0	0	100

N and N% indicate the number and percentage of treaties available in the relevant language.
N,only and N,only% indicate the number and percentage of treaties available only in the
relevant language. The remaining columns break down the composition of N,only:
- % of treaties available as a third language (3rd);
- % of treaties available as a common (official) language (Common);
- % of treaties available as either official language (Either).

VI. Common provisions of countries with MITs

According to our database (EDIT), the countries with the highest number of MITs in absolute terms are: Qatar (12 out 55 treaties), Kuwait (12 out 90), Turkey (11 out 119), Cuba (9 out 61), Mali (9 out 22), Zimbabwe (9 out 37), Sudan (8 out 36), Syria (8 out 47), Italy (7 out 107), Ghana (6 out 29), Iran (5 out 71) and Libya (5 out 44). Some other countries show a high number of missing treaties relative to the total number of IIAs they have signed. These are: Mali (41%), Iraq (40%), Timor-Leste (33%), Seychelles (29%), Botswana (27%), the Democratic Republic of Congo (26%), Angola (23%), Djibouti (23%), Somalia (20%), Occupied Palestinian territory (20%), Suriname (17%), and lastly, Sierra Leone (14%).

This section identifies which treaty standards are most common in the treaty practice of the above-mentioned countries with the highest number of MITs. To provide an overall view whether the countries with the largest MITs preserve more policy space to the host state - as negotiated in the new generation of IIAs[93] - or whether they provide more investment protection to foreign investment - as negotiated in the 1980s and 1990s, the analysis focuses on the scope of the treaty (e.g. definition of investment and investor), the relative standards (e.g. National Treatment), the absolute standards (e.g. compensation against expropriation and free transfer of funds), exceptions, and dispute settlement.

Available IIAs concluded by the countries with the largest MITs shows that many of their IIAs are inspired by standards in traditional IIAs. These IIAs include broad definitions of investment and investor, except Iran which requires legal entities to have substantial business activities in the contracting treaty partner (73% of Iran's IIAs). The IIAs also provide broad standards of treatment. Only Turkey (65%) and Kuwait (54%) have limited their national treatment standard to investors 'in

---

[93] This development started with the NAFTA's Free Trade Commission in 2001 adding an interpretation to the fair and equitable treatment provision under NAFTA in response to the broad interpretation of the provision by the arbitral tribunal in *Pope & Talbot v. Canada*.

like circumstances'. While most countries include a full protection and security standard, Timor-Leste has reduced its liability by providing this treatment only in accordance with its national laws; and Italy does not include such clause at all (65%). With regard to compensation for expropriation, only Seychelles has the practice to carve out the regulatory measures that are taken for the public welfare (40%). Seychelles (80%) and Iraq (40%) are the only countries that limit the free transfer of funds due to Balance-of-Payments or macro-economic difficulties. Further, only Kuwait prohibits performance requirements in its IIA practice (63%). Countries wishing to create more public policy space by including exception clauses are: Qatar (43% includes an essential security exception), the Occupied Palestinian territory and Somalia (50% includes a general exception clause to protect human, animal and plant life). Finally, most countries allow any dispute to be submitted to ISDS, except Ghana which permits only treaty claims (73%).

Regarding the consistency of IIA practice of countries with the largest MITs, we discovered that their available agreements do not have substantial differences with those concluded by countries that do not have a large number of MITs. In the majority of cases these treaties include: asset-based definition of investment and broad definition of investor; apply to investments before and after entry into force; MFN and NT cover the post-establishment phase; include unqualified FET and FPS; compensation for direct indirect expropriation, as well as for strife; free transfer of funds without limitation; and both ISDS and State to State Dispute Settlement. One could assume that treaties that are missing are different than treaties that are not, but we do not know this as the text is not publicly available. For that reason, other possible explanations for the presence of MITs have been advanced in this article.

VII. Conclusion

As we have shown, an important share of texts of IIAs cannot be retrieved easily, and often requires searches in official publications of governments, which very frequently implies dealing with language differences. Even for OECD countries, designated offices for the advertisement of BITs seem to be the exception rather than the rule, resulting in the texts of BITs missing from common databases used by investors and researchers alike, such as UNCTAD and Kluwer. For countries that rank either among the top 20 in outflows or inflow FDI according to UNCTAD,[94] missing text in BITs is not an exception. China is the most prominent example, with 20% of texts not publicly available (29 treaties out of 145, including 13 treaties in force, 13 signed and 3 terminated).

---

[94] United Nations Conference on Trade and Development (UNCTAD), *World Investment Report 2017. Investment and the Digtal Economy* (Geneva, Switzerland: United Nations, 2017), at 14.

According to our research there are several factors that influence the absence of publicly available texts of investment treaties.

(i) **Date of Entry into Force:** IIAs that are not in force are less likely to be available to the public. Treaties that are not in force are not printed on government publications and several countries consistently do not make them available until they are in vigour.

(ii) **Regional Factor**: Approximately 30% of treaties signed between two Asian countries, between two African countries, and between an African and a country in South America/Caribbean are missing. Treaties signed by an Asian and an African country are the most likely to be missing, at 35%. When considering only BITs in force, the most likely treaties to be missing are the ones signed between two Asian countries and between an African and a country from South America/Caribbean. Econometric results confirm that BITs signed by at least one Asian country are more likely to be missing. Moreover, BITs signed by countries that are geographically further away are more likely to be available.

(iii) **Level of Development:** BITs between high-income and middle-income and by two middle-income countries are more likely to be available. Treaties signed between two low-income countries are less likely to be available. A wide range of LDCs and developing economies do not make their IIAs available to public. These are mostly African countries and some Caribbean countries. Generally, linear regression shows that BITs signed by bigger (in terms of economic size) countries are less likely to be missing. Moreover, for a given level of total GDP, agreements are less likely to be missing if the economic size of the two countries is similar.

(iv) **Strategic Reasons**: It seems that countries that are less open to the global market economy are also reluctant to provide information about their signed agreements, such as North Korea and Cuba. Some countries seem to have a less transparent attitude, as a reaction to ISDS, after facing claims (e.g. Egypt, Iran or South Africa). There is some evidence that BITs signed by countries that have a higher percentage of oil and raw materials in exports are more likely to be missing. The effect is more important when there is asymmetry in natural resource endowments. This seems at odds with the stated objectives of BITs to promote investment.

(v) **Investment Climate:** For countries that are facing war or civil unrest such as Libya, Sudan, Syria, Yemen, and Afghanistan, it was almost impossible to find the IIAs through their governmental websites, but through their treaty partners. This was confirmed by econometric evidence: BITs signed by countries with low levels of Rule of Law, as measured by the World Bank Development indicators, are statistically more likely to be missing.

(vi) **Lack of resources/capacity/interest**: For a number of countries the official government website has not been updated and does not include the more recent treaties, such as Cyprus, Jordan, Mauritania and Senegal. Some treaties are labelled as IIAs, but they are double taxation or other agreements. This could be also explained as lack of resources or capacity, but also that some countries do not really care about IIAs. After an extensive examination of IPAs' websites, Yackee has concluded that BITs are never or infrequently mentioned on IPAs' webpages, and overall these treaties do not seem to be a central part of their marketing efforts.[95] In some cases, it seems that the availability of IIA's texts reflects the interest of investors, particularly when the agreement is found only in the language of country of origin of the investor, implicitly assuming that investment flows go only in one direction. This could be an explanation for the practice of several European countries and South Korea, referred in the precedent section, of having the websites or IIA's repositories, largely only in their official language.

With respect of the treaties that are publicly available, the large majority of IIAs are found in one language (81%), even though they are regularly signed in more than one. A country's level of development is a factor that influences in how many and which languages investment treaties are available. 77% of BITs signed between a low-income country and a middle-income country are available in only the official language of the low-income country.

---

[95] Jason W Yackee, 'Do Investment Promotion Agencies Promote Bilateral Investment Treaties?', in Andrea K Bjorklund (ed), *Yearb Int Invest Law Policy 2013-2014* (Oxford, New York: Oxford University Press, 2015) 529–552, at 541.