ESSAYS ON TRANSNATIONAL COMMERCIAL ARBITRATION INSTITUTIONS IN THE POLITICS OF FDI

A Dissertation

by

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ABSTRACT

Why do some countries with corrupt and dependent courts attract a substantial amount of foreign direct investment (FDI)? To address this puzzle, existing literature has widely discussed the effects of bilateral investment treaties (BITs) that provide legal forums as alternatives to domestic courts to settle investor-state disputes. However, BITs do not resolve contractual disputes between private parties. This dissertation contributes to the scholarship by introducing an important omitted variable in the politics of FDI, the transnational commercial arbitration (TCA) institutions. Serving as an impartial and low-cost venue to resolve contractual disputes between foreign and domestic firms, TCA institutions can mitigate the contractual hazards of the host country. My focus on TCA institutions echoes the insights that both property rights institutions that constrain the opportunistic behavior of the government and contracting institutions that facilitate contract formation and contract enforcement among private actors are both essential for economic growth.

This dissertation mainly consists of three quantitative essays that examine the role of TCA institutions in the politics of FDI. In the first essay, "Domestic Arbitration Institutions and Foreign Direct Investment", I examine whether TCA institutions can attract FDI. Focusing on the within-country variation of China, I find that provinces with TCA institutions receive a higher level of FDI inflows. My second essay, "Bundling Institutions", studies the interactive effects of BITs and TCA institutions. I find that a combination of BIT and TCA leads to an increase in FDI inflows, particularly for countries with a lower level of judicial independence. Moreover, these two sets of institutions are useful to attract FDI only when jointly present in the host country. The third essay, "The Effects of International Institutions on Cross-border Mergers and Acquisitions", evaluates how BITs and TCA institutions affect the inflows of M&A investments that are susceptible to political risks but less so to contractual hazards. Using country-level data, I confirm that the number of M&A deals by U.S. firms is larger for countries that share a BIT with the U.S. but not so for

those with a TCA institution.

DEDICATION

To my parents.

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TABLE OF CONTENTS

Page

LIST OF FIGURES

FIGURE Page

LIST OF TABLES

TABLE Page

1. INTRODUCTION

In this dissertation I focus on a set of international institutions that has been playing an important role in cross-border economic transactions and contract enforcement but has not received much scholarly attention in the international political economy (IPE) or general international relations (IR) literature. My dissertation centers on transnational commercial arbitration (TCA) institutions that provide arbitration service for private firms and individuals to resolve their contractual disputes. It mainly consists of three quantitative essays that examine the effects of TCA institutions on foreign direct investment (FDI) inflows. My dissertation contributes to the IPE and IR scholarship by identifying an important omitted variable in the politics of FDI.

Why some countries with corrupt and dependent courts can attract a substantial amount of foreign direct investment (FDI)? To address this puzzle, existing literature points to the effects of bilateral investment treaties (BITs) that provide legal forums as alternatives to domestic courts to settle investor-state disputes. In other words, BITs increase FDI inflows to countries without mature rule of law by deterring government expropriation and mitigating the political hazards of the host country. However, BITs do not resolve contractual disputes between private parties. Specifically, they do not provide dispute resolution mechanisms for foreign investors to settle their disputes with domestic firms. How contractual disputes between private parties are resolved remains understudied in the IPE literature.

To fill this gap, I focus on TCA institutions in my dissertation. Serving as an impartial and lost-cost venue to resolve contractual disputes between foreign and domestic firms, I argue that TCA institutions can mitigate the contractual hazards of the host country. In the first essay, I examine whether TCA institutions have a positive effect on FDI inflow by focusing on arbitration institutions in China. The advantages of within-country analysis allow me to single out the effect of TCA institutions and partial out many confounding variables. I find that provinces that have

established TCA institutions receive a higher level of FDI inflows, holding other factors constant. The second essay is a direct extension of the first. In this essay, I examine the interaction of TCA institutions with bilateral investment treaties (BITs) and domestic courts. Using firm-level data, I find robust evidence that a combination of TCA institutions and BITs can substitute the effect of judicial independence in attracting FDI. Hence, judicial independence is not necessary to make the host country an attractive investment destination. Finally in the third essay, I study how international institutions influence the entry mode choices of multinational corporations (MNCs). In particular, I examine the effects of BITs and TCA institutions on cross-border mergers and acquisitions (M&A) investments that are susceptible to political risks but not so to contractual hazards compared to other entry modes such as joint-ventures and greenfield projects. Using the data on M&As by U.S. acquirers, I confirm that the number of M&As by U.S. firms is higher for countries that share a BIT with the U.S. but not so for those with a leading TCA institution. The three chapters combined contribute to our understanding on the role of TCA institutions that are a source of comparative advantage in international trade and investment.

This introduction chapter proceeds as follows. First, I lay out the theoretical contributions of my dissertation. Second, I provide an outline of the dissertation and a summary of the three major essays. The theoretical argument and empirical strategy of each essay is highlighted. It ends with a conclusion.

1.1 Theoretical Contributions

Existing literature in IPE has paid much attention to the so-called political risks: after the investment is made and becomes "sunk", the host government has the incentive to renege on existing agreements and behave opportunistically to expropriate the assets of foreign firms (Vemon 1971). Firms that invest heavily in immobile assets are especially vulnerable as their threat of exiting the host country is less credible to the host government (Kerner and Lawrence 2014). Absent some sunk-cost or hand-tying mechanisms in the host country, foreign investors would have been

reluctant to invest, holding other factors constant. Students of IPE have identified a number of institutional devices that can credibly convey the trustworthiness of the host government and attract FDI. Democracy and judicial independence, for example, are found to have a positive effect on FDI inflows, as they can constrain the discretion of the executives and protect foreign investors from governmental expropriation (Jensen et al. 2012; Staats and Biglaiser 2012).

However, high-quality domestic governance, such as rule of law, is unlikely to be a necessary condition to attract FDI, as many countries with corrupt and dependent courts can still receive a substantial amount of FDI inflows (Beazer and Blake 2018). Some authors argue that this results from the effect of bilateral investment treaties (BITs). According to this body of literature, BITs can serve as a credible commitment to foreign investors due to its sunk-cost mechanisms and hand-tying effects (Kerner 2009). Specifically, if a BIT is in force between the home and host country, investors from the home country can resolve their disputes with the host government not through domestic courts—which can be corrupt and dependent on the executives in many developing countries—but through International Centre for Settlement of Investment Disputes (ICSID) tribunals instead. According to these authors, delegating dispute resolution to third party arbitration such as ICSID tribunals can effectively tie the hands of the government and attract FDI (Allee and Peinhardt 2011). Therefore, some existing research suggests that BITs can substitute for the role of good domestic institutions, especially judicial independence (Ginsburg 2005).

While the literature on the effects of BITs have made much progress, a number of puzzles remain unsolved. First, there exists an empirical discrepancy about the effect of BITs. There is little consensus in the IPE literature on whether BITs can help attract FDI. While some argue that BITs increase the level of FDI inflows (Ginsburg 2005; Kerner 2009; Neumayer and Spess 2005; Salacuse and Sullivan 2005), others suggest the effect of BITs is quite weak or non-existent (Rose-Ackerman and Tobin 2005; Yackee 2008), or only useful conditionally (Danzman 2016; Lee and Johnston 2016; Tobin and Rose-Ackerman 2011). Besides, we are not certain whether BITs can really substitute for rule of law either: the empirical evidence on the substitutive effect of BITs for

good domestic governance is quite weak and inconsistent (Ginsburg 2005; Neumayer and Spess 2005). The mixed findings on the effect of BITs demand a new theory that can better account for the role of BITs in the politics of FDI.

Second, existing literature concentrates on dispute resolution mechanisms between foreign investors and host governments, but largely ignores disputes between foreign investors and their domestic business partners that are often private firms. Disputes between firms occur much more frequently than investor-state disputes. The total number of cases registered at the ICSID is at most 53 per year.[1] In contrast, in year 2016, 966 new cases were filed at the International Court of Arbitration of the International Chamber of Commerce (ICC), mostly involving private parties.[2] These disputes in general arise due to contract breach and are often arbitrated in TCA institutions. ICC is only one of the approximately 1000 TCA institutions that actively provide arbitration services for firms and individuals engaging in cross-border economic transactions (Hale 2015). In addition to ICC, other reputational TCA organizations include the Singapore International Arbitration Centre, the American Arbitration Association (AAA), the Hong Kong International Arbitration Centre, and many others emerging in developing countries, such as the China International Economic and Trade Arbitration Commission (CIETAC), the Vietnam International Arbitration Centre, and the Malagasy Arbitration and Mediation Center in Madagascar. Many of them operate independently from governmental intervention. Currently the ICC and the AAA receive over 600 transborder cases each year, while the CIETAC in China has heard over 400 transborder cases per year since 1993 (Hale 2015, p.42). The statistics suggests that investor-state disputes and their resolution mechanisms only constitute "a small fraction of the global economy" (Hale 2015, p.18), while disputes between private actors are much more prevalent.

While the practice may differ across time and space, generally TCA institutions adopt a very similar set of arbitration rules. Contractors often specify in the arbitration clause a TCA institution

[1] Statistics for year 2017. See The ICSID Caseload-The Statistics (Issue 2008-1), available at the ICSID website.

[2] In year 2016, 966 new cases were registered at ICC, involving 3,099 parties from 137 countries and territories. Only 10% of the cases involved states or state-owned parties.

that is designated to hear any potential disputes. When disputes occur and are heard by the designated TCA institution, usually the plaintiff and the defendant each appoint an arbitrator and jointly appoint the third, who serve as the chair of the arbitration panel, or delegate the appointment of the third arbitrator to the TCA institution. Awards are issued speedily to reduce costs for both parties, and appealing is not possible with few exceptions.

Foreign investors can choose to resolve their disputes in domestic courts of the host country, but TCA institutions are usually a more favorable choice. First, the legal costs of arbitration are significantly lower than formal litigation (Drahozal 2008). Second, because of its simplicity, informality, and expedition, arbitration is less time consuming. Thus, disputants can resume normal business activities as soon as possible. Third, TCA institutions are more internationalized and professionalized. This greatly reduces language and cultural barriers for foreign disputants. Finally, TCA institutions are in principle fiscally and administratively independent from domestic courts and governments, thus governmental intervention in the proceedings is less of a concern for foreign investors (Inoue 2006). These advantages of TCA institutions over domestic courts lead to "a relatively high quality institution for foreign investment and relatively corrupt, low quality institution for domestic dispute resolution" in hazardous countries (Ginsburg 2005, pp.120-121).

Though TCA institutions have been playing an important role in cross-border trade since the Commercial Revolution in Medieval Europe (Greif 1993; Greif, Milgrom and Weingast 1994; Greif 2006; Milgrom, North and Weingast 1990), they receive little scholarly attention in the literature on the politics of FDI, which places more emphasis on the risks of government expropriation than breach of contract by domestic firms. Hence, this large body of literature only captures one type of hazards foreign investors may face in their investment destinations. According to Henisz (2000), foreign investors face two types of hazards in the host country, the political (government expropriation) and the contractual (contract violation). The impact of and solution to contractual hazards, however, is still understudied. My dissertation is aimed at filling this intellectual gap by examining the role of TCA institutions that resolve contractual disputes between firms.

In sum, my dissertation project sheds light on the contractual hazards foreign investors have to deal with in the host country that are still largely neglected in the IPE literature (Hale 2015, p.19). In particular, I examine how contractual hazards are addressed by contracting institutions that facilitate contract formation and enforcement (Acemoglu and Johnson 2005). Specifically, the three main essays focus on a specific set of contracting institution, the TCA institutions, and their interaction with domestic courts and BITs. My dissertation enhances our understanding on the institutional determinants for the location of FDI and the relationship among these determinants by introducing an important omitted variable absent in existing theories.

1.2 Outline of the Three Essays

This dissertation consists of three major chapters centering on the effects of TCA institutions on FDI. In this section I briefly summarize the main ideas of the three essays.

Essay One: Domestic Arbitral Institutions and Foreign Direct Investment

Existing literature in IPE has focused on how domestic institutions and international treaties can address the "political hazard" concerns for multinational companies (MNCs) and attract FDI. However, governmental expropriations and regulations are not the only causes of legal disputes that foreign investors may face. Disputes also arise frequently between foreign investors and their business partners in the host country due to contract incompleteness. From the perspectives of foreign investors, dispute resolution mechanisms that can effectively address their "contractual hazard" concern are as important as investor-state dispute resolution mechanisms. In this paper, I examine the effect of institutions that arbitrate disputes between foreign and domestic firms on FDI inflows. Using China as a case study, I find that provinces with CIETAC (China International Economic and Trade Arbitration Commission) sub-commissions are likely to receive more FDI. These agencies can attract FDI because they can serve as a credible signal that provinces with CIETAC are truly willing to treat foreign investors fairly when they have disputes with local firms. In sum, this paper sheds light on institutional factors that have not received much attention in the

literature on the politics of FDI.

Essay Two: Bundling Institutions

How do institutions affect the location of foreign direct investment (FDI)? Existing works point to both domestic and international institutions that can effectively constrain the behavior of the host government and protect the property rights of foreign investors from government expropriation. The literature has been focused on the role of domestic courts and international agreements. The effect of the TCA institutions, however, remains understudied. These institutions play an important role in cross-border economic transactions as it has been providing impartial venues for foreign investors to resolve their contractual disputes with domestic business partners at a relatively low cost. Despite its importance and longer history, they have received less attention in the literature compared to BITs which are designed to resolve investor-state disputes. Using firm-level data, I find that a combination of BITs and TCA institutions can increase the likelihood of subsidiary incorporation because it can address both the political hazard and contractual hazard concern for foreign investors. Moreover, the effect of such a combination is strong for countries that have a lower level of judicial independence and rule of law. Finally, BITs and TCA institutions are only useful when they are jointly present in the host country. The results suggest that both property rights institutions that constrain governments and contracting institutions that enforce private contracts are essential for economic growth.

Essay Three: The Effects of International Institutions on Cross-border Mergers and Acquisitions

In this essay, I study how the property rights and contracting institutions affect the entry mode choices of MNCs. In particular, I examine the effects of BITs and TCA institutions on the level of cross-border M&A inflows. Compared to other entry modes such as joint-ventures and greenfield investments, M&As are especially susceptible to government expropriation because in general they do not create as many new jobs as other entry modes for the locals and are often perceived as a

threat by nationalists. Hence, BITs should increase M&A inflows by effectively tying the hands of the government. On the other hand, TCA institutions should have a negligible effect on the level of cross-border M&As because they do not address the concern for political risks. Moreover, they should decrease the share of M&A investments in total FDI inflows because they make other entry modes, in particular, joint-ventures that are more susceptible to contractual hazards, a more attractive choice than M&As. Using country-level data, I confirm that, indeed, the number of M&A deals by U.S. firms and the percentage of M&A investments in total FDI are higher for countries that have a BIT with the U.S. but not so those that have established a leading TCA institution. The findings of this essay suggest that future research can focus more on the nuanced differences in the effects of international institutions as a source of comparative advantage.

1.3 Conclusion and Further Implications

This dissertation project contributes to the IPE and IR literature in the following three aspects. First, it sheds light on an important omitted variable in the politics of FDI. The importance of contracting institutions is still largely neglected in the IPE and IR literature, and my dissertation essays fill this intellectual gap. The findings indicate that what was fundamental to the Commercial Revolution of Medieval Europe remains to be fundamental for economic growth in the contemporary world (Greif 2006; Milgrom, North and Weingast 1990). Second, my dissertation project reveals the relationship among TCA institutions, BITs, and domestic courts. Specifically, I show how delegation to international contracting and property rights institutions can substitute for good domestic governance in terms of attracting FDI. The results directly address the puzzle of why many countries with corrupt and dependent courts can still attract a substantial amount of FDI. Finally, I look into the heterogeneity in the effects of international institutions. These institutions can be a source of comparative advantage, but they can be so for different reasons.

In addition to speaking to the IPE literature, this dissertation project also engages in the scholarly debate on what kind of institutions is conducive to economic growth. In particularly, the find-

ings imply that contracting institutions are compatible with authoritarian rule. Pioneering works suggest that private order contracting institutions, such as merchant guilds in Medieval Europe, effectively enforced contracts and reduced the risks of long distance trade (Greif 1992, 1993; Greif, Milgrom and Weingast 1994; Milgrom, North and Weingast 1990). Ogilvie (2011) questions the effectiveness of merchants guilds in contract enforcement, and shows that generalized institutions supported by public order outperformed particularized ones that served the interests of privileged groups (Ogilvie and Carus 2014). But are generalized contracting institutions necessarily incompatible with a politically exclusive regime? The experiences in the Low Countries indicate that the two could coexist. Spatial competition, according to Gelderblom (2015), gave municipal governments in the Low Countries incentives to establish independent contracting institutions open to all traders. Interestingly, he finds that political constraints on the rulers of commercial cities in the Low Countries "were of secondary importance for institutional change" and the constraints on the rulers were largely economic (Gelderblom 2015, pp.199-200). In other words, different from the North and Weingast (1989) argument, the Low Countries examples imply that it is not necessary to constrain the executives politically in order to credibly ensure that contracts were enforceable, as the pressure generated by spatial competition encouraged authoritarian leaders to constrain themselves economically and enforce contracts impartially.

Contemporary TCA institutions continue to exist and function well in non-democracies. In order to attract foreign capital, autocrats do not have to establish independent judiciaries, which would have allowed the oppositions to challenge their human rights abuse and possibly resulted in the collapse of the regime. Instead, they can resort to establishing high-quality TCA institutions within their territories. Delegating dispute resolution processes to TCA institutions, home or abroad, effectively ties the hand of the host government in the economic domain, while at the same time allows autocratic governments to suppress the oppositions and abuse human rights using dependent domestic courts. There is anecdotal evidence that the promotion of international arbitration helps illiberal regimes to attract foreign capital while at them same time to hold power

and curtail the development of domestic legal institutions towards rule of law (Massoud 2014). It remains to be explored whether legal reform only in the economic domain—the so-called "partial rule of law" (Wang 2014)—is sustainable in the long run. This question will be answered in my future research agenda.

2. DOMESTIC ARBITRAL INSTITUTIONS AND FOREIGN DIRECT INVESTMENT*

2.1 Introduction

The global flows of foreign direct investment (FDI) have reached 2.3 trillion current USD in year 2016, a 10-fold increase compared to the end of the Cold War.[1] The increase of FDI is accompanied with the diffusion of institutions—both domestic and international—that are designed to protect the property rights of foreign investors. It is well established in the political economy literature that domestic institutions matter in determining the level of FDI inflows. Democracy and the establishment of the rule of law can help to attract FDI because they can better protect the assets of foreign investors from the expropriation by the host government (Jensen et al. 2012; Li and Resnick 2003; Li, Owen and Mitchell 2018). International institutions, such as bilateral investment treaties (BITs), are also effective in attracting FDI because they can credibly signal the trustworthiness of the host state government and tie its hand (Kerner 2009; Neumayer and Spess 2005).

However, opportunistic expropriation by government is not the only concern for foreign investors. Disputes between multinational firms and their business partners of the host country also arise frequently. When at its peak, the total number of cases registered at the International Centre for Settlement of Investment Disputes (ICSID)—which is the major forum to resolve investor-state disputes—is 53 per year.[2] In contrast, in year 2016, 966 new cases were filed at the International Court of Arbitration of the International Chamber of Commerce (ICC). While the ICC provides arbitration services to both government and non-governmental actors, its customers are mainly private ones.[3] Thus, in addition to investor-state disputes, multinational companies (MNCs) are also

*Reprinted with permission from "Domestic Arbitral Institutions and Foreign Direct Investment" by Weiwen Yin, 2020. Online in *International Relations of the Asia-Pacific*, Copyright 2020 by Weiwen Yin.

[1]Statistics from World Bank Data. See: https://data.worldbank.org/indicator. Last accessed: April 11, 2019.

[2]Statistics for year 2017. See The ICSID Caseload-The Statistics (Issue 2008-1), available at the ICSID website: https://icsid.worldbank.org/en/Pages/resources/ICSID-Caseload-Statistics.aspx. Last accessed: April 11, 2019.

[3]In year 2015, 801 new cases were filed at the ICC, involving 2283 parties from 133 countries and territories.

likely to face disputes with host country firms.

Therefore, institutions that can fairly and effectively resolve disputes between firms can make host country more attractive to foreign investors. Private actors usually resort to third-party arbitration or mediation to address their contractual disputes. If a host government has established arbitral institutions that can treat disputants fairly—particularly treat foreign investors who usually have less connection with the host government fairly—and at the same time offer affordable arbitration service to the parties, we expect that it can attract more FDI, holding other factors constant.

In order to empirically test this argument, I examine the regional variation within China. China is a substantively interesting case because foreign investors not only face contractual disputes with private firms, but are susceptible to the political risks of government expropriation. Using machine learning and statistical methods, I find robust evidence that provinces that have established sub-commissions of CIETAC (The China International Economic and Trade Arbitration Commission) are likely to receive more FDI inflows, compared to provinces that have no CIETAC sub-commissions.

CIETAC sub-commissions can attract FDI due to the following reasons: First, compared to Chinese courts, they are not only more professional in arbitrating or mediating cross-border commercial disputes, but are also relatively more independent from government intervention. Second, compared to foreign arbitral institutions, such as the ICC or the Singapore International Arbitration Centre, fees charged by the CIETAC are in general lower while its rulings are more enforceable in China. Lastly, in many developing countries such as China, contractual hazards are magnified with the presence of political hazards (Henisz 2000). Investors often worry that during the process of dispute resolution, local governments may intervene and support local firms which have more connections with local officials. The establishment of arbitral institutions can serve as a credible signal that local governments are not going to be biased against foreign investors. The signal is

Among them only 127 are states or state-owned parties, accounting for approximately 5.56% of all parties involved. See: https://www.slideshare.net/ICCWBO/icc-arbitration-statistics-2015. Last accessed: April 11, 2019.

credible because of the sunk-cost mechanisms and hand-tying effects associated with the establishment of CIETAC sub-commissions. As a result, foreign firms are willing to invest in places with CIETAC organizations where both the contractual and political hazard concerns are mitigated. In sum, I add to the literature that domestic arbitral institutions also matter in determining the flows of FDI.

This paper proceeds as follows. The next section provides a brief review of the literature that offers institutional explanations for the amount of FDI inflows. The importance of contractual hazard concern in the decision-making of foreign investors is highlighted. It will then offer an introduction to the CIETAC and a theory on how it addresses the contractual hazard concerns for multinational companies (MNCs). The paper will proceed with research design and empirical evidence. The concluding words emphasize that arbitral institutions can serve as a source of comparative advantage in attracting foreign capital.

2.2 Institutions and FDI

Institutions, both domestic and international, play an important role in determining the level of inward FDI. First, the effects of domestic institutions have received much attention in the literature. It has been established that institutions that can effectively protect property rights help to attract more investment, from home and abroad, thus can lead to a higher economic growth rate (Acemoglu, Johnson and Robinson 2005*a*,*b*; Greif, Milgrom and Weingast 1994; North and Weingast 1989). These institutions can credibly limit the discretion of the executives. Democracy provides one of the institutional constraints for the executives thanks to its policy stability generated by a larger number of veto players and their divergent preferences (Tsebelis 2002). Therefore, democratic regimes can attract more FDI because of its comparative advantage in protecting the investors from the expropriatory behavior of the host government (Li and Resnick 2003; Li, Owen and Mitchell 2018; Olson 1993). In addition, the establishment of rule of law and judicial independence can also work as a pull factor for FDI (Staats and Biglaiser 2012). Since judges and

courts under the common law system are more independent from the executives compared to their counterparts under the civil law system, common law countries are associated with a higher level of investment, including investment from abroad (La Porta et al. 1997; La Porta, de Silanes and Shleifer 2008; Mahoney 2001).

In addition to domestic institutions, international institutions built on treaties and agreements can also help countries attract FDI. A time inconsistency problem is a concern of foreign investors—particularly for those whose invested assets are less mobile. Such concern is more salient if the investment destination is a developing country where rule of law is not fully established and the executives are less constrained. For these countries to attract FDI, they have to send credible signals to foreign investors that they are truly willing to protect their assets. Investing in domestic courts and improving local governance is one option (Malesky 2004; Wang 2014), but this is not always optimal for the host government. First, enhancing the quality of courts and administrations is usually time-consuming, thus this solution may not meet the emergent need for capital for many developing countries (Betz and Kerner 2016; Simmons 2014). Moreover, authoritarian regimes may have no incentive to build "good" institutions such as fully independent courts or inclusive regimes, as doing so will weaken their position in the state-society interaction and negatively affect their vested interests (Acemoglu, Johnson and Robinson 2001; Sokoloff and Engerman 2000; Wang 2014).

Therefore, many countries that long for capital resort to international agreements and international treaties (Simmons 2000). Specifically, they credibly signal to foreign investors through signing BITs. BITs are credible signals because of their sunk-cost mechanism and hand-tying effect: the ex ante costs paid to ratify BITs and the ex post costs to violate treaty obligations allow host states to credibly commit that the signatories will not expropriate from foreign investors (Kerner 2009; Neumayer and Spess 2005). Existing works on the effects of BITs confirm that, indeed, signing BITs can lead to an increase in FDI inflows (Allee and Peinhardt 2011; Kerner 2009), particularly investment in the form of fixed capital (Kerner and Lawrence 2014). The hand-

tying effect of BITs is stronger when the host countries cannot intervene in the dispute resolution mechanisms, such as ICSID arbitration. Indeed, existing findings suggest that including ICSID as a venue to resolve investor-state disputes in the BIT clauses has a positive effect on FDI inflows (Danzman 2016), thus states are more likely to include ICSID provisions in the BITs if they are more dependent on the global economy (Allee and Peinhardt 2010).

2.3 Contractual Hazards and Contract Enforcement Institutions

Investor-state dispute resolution provisions in BITs can enhance the credibility of the host government because MNCs can expect that they will be treated fairly even if disputes with the host government occur. However, disputes with the host government are only one type of the disputes foreign investors may confront. The disputes between private actors—between foreign firms and their business partners of the home country—are much more likely to occur. Therefore, when making a decision to invest or not, foreign investors also have the incentive to choose a target country where their disputes with domestic business partners can be fairly and effectively handled with affordable costs. Simply put, resolution mechanisms that are designed to address disputes between domestic and foreign firms are as important as investor-state dispute resolution mechanisms in terms of influencing FDI inflows.

The existing IPE literature largely focuses on political hazards—the possibility that host government will expropriate the assets of investors either directly by nationalization or indirectly by adjusting tax rates and other regulation policies—that MNCs may face. Thus, a large body of literature emphasizes on the role of investor-state dispute resolution mechanisms when exploring the institutional explanations for FDI flows, although these arrangements are merely "a small fraction of the global economy" (Hale 2015). On the other hand, another sort of hazards, the so-called contractual hazards, have received little attention from the students of FDI politics. Correspondingly, private transborder dispute resolution is rarely the focus of IPE studies (Hale 2015, 19). According to Henisz, contractual hazards exist because domestic firms—particularly joint venture partners—

have the incentive to make use of contractual incompleteness to exploit their foreign business partners. After an investment deal becomes sunk, domestic firms may ask for a renegotiation of the contracts, or simply ignores their obligations, both of which could generate unexpected losses for foreign investors. Often contractual hazards arise as a result of asset specificity, technological leakage, and free riding on brand-name reputation (Henisz 2000). Simply put, both political hazards and contractual hazards can be troublesome for MNCs, but the latter has received relatively less scholarly attention in the literature.

Contractual hazards are magnified by the presence of political hazards because MNC's business partners in the host country can manipulate the corrupt political system to expropriate the assets of their foreign partners (Henisz 2000). This is more likely to occur in developing countries where rule of law is not fully established. Foreign investors often find themselves disadvantaged compared to domestic firms because the latter usually have closer connections with the host government. As a result, when contractual disputes between private actors occur, domestic firms tend to receive more favorable rulings from the court thanks to their connection with the local government that has a strong influence over the judiciaries. For example, in China, courts are fiscally dependent on the local administration. As a consequence, when cases are filed at local courts, foreign investors sometimes find that the trials are not fair, even if the opponents are neither local governments nor state-owned enterprises but a privately held Chinese company (Stockmann 2011). Therefore, from the investor's perspective, institutions that can effectively reduce contractual hazards and guarantee contract enforcement—even with the presence of political hazards—can make the host country a more attractive investment destination. More specifically, since it is impossible to thoroughly avoid contractual incompleteness ex ante, forums in which disputes can be fairly, effectively, and affordably settled are of great importance for investors. In other words, dispute resolution institutions designed for investors and their business partners in the host country, similar to investor-state dispute resolution mechanisms, should also have a positive effect on FDI inflows.

I study the effect of these contracting institutions by examining the within-country variation of

China. In the next section, I first provide a brief introduction to the CIETAC, the representative TCA institution in China, and its advantages compared to other forums such as domestic courts and international arbitral institutions located outside of the country. After introducing the basic features of CIETAC, I then lay out the theorical argument on why CIETAC can help to attract FDI. Finally, I formulate the hypothesis that can be empirically tested using the data of China.

2.4 Context, Theory, and Hypothesis

There are approximately 1000 arbitral institutions in the world that serve as ADR mechanisms for disputes between private actors. In addition to the ICC and the CIETAC, other famous organizations include the Arbitration Institute of the Stockholm Chamber of Commerce in Sweden, the Singapore International Arbitration Centre, and the American Arbitration Association. These arbitral institutions have been playing an important role in facilitating dispute resolution for the business sector and become an essential part of the global trade and investment network.

The China International Economic and Trade Arbitration Commission (CIETAC) is the representative arbitral institution in China. Formerly known as the Foreign Trade Arbitration Commissions, the CIETAC was founded in 1956 under the China Council for the Promotion of International Trade (CCPIT).[4] Ever since its foundation, the CIETAC has functioned as the major international commercial arbitration organization of the country. Since 1993, it has registered more cases annually than any other commercial arbitral institutions in the world (Chew 2016). The headquarter of CIETAC is located in Beijing. And there are currently 10 sub-commissions in different provinces of Mainland China.[5] In addition, the CIETAC has an arbitration center located in Hong Kong. While the headquarter and the sub-commissions adopt the same arbitration rules and share the

[4]In addition to CIETAC, the CCPIT also established two other arbitral institutions in China: The Arbitration Center Across the Straits located in Fujian Province in 2016, where investors from Taiwan are concentrated, and the China Maritime Arbitration Commission that focuses on maritime business disputes.

[5]They are the South China Sub-commission in Shenzhen, the Shanghai Sub-commission, the Tianjin International Economic and Financial Arbitration Center (Tianjin Sub-Commission), the Southwest Sub-commission in Chongqing, the Zhejiang Sub-commission in Hangzhou, the Hubei Sub-commission in Wuhan, the Fujian Sub-commission in Fuzhou, the Silk Road Arbitration Center in Xi'an, the Jiangsu Arbitration Center in Nanjing, and the Sichuan Sub-commission in Chengdu.

same pool of arbitrators, the sub-commissions operate independently before 2012 (Inoue 2006).[6]

Compared to domestic courts and other international arbitral organizations located outside of China, the CIETAC has a number of advantages that make it more attractive to foreign investors who are seeking to resolve disputes with their Chinese business partners. First, the CIETAC is independent of the government: unlike Chinese courts, the CIETAC, including all its branches across the country, does not rely on local governments for budgetary support and the local governments cannot intervene in its personnel issues (Inoue 2006). The independence of CIETAC has been supported and strengthened by a series of legal interpretations of the Supreme Court of China since the 1990s (Gu 2013).

Foreign investors who are constrained by language and cultural barriers often find it difficult to establish connections with local governments. Thus, when disputes with Chinese firms occur, they worry that, under the pressure of local officials, the judges would rule in favor of Chinese firms. The possible unfair treatment in local courts magnifies the contractual hazards MNCs may face and discourages them from investing. The CIETAC, on the other hand, is more likely to treat domestic and foreign firms fairly in the arbitration process because they are more independent. Therefore, provinces with CIETAC sub-commissions should receive more FDI inflows.

Second, the CIETAC is more internationalized and professionalized compared to domestic courts. Courts in China require that the lawsuit should be conducted in Chinese, which is not a negligible obstacle for many foreign firms, particularly for small and medium enterprises (Stockmann 2011). On the other hand, according to Article 81 of the CIETAC Arbitration Rules, the parties themselves can decide on the language of arbitration. If there is no agreement on such matter, Chinese shall be used.[7] More importantly, the arbitrator pool of CIETAC consists of arbitrators from other countries and territories. In 2015, 17 arbitrators from 8 different countries or territories (excluding mainland China) arbitrated in 58 cases. Compared to the ICC in which

[6]See: http://www.cietac.org/index.php?m=Page&a=index&id=34&l=en. Last accessed: April 11, 2019.

[7]CIETAC Arbitration Rules, Article 81. See: http://www.cietac.org/index.php?m=Page&a=index&id=106&l=en. Last accessed: April 11, 2019.

arbitrators are from 77 countries (2015 data), CIETAC's arbitrator panel still falls behind in terms of diversity. However, compared to Chinese courts that forbid judges holding foreign nationalities, one can hardly deny that CIETAC is more internationalized.[8] Third, the arbitration rules and procedures adopted by CIETAC are essentially the same as other international arbitral institutions, such as clauses that allow disputants to nominate arbitrators even if they are not listed in the pool of CIETAC.[9] Another example is that CIETAC tribunals adopt the adversarial approach—which is a common practice in western countries, particularly in common law countries—when hearing the arbitration (MacLean 2012). Besides, CIETAC, supported by the Supreme Court of China, employs the so-called Kompetenz-Kompetenz Doctrine under which an arbitration tribunal can rule on its own jurisdiction (Inoue 2006). Therefore, "[f]oreign parties have noted that their experiences in CIETAC were similar to experiences in other international arbitral commissions" (Stockmann 2011). The fact that CIETAC is more independent, internationalized, and professionalized implies that it is relatively more difficult for Chinese firms to obtain preferential treatment as they usually do in formal litigation through domestic courts.

These advantages in relation to domestic courts are not unique to the CIETAC. In general, alternative dispute resolution (ADR) mechanism like arbitration is a better option for foreign firms that are investing in developing countries. For example, the average duration of cases handled by the Malagasy Arbitration and Mediation Center established in Madagascar is one and a half month, while formal litigation in average takes 841 days in the courts of Madagascar. More importantly, the local courts are associated with a number of problems, such as "corruption and a lack of transparency, and inadequate training of judges."[10] Therefore, the advantages of private arbitration forums over domestic courts are not unique to China, but are also observable in other developing countries.

[8]CIETAC 2015 Report, p.37. See: http://www.cietac.org/Uploads/201612/58678e45783ae.pdf. Last accessed: April 11, 2019.

[9]CIETAC Arbitration Rules, Article 26. See: http://www.cietac.org/index.php?m=Page&a=index&id=106&l=en. Last accessed: April 11, 2019.

[10]See: https://www.export.gov/article?id=Madagascar-dispute-settlement. Last accessed: April 12, 2019.

Compared to the ICC and other foreign arbitral organizations, the CIETAC is also preferable for many investors. First, the arbitration fees of CIETAC are in general lower. When the monetary value of the claims is 100,000 USD (approximately 633,190 CNY as of the exchange rate in March, 2018), the total cost of CIETAC treatment is less than 5,600 USD.[11] On the other hand, for the same amount of disputed claims, ICC can charge 35,945 USD on average.[12] Hence, CIETAC is much more affordable, particularly for small and medium foreign enterprises.

Second, there is an enforceability problem for the awards issued by non-Chinese arbitral institutions. China became a party to the Convention on the Recognition and Enforcement of Foreign Arbitral Awards (The 1958 New York Convention) in 1987. Currently, there are over 150 member signatory countries/territories. According to the Convention, under general conditions, national courts of signatory states and territories have the obligation to enforce arbitration rulings–including rulings issued in other signatory states or territories.[13] In theory, the rulings of foreign arbitration tribunals can be enforced in over 150 countries in the world. However, the rulings of international commercial arbitrations may not necessarily be enforced by the domestic courts of China. First, according to Article 5 of the Convention, the recognition and enforcement of an award can be refused under certain circumstances. For example, an award would not be enforced if the domestic court finds that the award is contrary to the "public policy" of that country.[14] Between 2000 and 2011, 17 foreign arbitral awards were refused by the Chinese court due to a condition prescribed in Article 5 of the Convention (Xia 2011). In 2015, four (including one from Hong Kong) out of 44 foreign arbitral awards were not recognized or enforced by the Chinese courts, accounting for approximately 9% of all enforcement applications. On the other hand, in the same year, only

[11]The fees are calculated using the online cost calculator of CIETAC. I select the fees for "foreign related" arbitration cases as effective from 2015. See: http://www.cietac.org/index.php?m=Cost&type=out2015&l=en. Last accessed: April 12, 2019.

[12]The fees are calculated using the online cost calculator of ICC. I select ordinary procedure with three arbitrators in the tribunal. See: https://iccwbo.org/dispute-resolution-services/arbitration/costs-and-payments/cost-calculator/. Last accessed: April 12, 2019.

[13]New York Convention, Article 3.

[14]New York Convention, Article 5.

0.06% awards issued by Chinese domestic arbitration institutions were refused to be enforced by domestic courts of China.[15] Second, when China acceded to the New York Convention in 1987, reservations were made that it will only recognize and enforce awards made in the territory of another contracting state, and that it will apply the Convention only to differences arising out of legal relationships that are considered commercial under Chinese national law.[16] Chinese courts may refuse to enforce an undesirable award by interpreting "commercial" narrowly (Inoue 2006). Article 5 of the New York Convention and the "commercial reservation" increase the risk of choosing non-Chinese arbitral organizations in that the awards may be declared void by the Chinese courts.

Finally, when disputes arise over Chinese-foreign equity joint ventures, the jurisdiction of foreign arbitral organizations is simply denied by the Chinese law. According to Article 246 of Civil Procedure Law of China, "actions brought on disputes arising from the performance of contracts for Chinese-foreign equity joint ventures, or Chinese-foreign contractual joint ventures, or Chinese-foreign cooperative exploration and development of the natural resources in the People's Republic of China shall fall under the jurisdiction of the people's courts of the People's Republic of China." This clause concerns a large number of foreign investors in China as joint venture is the required entry mode for many profitable industries, such as automobile production. In this case, Chinese domestic courts and the CIETAC are the only options from which foreign investors as claimants may receive an enforceable award (Heye 2003). Therefore, despite that the CIETAC is far from perfect, in many circumstances it is the only reliable option for MNCs who seek to resolve their contractual disputes effectively with Chinese firms.

The Signaling Effect of the CIETAC

The advantages of CIETAC, however, cannot sufficiently explain why it can attract FDI to a country where political hazards are prevalent and contractual hazards are magnified with the

[15]CIETAC 2015 Report, pp. 17-19. See: http://www.cietac.org/Uploads/201612/58678e45783ae.pdf. Last accessed: April 12, 2019.

[16]See: https://www.lexology.com/library/detail.aspx?g=b9a8c243-8ac2-4236-a62b-157b8377b1c4. Last accessed: April 12, 2019.

presence of political hazards. In other words, if CIETAC is useful in terms of attracting FDI, it should function like BITs that can effectively address investors' political hazards concern as well. Students of BITs find that signing BITs has a positive effect on FDI inflows because they can serve as a commitment device to assure foreign investors who are uncertain about the future behavior of the host government. The commitments are credible because of the sunk-cost mechanisms and hand-tying effects of BITs (Kerner 2009).

Similar to BITs, the establishment of CIETAC sub-commissions can also credibly inform investors that the local government will refrain from protecting domestic firms when a dispute arises. First, all CIETAC sub-commissions in mainland China were established in response to the petition of local governments (with the permission of the central government).[17] Therefore, it is the local governments that actually use CIETAC sub-commissions as a commitment signal to foreign investors. Since the signal is sent by local governments, if the signal is credible, it should help local regions with CIETAC to attract FDI.

Second, establishing CIETAC sub-commissions is a credible signal because there exist ex ante costs to introduce CIETAC for the local government. While CIETAC sub-commissions are fiscally independent from the government, their existence may result in some externalities—which are positive for foreign investors but negative for existing local judicial institutions—in the sense that local courts will have a smaller share in the market of arbitration service. According to Article 5 of Arbitration Law of PRC, "[i]f the parties have concluded an arbitration agreement and one party institutes an action in a people's court, the people's court shall not accept the case unless the arbitration agreement is null and void."[18] In other words, if both parties have agreed to proceed to arbitration, local courts must refer the case to the arbitration tribunal. Thus, the establishment of CIETAC sub-commissions will break the monopoly of local courts in the arbitration service market and necessarily reduce their revenue. Simply put, ex ante opportunity costs must be paid to

[17] See: http://www.legaldaily.com.cn/Arbitration/content/2016-03/29/content_6545659.htm?node=78348. Last accessed: April 12, 2019. Arbitration Law of the People's Republic of China, Article 5.

[18] Arbitration Law of the People's Republic of China, Article 5.

introduce CIETAC. These sunk-costs enhance the credibility of the signal.

Third, in addition to the sunk-cost mechanisms, the establishment of CIETAC can be a credible signal because of its hand-tying effects. CIETAC ties the hand of government officials by imposing ex post costs on the government if it intervenes in the dispute resolution process. As is mentioned above, Chinese laws require that local courts must refer the case to arbitral organizations if the parties have reached an arbitration agreement. This Article in the Arbitration Law prevents governments from using dependent courts to protect Chinese firms that are well-connected with government officials. The formats of arbitration agreement include clauses in a contract.[19] In other words, if foreign investors expect that disputes with domestic business partners may occur and that they want CIETAC instead of Chinese courts to arbitrate, they can include clauses that designate CIETAC as the dispute resolution forum in the contract, prior to conducting any substantial business activities. Doing so can effectively prevent governmental intervention in the proceedings—governments and local courts that violate the Arbitration Law would be punished by the central government and the Supreme Court (Gu 2013). Simply put, establishing CIETAC can serve as a credible signal for local governments because it can effectively tie their hands and address the time inconsistency concern of foreign investors.

If CIETAC is useful to attract FDI, it remains to be answered why some provinces established and maintained independent CIETAC sub-commissions while others have not. Answering this question is not only theoretically relevant, but also has profound implications for empirical research design. Gelderblom (2015) argues that contracting institutions were established in the Low Countries in early modern Europe mainly as a result of spatial competition among major commercial cities such as Antwerp and Amsterdam. To compete for trade and capital inflows, commercial cities in the Low Countries adopted a series of institutional reforms to resolve disputes arising from cross-border economic activities. These reform measures included establishing generalized (i.e., available to all merchants regardless country of origin or social status) TCA institutions, standard-

[19]CIETAC Arbitration Rules, Article 5.

izing arbitration rules, and accommodating the need for expedited dispute resolution. Gelderblom (2015, 199-201) emphasized that these early TCA institutions were built in polities that were far from being politically inclusive. Hence, peer pressures, instead of the quality of domestic governance, could better explain the origin of the first TCA institutions in the world.

Similarly in China, CIETAC sub-commissions and local agencies are expanding because of peer pressure among major commercial centers in the country. Indeed, the first CIETAC sub-commissions were all established in metropolitans. These cities are competing with counterparts of similar ranks, not necessarily targeting neighboring provinces. For example, the sub-commissions in Shanghai and Shenzhen were both founded in the late 1980s (the two also declared independence from the CIETAC headquarter in the same year), while the Chongqing and Tianjin sub-commissions were established around 2008-2009. When commenting on the reason to establish the Southwest Sub-commission in Chongqing, an official from the CCPIT indicated that since CIETAC has established sub-commissions in Shenzhen, Shanghai, and Tianjin, Chongqing as an important city in Southwest China and a municipality should also have its own internationally influential TCA institution.[20] It should be noted that empirical evidence below does not support the claim that CIETAC sub-commissions were established in response to the demand of multinational firms who were already investing, but is more in favor of the signaling argument that local governments use CIETAC to attract foreign capital.

In sum, CIETAC is more attractive for foreign investors to resolve commercial disputes compared to domestic courts and other international arbitral organizations. Compared to Chinese courts, they are more independent from the government and more professional. Compared to foreign arbitral organizations like the ICC, they are more affordable while their awards are more likely to be enforced in China. But these are not the major reasons why they can attract FDI. In a developing country like China, both contractual and political hazards exist, and they interact in the sense that domestic business partners of foreign investors may have the incentive to manipulate

[20] See: http://www.chinawuliu.com.cn/xsyj/200805/12/139355.shtml. Last accessed: April 27, 2019.

the political system and obtain preferential treatment in trial process when contractual disputes arise. Therefore, from the government's perspective, if it wants to compete with other local governments and attract FDI, it needs to signal credibly that when disputes arise between foreign and domestic firms, the government is not going to intervene in the proceedings. The establishment of CIETAC sub-commissions can serve as a credible signal because of the associated sunk-costs and their hand-tying effects. As a result, CIETAC can not only directly address the "contractual hazard" concern of foreign investors, but can also indirectly reduce the political risks that governments may protect local firms and treat foreign investors unfairly in the dispute resolution process. Simply put, the existence of CIETAC sub-commissions should lead to an increase in FDI inflows. In the next section, I will use the provincial-level data of China to test the following hypothesis:

Hypothesis 1: CIETAC sub-commissions can lead to an increase in FDI inflows, holding other factors constant.

2.5 Research Design and Empirical Analysis

In this section, I empirically test whether domestic arbitration institutions can attract FDI or not. Specifically, I examine China's within-country variation. There are mainly two advantages of focusing on a single country like China. First, from a methodological perspective, doing so can hold many confounding variables constant and single out the effects of arbitration institutions. While there exist a number of arbitral institutions located in various countries, the cultural, political, and social environment in which they operate is quite different. These factors could possibly moderate the effect of arbitral institutions on FDI inflows, but good proxies for them are not always available. Moreover, though in general the rules of different arbitral institutions follow the same principles, the arbitration practice can vary. For example, the cases submitted to CIETAC more often end up being mediated instead of being arbitrated, and even if the cases are formally arbitrated, it is quite unlikely that the disputants can receive a full win (Chew 2016). The heterogeneity in the practice of arbitral institutions across different countries may do a disservice to causal inference.

Lastly, arbitral institutions of different countries do not share the same pool of arbitrators. As is mentioned above, some arbitral organizations can offer a higher salary and hire more skilful and professional arbitrators. The skill level of arbitrators could influence the attractiveness of an arbitral institution, but it is difficult to measure it accurately in cross-national comparison. Simply put, the cross-country approach can hardly eliminate the impacts of confounding variables, thus is not suited for studying the effect of arbitration institutions.

On the other hand, CIETAC sub-commissions in different provinces of China are essentially the same in the sense that they not only follow the same rules and use the same pool of arbitrators but also generate similar arbitration outcome for disputants. The rates of full-win, partial-win, and full-losses are very close (and statistically indistinguishable) across different sub-commissions (Chew 2016). Therefore, for disputants who are considering to initiate an arbitration in CIETAC, they do not need to consider whether the chance of winning is higher or lower for certain sub-commissions. Their major concern should be the distance between their business activities and the location of sub-commissions. Indeed, this is a real concern for disputants. For example, before the foundation of the Southwest Sub-commission in Chongqing, local firms had to resolve international trade disputes in Beijing, Shanghai, or Shenzhen, which was inconvenient and costly.[21] Unlike the ICC, CIETAC prefers oral hearing over written processes (MacLean 2012). Article 33 of the CIETAC Arbitration Rules indicates that oral hearing is the default option, and Article 34 states that the default place to hold the oral hearing is "in Beijing for a case administered by the Secretariat of CIETAC or at the domicile of the sub-commission which administers the case."[22] Since CIETAC arbitration proceedings often require oral hearings, disputants are likely to select arbitration venue that minimizes travel costs. Simply put, the location of CIETAC does matter in the calculation of firms. In sum, focusing on the within-country variation can facilitate causal inference.

The case study of China is also substantively interesting. China is a representative case not

[21] See: http://business.sohu.com/20080507/n256718449.shtml. Last accessed: August 29, 2019.
[22] CIETAC Arbitration Rules, Article 33-34.

only because it is one of the largest recipients of FDI in the world, but also because it is a developing, non-democratic country where both contractual hazards and political risks exist. Contractual hazards have been a major concern for MNCs investing in China because they are required to form equity joint ventures with Chinese firms in order to invest in many profitable industries. Expecting that contractual disputes are likely to occur, foreign firms should have chosen to establish wholly-owned subsidiaries (Henisz 2000), but this is simply prohibited for many industries according to the Chinese laws. In addition, because of the relatively weak protection of intellectual property rights in China, technological leakage and free-riding on brand names are also likely to occur. The fact that judiciaries are not fully independent in China magnifies the contractual hazards investors may face because domestic firms that are more connected to the local government are often treated preferentially in the Chinese courts. Thus, domestic firms have the incentive to expropriate the assets of foreign investors by colluding with the local government and the legal system.

The coexistence of contractual and political hazards makes China a substantively interesting case, as many other developing countries face similar problems. If domestic arbitral institutions in China can mitigate both contractual hazards and political risks for foreign investors and attract FDI, they should be able to do so as well in other developing countries where executives are less constrained and rule of law is not fully established. Therefore, the findings of this paper can be generalizable to many other countries that lack fully independent courts but have relatively high standard arbitration institutions.

Data

To empirically test the hypothesis that CIETAC sub-commissions can attract FDI, I construct a panel data set covering 31 provincial-level administrative divisions of China from 1985 to 2011. Thus, the unit of analysis is provincial-level administrative division-year, or province-year for short. Provincial-level divisions in China include provinces, autonomous regions, and municipalities. Though nominally different, they are essentially the same in terms of governance struc-

ture. The dependent variable is foreign capital actually utilized (denoted in 10 thousand USD, log-transformed) reported by provincial statistical yearbooks.[23] The key independent variable is CIETAC sub-commissions, which is coded as 1 if the province hosts a sub-commission, and 0 otherwise. The data for this variable are collected from the CIETAC website.[24] By 2011, CIETAC sub-commissions have been established in five different provincial divisions of Mainland China, and three more would start operating from 2016. The panel dataset used in this paper excludes observations from 2012 because in 2012 the South China and Shanghai sub-commissions split with the headquarter due to their opposition to the revision of the CIETAC arbitration rules. The new rules provide a default jurisdiction to the Beijing headquarter of all cases in which the arbitration clause does not specify a particular sub-commission, while previously such cases were managed by sub-commissions that were geographically most related.[25] CIETAC headquarter rebuilt the South China and Shanghai sub-commissions in 2014, while the two original sub-commissions became independent TCA institutions from CIETAC since October, 2012. To partial out the impact of the new rules and that of the split, I truncate the sample by dropping observations from 2012.

To correctly identify the effect of CIETAC sub-commissions on FDI inflows, we need to assume that there is no selection on unobservables. To mitigate the possibility of omitted variable bias, I control for a number of covariates that may influence the level of FDI inflows. There are 38 in total, basically covering all important economic and social indicators reported in the provincial statistical yearbooks. These variables capture the characteristics in economic development, demography, human capital, and strength of government. The summary statistics of all control variables are presented in the Appendix A. While controlling for a large number of covariates may mitigate the risks of omitted variable bias, it is statistically inefficient in that controlling for irrelevant variables

[23] To test whether the log-transformed FDI is stationary, I perform the Im-Pesaran-Shin unit root test. The result suggests that we can reject the null hypothesis that all panels contain a unit root at a relatively high confidence level, with p-value = 0. 0676.

[24] http://www.cietac.org/index.php?m=Page&a=index&id=40&l=en. Last accessed: April 13, 2019.

[25] See: https://www.jonesday.com/zh-hans/insights/2013/05/cietac-rebranding-in-shanghai-and-shenzhen. Last accessed: August 23, 2019.

may artificially inflate the standard errors, thus making it more difficult to reject the null hypothesis of no effect from CIETAC. In the following analysis, I use a machine learning technique, the post-double-selection (PDS) method, to select variables that are associated with smallest prediction errors.

Post-double-selection (PDS) Results

I use the PDS method introduced by Belloni, Chernozhukov and Hansen (2014) to select control variables. This method is built on the LASSO estimator that has become increasingly popular in social sciences. The LASSO estimator employed in this paper is defined as $\hat{\beta} = arg\ min\ \sum_{i=1}^{n}(y_i - \sum_{j=1}^{p} x_{i,j} b_j)^2 + \lambda \sum_{j=1}^{p} |b_j|$ (Tibshirani 1996). Note that the regularized regression which the LASSO estimator solves not only includes mean squared prediction error, but also addictively includes a regularizer multiplied by a tuning parameter λ. This parameter is chosen to guard against model overfitting inherent in least-square estimators and is chosen using cross-validation, a data-driven method. Specifically, the data are partitioned repeatedly into training and test data; the least-square model is fit using the training data while the prediction error is calculated using the test data. We then use cross-validation to choose the optimal λ. Using this optimal λ, we obtain the LASSO estimates. Since the LASSO method can drive irrelevant variables to 0, we select variables that are "true" predictors of the dependent variable.

In the course of the PDS method, I use LASSO estimator twice. First, I estimate a LASSO regression with the level of FDI (log-transformed) as the dependent variable while the 38 control variables along with the 1st-5th order temporal lags of the dependent variable as the regressors. Second, I estimate another LASSO regression with the CIETAC treatment as the dependent variable while the 38 control variables plus the temporal lags as the regressors. The two LASSO regressions yield two sets of variables. A union of them are predictors of both the level of FDI and the CIETAC treatment, thus should be controlled for in order to avoid omitted variable bias. I use the Stata package developed by Ahrens, Hansen and Schaffer (2018) to perform the PDS analysis.

The PDS data-driven method selects the following variables that are predictors of both the dependent and CIETAC treatment variable: (1) the first temporal lag of the logged FDI, (2) trade-to-GDP ratio, (3) share of college and university students in total population, (4) investment in state-owned assets as a percentage of total fixed-assets investment, (5) share of tertiary industry in GDP, (6) share of employment of second industry, (7) population growth rate, (8) number of work-related crimes investigated in every 10 thousand people. The coefficient on the CIETAC treatment variable is statistically significant at 90% confidence level (p-value=0.078). It has a positive sign as expected, with a magnitude of 0.1593. In other words, establishing a CIETAC local sub-commission can increase FDI inflows by approximately 16%, holding other factors constant.

Statistical Estimation Results

Since the standard errors and test statistics are only valid for the CIETAC treatment variable in the PDS results, I do not report the inference on the control variables. Instead, I estimate several models with the set of selected control variables and that of all control variables using conventional statistical estimators. Doing so can also serve as robustness checks for the effect of CIETAC on FDI inflows.

Specifically, I estimate fixed-effects models. The results are presented in Table 2.1. Model 1 and 2 include only the PDS-selected control variables. Model 3 and 4 include all 38 pre-PDS control variables. Province fixed-effects are added to all four models, while year fixed-effects are added to both Model 2 and 4. Two-way fixed-effects models are equivalent to the difference-in-difference (DID) design that can partial out time-invariant (such as being coastal or a municipality) and province-invariant confounding factors (Angrist and Pischke 2008). Such equivalence holds as long as the units cannot go in and out of the treatment condition at different time points, which is the case of my data structure (Imai and Kim 2019). The parallel trend assumption needed for a valid DID design is also met (see the discussions in the Appendix A). The empirical test presented here is conservative (i.e., more difficult to find statistically significant effect of the CIETAC) because

the standard errors are clustered at the province level. Hence, if we could still find statistically significant effect of CIETAC in these conservative tests, we can confidently conclude that CIETAC sub-commissions do attract FDI inflows.

As the results in Table 2.1 show, the existence of CIETAC sub-commissions is positively associated with the level of FDI inflows. The coefficients on CIETAC are statistically significant at or very close to 90% confidence level. According to Model 2 in which both province and year fixed-effects are included with the PDS-selected controls, establishing CIETAC sub-commissions can increase FDI inflows by 53%. The effect is substantially larger than the PDS prediction. There is relatively strong evidence that the percentage of investment in state-owned fixed assets relative to total fixed asset investment has a positive effect on FDI inflows. Fixed asset investment by state-owned enterprises can be used to provide better infrastructure, which helps attract more foreign capital. Simply put, the positive effect of CIETAC is robust to fixed-effects specifications.

Finally, I use the method proposed by Oster (2019) to evaluate the robustness of the above findings to omitted variable bias. The intuition is that sizeable increase in the model fit (i.e., the R^2) caused by the inclusion of relevant controls, coupled with coefficient stability, implies it is unlikely that unobservable omitted variables spuriously drive the estimation results. Using the information contained in the change in coefficient and the change in model fit when moving from non-controlled to controlled regression, based on Model 1 (which is the most parsimonious among the four fixed-effects models), I find that selection on unobservables would have needed to be as powerful as selection on observables (i.e., the degree of selection δ equals 0.99) to zero-out the estimated treatment effects. Moreover, under the assumption that $\delta = 1$ and the R-squared from a hypothetical regression of log FDI on both the observables and unobservables is 0.9, the bias-adjusted treatment effect is 0.26, which is correctly signed and substantially large.[26] Therefore, the positive effect of CIETAC sub-commissions on FDI inflows is robust to Oster's tests. Omitted

[26]The bias-adjusted estimate is above 0 for all R-squared from the hypothetical regression between 0.9 and 0.99, which is a realistic assumption according to Oster (2019).

variable bias, even if it exists, would have been limited and inconsequential.

Table 2.1: The Effect of CIETAC, Fixed-effects Models

	(1)	(2)	(3)	(4)
CIETAC	0.5693**	0.5310**	0.3378	0.4060*
	(0.2408)	(0.2372)	(0.2024)	(0.2111)
LOG FDI, LAG 1	0.6333***	0.6149***	0.5990***	0.5929***
	(0.0701)	(0.0839)	(0.0693)	(0.0822)
PERCENTAGE OF TRADE IN GDP	0.0235	0.0664	0.2195	-0.0690
	(0.1175)	(0.0807)	(0.1608)	(0.1071)
PERCENTAGE OF COLLEGE AND UNIVERSITY STUDENTS	8.0943	-12.2652*	-5.0231	-4.6764
	(6.0785)	(6.6203)	(13.1642)	(9.6536)
PERCENTAGE OF INVESTMENT IN STATE-OWNED FIXED ASSETS	1.9008***	1.1275*	0.8460**	0.6353
	(0.5126)	(0.5573)	(0.3182)	(0.4774)
PROPORTION OF TERTIARY INDUSTRY IN GDP	-0.0110	-0.0029	-0.0233*	-0.0014
	(0.0069)	(0.0090)	(0.0132)	(0.0118)
SHARE OF EMPLOYMENT OF SECONDARY INDUSTRY	0.0161*	0.0045	-0.0069	-0.0212
	(0.0088)	(0.0078)	(0.0140)	(0.0132)
POPULATION GROWTH RATE	-0.0050	-0.0156	-0.0013	-0.0334
	(0.0130)	(0.0170)	(0.0206)	(0.0245)
NUMBER OF WORK-RELATED CRIMES INVESTIGATED	-0.0028	-0.0002	-0.0021	0.0012
	(0.0024)	(0.0020)	(0.0026)	(0.0030)
CONSTANT	3.2053***	3.8326***	4.7540***	0.2836
	(0.4501)	(0.6031)	(1.3245)	(1.0972)
Full controls	No	No	Yes	Yes
Province FE	Yes	Yes	Yes	Yes
Year FE	No	Yes	No	Yes
N	543	543	406	406

The table displays coefficients and standard errors clustered at province-level (in parentheses). Two-tail tests.
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

In sum, the existence of CIETAC sub-commissions is positively associated with FDI inflows. The effect is robust to the PDS and conventional statistical methods. Anecdotal evidence also suggests that CIETAC sub-commissions are effective. For example, FDI inflows to Tianjin increased by 2.14 billion USD (a 29% increase compared to 2007) in 2008 when the Tianjin sub-commission was established despite the hit of the 2008 financial crisis. Therefore, the hypothesis that domestic arbitration institutions can lead to an increase in FDI is supported by sound empirical evidence.

2.6 Conclusion and Further Discussion

This paper examines the effect of domestic arbitral institutions on FDI inflows. Focusing on the within-country variation of China, I find that the establishment of CIETAC sub-commissions can indeed attract FDI. Domestic arbitral institutions are useful because they can effectively address foreign investors' concern for contractual hazards—which are magnified with presences of political hazards. More specifically, unlike domestic courts that are dependent on local governments which tend to protect local firms, CIETAC treats foreign investors fairly and professionally when MNCs are involved in contractual disputes with their domestic business partners. CIETAC sub-commissions have the incentive to improve the quality of arbitration because they are competing with other similar forums in the market of arbitration services. But this is not the only reason why they can attract FDI to a non-democratic country where both political risks and contractual hazards are present and mutually strengthening. Most importantly, the establishment of CIETAC sub-commissions can serve as a credible signal to foreign investors that the local government is not going to intervene in the dispute resolution processes between local and foreign firms. The signals are credible because of the ex ante sunk-cost mechanisms and the ex post hand-tying effects associated with the establishment of CIETAC sub-commissions. Therefore, CIETAC can help local governments to attract more FDI even if a fully independent judiciary is absent.

The findings of this paper imply that the Chinese model of economic development—if such a model really exists—is not so exceptional as some people believe. The rapid growth of China in the past four decades is not simply a result of extractive policies (Acemoglu and Robinson 2012). The establishment of CIETAC is a manifestation of the accumulation of fundamental capabilities in the form of "first-best" institutions that can effectively protect private property rights (Rodrik 2014). The Chinese experiences may have demonstrated that crucial governance tasks such as rule of law and strong property rights can be provided by institutions other than domestic public courts (Hale 2015, 302). Still, it remains to be empirically explored whether "a relatively high quality

institution for foreign investment and relatively corrupt, low quality institution for domestic dispute resolution (Ginsburg 2005)" are compatible in the long run (Massoud 2014).

3. BUNDLING INSTITUTIONS

3.1 Introduction

How do institutions influence the location of foreign direct investment (FDI)? Answering this question is meaningful as foreign capital has been a major driver of economic growth in the developing world. Existing works point to both domestic and international institutions that can credibly constrain the behavior of the host government and protect the property rights of foreign investors from government expropriation. In particular, the international political economy (IPE) literature has widely discussed the role of bilateral investment treaties (BITs) in attracting FDI. The effect of transnational commercial arbitration (TCA) institutions, however, remains understudied. These institutions have been playing an important role in cross-border transactions by providing impartial venues for foreign investors to resolve their disputes with domestic business partners. Despite its importance and long history, TCA institutions have received less attention in the literature compared to BITs which are designed to resolve investor-state disputes. This paper contributes to the understanding on TCA institutions' role in the politics of FDI by showing that a *combination* of BITs and TCA institutions leads to an increase in FDI inflows, especially for countries with weak rule of law. In addition, I argue that having only one of them is not sufficient to attract FDI—both sets of institutions are necessary for countries that lack independent courts to constrain the government and enforce private contracts. The findings of this paper address the puzzle of why some countries with dependent and corrupt courts receive a substantial amount of FDI.

Institutions influence foreign investors' choice of target country. Once the investment is made and becomes "sunk", the host government has the incentive to renege on existing agreements and behave opportunistically to expropriate the assets of foreign firms (Vemon 1971). Absent strong property rights protection, foreign investors would have been reluctant to invest, holding other factors constant. Existing research suggests that an independent judiciary can prevent states from

expropriating the assets of foreign investors, thus countries with strong and independent courts can receive a higher level of FDI inflows (Jensen et al. 2012; Staats and Biglaiser 2012). The literature also sheds light on the effect of BITs, arguing that signing BITs can credibly convey trustworthiness and tie the hands of the host government (Kerner 2009). Both independent courts and BITs constrain the executives by offering legal forums in which disputes between foreign investors and host governments can be resolved impartially. These institutions reduce the political risks for foreign investors.

However, political risks/hazards in the form of government expropriation or change of public policy are not the only concern affecting the decision making of foreign investors. In other words, disputes with the government are only one type of disputes foreign investors may face in the host country. Foreign investors are also likely—in fact, more likely—to engage in disputes with private firms of the host country. Indeed, the total number of cases registered at the International Centre for Settlement of Investment Disputes (ICSID)—a major forum to resolve investor-state disputes delegated by many BITs—is at most 53 per year.[1] In contrast, in year 2016, 966 new cases were filed at the International Court of Arbitration of the International Chamber of Commerce (ICC), mostly involving private parties.[2] The ICC is only one of the many TCA institutions active in the world. Other reputational organizations include the Singapore International Arbitration Centre, the American Arbitration Association (AAA), the Hong Kong International Arbitration Centre, and many others emerging in developing countries, such as the China International Economic and Trade Arbitration Commission (CIETAC). Currently, the ICC and the AAA receive over 600 transborder cases each year, while the CIETAC in China has heard over 400 transborder cases per year since 1993 (Hale 2015, p.42). Thus, both investor-state disputes and disputes with domestic firms can occur to foreign investors.

[1] Statistics for year 2017. See The ICSID Caseload-The Statistics (Issue 2008-1), available at: https://icsid.worldbank.org/en/Pages/resources/ICSID-Caseload-Statistics.aspx.

[2] In year 2016, 966 new cases were registered at the ICC, involving 3,099 parties from 137 countries and territories. Only 10% of the cases involved states or state-owned parties. See: https://iccwbo.org/media-wall/news-speeches/full-2016-icc-dispute-resolution-statistics-published-court-bulletin/.

Disputes between foreign firms and their domestic business partners often result from the failure of one party to fulfill contract obligations. Therefore, in addition to political hazards, contractual hazards are also a major concern for foreign investors when they are choosing investment destinations (Henisz 2000). Contractual hazards are low in host countries with strong and independent courts that can effectively enforce private contracts, but the opposite is true in countries without rule of law. While BITs can offer foreign investors investing in these countries an impartial venue to resolve their disputes with the host governments, BITs are unable to mitigate investment risks caused by "weak domestic corporate governance institutions that govern private party contract" (Danzman 2016, p.459).

In countries with high contractual hazards, TCA institutions provide foreign investors an alternative to domestic court that is expedient, affordable, and fair, to resolve disputes with private actors. In practice, when foreign and domestic firms sign a contract, they include an arbitration clause in it that specifies a TCA institution to arbitrate possible future disputes. If disputes do occur, the two parties can register their case in the designated TCA institution and delegate dispute resolution to its tribunal—usually formed by three arbitrators—that will issue an arbitration award that cannot be appealed. The award will be enforced by domestic courts.[3] TCA institutions have existed long before the first BIT was signed in 1959. "Private courts", such as the merchant guilds in Medieval Europe, were the first TCA institutions that addressed contractual disputes in cross-border transactions (Greif 1993; Greif, Milgrom and Weingast 1994; Greif 1994; Milgrom, North and Weingast 1990). Although most contemporary TCA institutions are still private, they are advocated by national governments as an alternative to domestic courts while maintaining their independence. The establishment of TCA institutions in the host country can facilitate contract enforcement and mitigate contractual hazards for foreign investors.

[3]In practice, these awards are very likely to be enforced, even in countries that lack mature rule of law. Many countries have revised their arbitration laws to strengthen the neutrality of TCA institutions and the enforceability of their awards (Greenberg, Kee and Weeramantry 2011, 33-40). For example, in 2015, only 0.06% of CIETAC awards were not enforced by the Chinese courts (CIETAC 2015 Report, pp. 17-19). Since the 1990s, the Supreme Court of China has issued several notifications to facilitate safeguard enforcement (Gu 2013).

In this paper, I bundle the two sets of international institutions, BITs and TCA institutions, and study their effects on FDI inflows. I argue that countries that have signed BITs *and* established TCA institutions are attractive investment destinations. Foreign investors may face political as well as contractual hazards in the host country that discourage them from investing. BITs can address foreign investors' political hazard concerns, while TCA institutions can address their contractual hazard concerns. Protected by BITs and TCA institutions, foreign investors can resolve both kinds of disputes—those with the host government and those with domestic firms—in impartial venues other than domestic courts. Therefore, a combination of BITs and TCA institutions can increase FDI inflows. Moreover, the effect of such combination should be particularly strong in countries where courts are corrupt and dependent because the two sets of international institutions provide better alternatives to domestic courts to resolve both kinds of disputes. Finally, since both political and contractual hazards can cause losses for foreign investors and BIT or TCA only addresses one type of hazard, the two institutional variables should have little effect on the likelihood of inward investment if only one of them is adopted by the host country. In other words, BITs have the largest effect on FDI inflows in countries with the lowest level of judicial independence and a TCA institution. Similarly, TCA institutions have the largest effect in countries with the lowest level of judicial independence and a BIT with the home country.

Empirically, I use firm-level cross-sectional data adopted from Beazer and Blake (2018) to test my theory. The unit of analysis is parent company-potential host country dyad, and the dependent variable is whether a parent company created a subsidiary in a potential host country during 2006-2011. I estimate three-way interaction models and find strong support for my hypotheses that the effects of BITs and TCA institutions on the likelihood of subsidiary incorporation are conditioned on whether the host country has the other set of institutions and the country's level of judicial independence. Specifically, I find that BITs have a stronger effect in host countries with a TCA institution and a lower level of rule of law. Similarly, I find that TCA institutions have a stronger effect in countries with a lower level of rule of law and a BIT with the home country. The results

suggest that a combination of BIT and TCA is necessary to attract FDI—only of them is not sufficient—for countries without strong and independent courts.

By showing that a combination of BIT *and* TCA helps countries with weak rule of law attract FDI inflows, this paper addresses three puzzles in the literature on the politics of FDI. First, it helps us understand why some countries with weak and corrupt courts can receive a substantial amount of FDI inflows, while others with similar quality of domestic governance fail to do so. Second, it clarifies the role of BITs. There is little consensus in the IPE literature about whether BITs have a positive effect on inward FDI. While some argue that BITs increase FDI inflows (Ginsburg 2005; Kerner 2009; Neumayer and Spess 2005; Salacuse and Sullivan 2005), others suggest the effect of BITs is quite weak (Rose-Ackerman and Tobin 2005; Yackee 2008), or only exists conditionally (Danzman 2016; Lee and Johnston 2016; Tobin and Rose-Ackerman 2011). The finding of this paper suggests that BIT itself is not sufficient to attract FDI inflows because it does not address the contractual hazard concern for foreign investors. But BIT is still useful in the sense that by combining BITs and TCA institutions, host countries can alleviate both political and contractual hazards for MNCs investing in risky countries. Finally, this paper is one of the pioneering works that systematically examine the role of TCA institutions in the politics of FDI. Contract enforcement institutions have been one of the major focuses in the institutional economics literature (Acemoglu and Johnson 2005; Greif 2006; Henisz 2000; North and Weingast 1989; Nunn 2007; Ranjan and Lee 2007). Built on existing effort, this paper highlights the importance of TCA institutions in cross-border economic transactions. The findings imply that what was fundamental to facilitate contract enforcement, protect private property rights, and promote economic growth in Medieval Europe remains fundamental in the modern economy.

3.2 Institutions and FDI

A large body of literature examines how institutions—domestic and international—influence the location of FDI. In general, there are two types of institutions that matter for the economy,

(1) property rights institutions that constrain the opportunistic behavior of the government, and (2) contracting institutions that enforce private contracts (Acemoglu and Johnson 2005). Property rights institutions such as BITs address the political hazards while contracting institutions like TCA institutions mitigate the contractual hazards for capital owners. Independent courts are both property rights and contracting institutions, as they can not only constrain the executives but also facilitate contract enforcement.

Two Functions of Independent Courts

Capital owners—at home and abroad—will have little incentive to invest if they expect their assets or revenue to be expropriated by the government (Acemoglu, Johnson and Robinson 2001; Olson 1993). Hence, countries with good institutions that can effectively protect foreign investors from the opportunistic behavior of the government become attractive FDI destinations (Jensen et al. 2012; Li and Resnick 2003; Li, Owen and Mitchell 2018). An independent judiciary is one of those formal institutions that can check the executives, thus protecting the assets of foreign investors. In addition to guarding against government transgression, judicial independence and adherence to the rule of law can facilitate private commercial transactions by enforcing contracts (La Porta et al. 1997; Staats and Biglaiser 2012). Independent judiciary is conducive to strong contract enforcement because it can impartially resolve disputes between private parties, punishing the contract violators and compensating the victims. While institutions that protect property rights from state expropriation have been the focus of comparative and international economy scholarship, the role of contracting institutions—which protect property rights from private expropriation—remains relatively underappreciated (Hale 2015).

Though the rule of law can provide strong property rights protection and contract enforcement, establishing an independent judiciary is not necessarily in the interests of the government. First, reforming the legal system is often a costly and time-consuming process, thus it cannot meet the urgent need of capital for many developing countries (Betz and Kerner 2016; Elkins, Guzman and

Simmons 2006; Simmons 2014). Moreover, an independent judiciary can be a threat to authoritarian governments' grip on power, as it allows citizens to challenge the government at a relatively low cost (Wang 2014). Hence, countries may have little incentive to reform their domestic courts if in need of foreign capital (Massoud 2014).

BITs and Political Hazards

Host countries that lack independent courts can rely on BITs as a commitment device. Existing work argues that BITs are useful to attract FDI because they can mitigate the political hazards of the host country by assuring potential investors that the host government is trustworthy (Kerner 2009). BITs increase the level of FDI inflows through two mechanisms (Ginsburg 2005; Kerner 2009). First, the ex ante costs paid by host governments to cope with domestic oppositions and ratify BITs can serve as a credible signal to foreign investors. The signaling effect of BITs increases FDI inflows from any states, including non-signatories. Second, the ex post costs to violate provisions in BITs can credibly tie the hands of the host government. The hand-tying effect of BITs stems from the clauses on dispute resolution mechanisms, which states that when disputes occur between the foreign investor and the host government, the disputes can be resolved in ICSID tribunals or other third-party legal forums instead of domestic courts in the host country (Allee and Peinhardt 2011; Danzman 2016). Unlike the signaling effect, the hand-tying effect of BITs only increases FDI flows between signatory states. Some authors suggest that BITs are only useful conditionally, depending on the type of investment, the powerfulness of the signatories, and the quality of domestic institutions (Danzman 2016; Lee and Johnston 2016; Tobin and Rose-Ackerman 2011). While this body of literature enhances our understanding on the effect of BITs, there is still an empirical discrepancy in the literature.

Most BITs offer foreign investors impartial and friendly forums to resolve investor-state disputes, such as the ICSID tribunals or the Permanent Court of Arbitration (Allee and Peinhardt 2010; Simmons 2014).[4] This is particularly important for foreign firms investing in developing

[4]Even BITs that include no ICSID clauses usually allow the usage of legal forums other than domestic courts of

countries where domestic courts are dependent and political risk of expropriation is higher (Büthe and Milner 2014; Rose-Ackerman and Tobin 2005). With BITs, developing countries could credibly commit that they are truly willing to protect the assets of foreign investors. Covered by BITs, foreign investors no longer need to file their cases in domestic courts when disputes with the host government occur. However, BITs do not fully substitute for independent courts. In particular, BITs do not enforce contracts signed between private parties. Below I will elaborate on the relevance of contract enforcement in the politics of FDI and how TCA institutions enforce contracts for cross-border economic transactions.

TCA Institutions and Contractual Hazards

Foreign investors face two kinds of uncertainties when they are investing in the target country. The first is political hazard—the risks that the host government will expropriate the assets of foreign investors after the investment is made and becomes sunk. The government can exploit multinational firms either directly by nationalization, or indirectly by adjusting tax rates and other regulatory policies (Pelc 2017). Signing BITs can address the political hazard concern for foreign investors, as their investment is protected by the treaty through which they can resort to ICSID tribunals instead of dependent and corrupt domestic courts of the host country to resolve investor-state disputes.

However, there is another kind of hazard that cannot be mitigated by BITs directly—the contractual hazards (Henisz 2000). Failure to fulfill contract obligations can give rise to disputes between foreign investors and their business partners in the host country. Contractual disputes are more likely to occur if the entry mode is a joint venture characterized by shared ownership and governance, as every joint-venture contract is necessarily incomplete (Henisz 2000). If contracts cannot be effectively enforced, domestic firms may have the incentives to violate contracts and expropriate the assets of foreign investors. Moreover, the presence of political hazards can magnify contractual hazards, as domestic firms can manipulate and collude with the corrupt political

the host country as investor-state dispute resolution mechanisms, such as the Permanent Court of Arbitration.

system—such as dependent courts—to expropriate the assets or revenue of their foreign partners. Therefore, when choosing investment destinations, foreign investors have to consider the possibility of contractual disputes with domestic firms and whether they can be settled fairly.

Foreign investors can choose to resolve their contractual disputes with domestic firms through domestic courts, but they may receive unfair treatment if the court is dependent on the executives who have the incentive to protect local firms. For example, in countries like China where the rule of law is not yet fully established, local courts are fiscally dependent on the local government, and the judges are appointed by the government as well. Well-connected with local officials who can influence the litigation process, local firms are likely to receive favorable rulings in domestic courts. Expecting the local biasedness of domestic courts in countries without judicial independence, multinational companies should have been reluctant to invest in these risky countries.

However, we still observe countries with dependent courts and weak rule of law attract a substantial amount of FDI (Beazer and Blake 2018). This can not be solely explained by signing BITs, as BITs do not directly address disputes between foreign and domestic firms. One understudied reason is that foreign investors can rely on TCA institutions to resolve contractual disputes with their domestic business partners in some countries. TCA institutions in different parts of the world provide arbitration services for firms and individuals to resolve contractual disputes and adopt a similar set of arbitration rules. They share a number of common advantages over domestic courts. First and foremost, TCA institutions are in principle fiscally and administratively independent from domestic courts and governments, thus governmental intervention in the proceedings is less of a concern for foreign investors (Greenberg, Kee and Weeramantry 2011; Inoue 2006). Neutrality is regarded as the most important advantage of TCA institutions relative to formal litigation by arbitration users (Bühring-Uhle 1996, pp. 127-156). Second, because of its simplicity, informality, and expedition, arbitration is less time-consuming. Third, TCA institutions are more internationalized and professionalized.[5] This greatly reduces language and cultural barriers for foreign disputants.

[5]Several features of the CIETAC in China can support this point. First, in CIETAC tribunals the parties themselves

In sum, these advantages of TCA institutions over domestic courts lead to "a relatively high quality institution for foreign investment and relatively corrupt, low quality institution for domestic dispute resolution" in some hazardous countries (Ginsburg 2005, pp.120-121).[6]

Why do some countries that lack the rule of law have the incentive to establish TCA institutions that operate independently? Hale (2015) attributes the evolution of TCA institutions to the interaction among firms' market power, lawyers' legal networks, and politics. When it comes to the establishment of basic institutional architectures in the early stages of TCA institutions, market power and politics have stronger impacts. Gelderblom (2015) argues that spatial competition for trade and capital among commercial centers in the Low Countries around the 16th-17th century encouraged them to establish generalized TCA institutions and standardize arbitration rules to facilitate contract enforcement. He emphasizes that these private order institutions worked only because the governments, far from being politically inclusive at that time, supported them. In other words, the independence of TCA institutions does not require political representation; the constraints imposed by TCA institutions were only economic but sufficiently credible (Gelderblom 2015, pp. 199-200). Like the diffusion of other international institutions (Elkins, Guzman and Simmons 2006; Simmons 2000; Simmons, Dobbin and Garrett 2006), peer competition for trade and investment gives states—including authoritarian states—strong economic incentives to adopt independent TCA institutions as a commitment device.

Bundling Institutions

In this paper, I argue that if a host country has signed a BIT with a home country while has established TCA institutions, the host country can be an attractive investment destination for MNCs from the home country, as both disputes with the host government and those with domestic pri-

can decide on the language of arbitration. On the other hand, courts in China require that the lawsuit should be conducted in Chinese. Second, in contrast to domestic courts in civil law countries, CIETAC arbitration adopts the adversarial approach that is a standard practice in common law countries. Third, the CIETAC hires foreign arbitrators.

[6]Even two domestic firms may prefer to resolve their disputes in TCA institutions instead of domestic courts. For example, out of the 2181 cases submitted to the CIETAC in 2016, 483 are foreign-related (including parties from Hong Kong). In other words, the remaining 1500 or so disputes involve no foreign parties. See CIETAC 2016 Report, pp.14-15.

vate firms can be resolved impartially through third-party arbitration. While BITs can effectively address the political hazard concern, TCA institutions can effectively mitigate the contractual hazards for foreign investors. Simply put, a combination of BITs and TCA institutions should have a positive effect on FDI inflows. Moreover, I expect the effect of such a combination should be stronger in countries that lack independent courts to constrain the host government and enforce contracts. Rule of law helps attract FDI because of stronger property rights protection and contract enforcement (Staats and Biglaiser 2012). A combination of BITs and TCA institutions can assume both functions of independent courts, thus substituting for the effect of the latter (Clark, Gilligan and Golder 2006). Empirically, we should observe that the individual effect of BITs and TCA institutions decreases in the level of rule of law when the other set of institutions is present. Finally, since both political and contractual hazards can result in losses for MNCs, the two sets of international institutions are both needed to assure foreign investors investing in risky countries. In other words, regardless of the level of judicial independence, neither BITs nor TCA institutions have an independent effect on inward FDI if the other is absent. Empirically, we should observe that the individual effect of BITs and TCA institutions is negligible when the other set of institutions is absent. This theory echoes the insight from the economic growth literature that property rights institutions limiting the government and contracting institutions regulating private actors are both essential for economic growth (Ogilvie and Carus 2014).

The following testable hypotheses can be derived from the theory:

Hypothesis 1: Given a TCA institution is present, the effect of BIT on inward FDI is positive and decreases in the level of judicial independence. Absent a TCA institution, BIT has no effect on inward FDI.

Hypothesis 2: Given a BIT is present, the effect of TCA institution on inward FDI is positive and decreases in the level of judicial independence. Absent BIT, TCA institution has no effect on inward FDI.

3.3 Empirical Analysis

I test the hypotheses using firm-level data on foreign subsidiary incorporations by multinational companies. The dataset is adopted from Beazer and Blake (2018). The dependent variable, subsidiary incorporation, takes the value of 1 if a foreign subsidiary is incorporated in the potential host country between 2006 and 2011, and 0 otherwise.[7] Hence, the dataset is cross-sectional, and the unit of analysis is parent company-potential host country dyad (e.g., Amazon-China). The baseline sample consists of 3,871 parent firms and 10,409 instances of incorporation in 113 host countries. The authors collect the data from the Orbis.

Since the outcome variable is binary, I estimate logit models. Formally, the models can be expressed as:

$$logit(p_{ijk}) = \beta_1 BIT_{ij} + \beta_2 TCA_j + \beta_3 Judicial\ Independence_j +$$
$$\beta_4 BIT_{ij} * Judicial\ Independence_j + \beta_5 TCA_j * Judicial\ Independence_j +$$
$$+\beta_6 BIT_{ij} * TCA_j + \beta_7 BIT_{ij} * TCA_j * Judicial\ Independence_j + \gamma' \mathbf{Z} + \varepsilon_{ij}$$

p_{ijk} is the probability of subsidiary incorporation by parent company k from home country i in potential host country j. The vector $\mathbf{Z}$ stands for control variables. Following Beazer and Blake (2018), all independent variables are measured in year 2005, one year before the sample period begins.[8] I estimate three-way interaction models to examine the individual and interactive effects of BIT and TCA. To test my theory that the two sets of institutions are effective only if combined and stronger in countries with weak rule of law, the coefficients on BIT and TCA are less informative compared to their marginal effects conditioned on each other and the level of judicial independence (Brambor, Clark and Golder 2006).

BIT_{ij} takes the value of 1 if there is a BIT in force between the home country of the parent

[7] Existing subsidiaries do not count.

[8] There is no change for the TCA variable between 2005 and 2011. In the same period, less than 3% of the country-dyads see a change in the BIT variable.

company and the potential host country, and 0 otherwise. The data on BITs are collected from the UNCTAD Investment Policy Hub.[9] TCA_j takes the value of 1 if in the potential host country there is a *leading* arbitration institution, and 0 otherwise. The list of leading TCA institutions is retrieved from the website of "International Arbitration Information" (IAI) created by an international arbitration lawyer.[10] There were 18 leading TCA institutions located in 18 different countries by 2005. The IAI website was created in 2012 to make "information about international arbitration more readily available for businesses, lawyers, in-house counsel, government officials, students and academics alike." According to the website, there are two types of arbitral institutions, (1) the leading arbitration institutions and (2) the regional, specialist and lesser-known generalist arbitration centers. The latter group handles specialized subject matters or infra-regional disputes. A large proportion of countries have TCA institutions of this type.[11] I do not consider them *leading* TCA institutions (thus countries with TCA institutions in the group (2) but not (1) take the value of 0 for the TCA variable in the baseline analysis) because many of them do not even possess a website. Lack of publicly available information is an indication that these institutions are less reputational than the leading ones, thus are less influential in attracting FDI. While the distinction between leading and non-leading institutions are somewhat artificial, using the standard accepted by legal practitioners can better proxy for the actual usage of TCA institutions. In the robustness check section below, I discuss the effect of the regional, specialist, and lesser-known generalist TCA institutions, which I find is similar to that of the leading ones.

To measure another key independent variable, *level of judicial independence*, I use the latent judicial independence (LJI) scores from Linzer and Staton (2015), which cover 200 countries for 1948-2012. The LJI scores are continuous and bounded between 0 and 1. A larger score is an indication of a higher level of judicial independence. The measure is estimated from theoretically-

[9] See: https://investmentpolicy.unctad.org/international-investment-agreements.

[10] See: https://www.international-arbitration-attorney.com/arbitral-institutions-and-arbitration-courts/. The full list of leading TCA institutions with their location and founding year is reported in the Appendix B.

[11] Countries and territories that have established regional and specialized arbitral institutions are listed in the Appendix B.

relevant observable manifestations and captures de facto judicial independence.

I control for a number of potentially confounding factors. First, following the practice in the FDI literature, I control for several economic features of the home and host country that may affect subsidiary incorporation. I use *log GDP* to proxy for the market size and *GDP per capita* to proxy for the development level of the host country.[12] To account for the level of external dependence of the host country, I include *net FDI inflows-to-GDP* as well as *trade-to-GDP ratios*. *Fuel exports* as a percentage of GDP are also added to the right-hand side of the equation to partial out the effect of energy exporting countries (Beazer and Blake 2018). Since parent companies may create subsidiaries for the sake of tax avoidance, a dummy variable *tax haven* is generated that takes the value of 1 if the host country is a tax haven, and 0 otherwise. Since signing BITs may attract FDI globally (Kerner 2009), I include the *total number of BITs* in force ratified by the host country as a control variable. Finally, I include *GDP per capita* and *GDP growth rate of the home country*, as the economy of the home country may affect parent companies' internationalization strategy as well.

Second, I use several political indicators to capture the quality of domestic governance in the host country that may matter for both FDI inflows and the adoption of international institutions. I include the host country's *polity score* to account for the effect of regime type on FDI inflows (Marshall and Jaggers 2006). I also add five of the six World Bank's Worldwide Governance Indicators except for the measure for rule of law. The five indicators are *control of corruption, government effectiveness, political stability and absence of violence, regulatory quality*, and *voice and accountability*. They are composite governance indicators generated from over 30 underlying data sources.

Additionally, I control for a number of dyadic-level factors that may be correlated with both the key independent variables and subsidiary incorporation. These variables include *logged bilateral trade*, *colonial ties* (Hensel 2018), *military alliance* (Leeds et al. 2002), *common official*

[12] Both are measured at constant international USD.

language, *physical distance*, and *difference in the level of judicial independence between the home and host country* (Beazer and Blake 2018). Since legal systems may affect contract enforcement in international transactions (McLaughlin Mitchell and Powell 2009; Powell and Rickard 2010), I include two dummy variables, *both common law* and *both civil law*, in the right-hand side of the regression model. Specifically, the variable *both common law* is coded as 1 if both the home and host countries have an English legal origin, and 0 otherwise. Similarly, if countries from the same dyad share the French legal origin, the variable *both civil law* is coded as 1. Summary statistics of the variables are presented in Table 3.1.

The baseline estimation results are presented in Table 3.2.[13] In Column 1, I include the economic, political, and dyadic control variables, but not the interaction terms. In Column 2-4, I estimate three-way interaction models. To account for the influence of the industry to which the parent company belongs, industry fixed-effects are added to Column 3 and 4. In Column 3, I use the NAICS 2-digit industry code (24 categories) to denote the fixed-effects, while I use the 3-digit code in Column 4 (86 categories). The standard errors in all four models are clustered at the parent company level to address the concern that observations of the same parent company are related to each other.

In models with interaction terms, the coefficients are less informative compared to the marginal effects of the independent variable depending on the moderating variable(s) (Brambor, Clark and Golder 2006). I calculate the marginal effects of BIT and TCA at different levels of judicial independence. The average marginal effects (AMEs) of BIT and TCA are reported in Figure 3.1. The left graph shows the AMEs of BIT at different levels of judicial independence when TCA is present as well as when TCA is absent. If the host country has not established a TCA institution, the AMEs of BIT on the probability of subsidiary incorporation are substantively negligible, though statistically distinguishable from 0 at 95% confidence level for low LJI scores. Once the host country establishes a TCA institution, the AMEs of BIT become quite substantial. As expected,

[13]The estimation results for the control variables are reported in Appendix B.

Table 3.1: Summary Statistics of Essay Two

	count	mean	sd	min	max
Subsidiary incorporation	437424	0.024	0.152	0.000	1.000
BIT	433315	0.410	0.492	0.000	1.000
Leading TCA	437424	0.336	0.472	0.000	1.000
LJI score	425811	0.549	0.280	0.018	0.988
Rule of Law	433553	0.134	1.012	-1.632	1.963
Log GDP of host country	414198	25.401	1.771	20.940	30.162
GDP per capita of host country	414198	14.704	15.655	0.277	69.512
FDI-to-GDP ratio	414198	6.399	17.178	-4.258	172.716
Trade-to-GDP ratio	414198	87.680	52.000	26.527	429.949
Fuel exports as % of GDP	382339	6.916	12.139	0.000	55.362
Tax Haven	437424	0.053	0.224	0.000	1.000
Total BITs	433553	30.589	25.773	0.000	117.000
GDP per capita of home country	434486	33.507	9.906	1.017	69.512
GDP growth of home country	434486	1.987	1.408	-6.272	10.647
Polity score	398714	5.330	5.805	-10.000	10.000
Control of corruption	433553	0.150	1.054	-1.418	2.325
Government effectiveness	433553	0.195	1.004	-1.572	2.129
Political stability	429682	-0.052	0.935	-2.133	1.596
Regulatory quality	433553	0.214	0.929	-1.684	1.789
Voice and accountability	433553	0.155	0.940	-1.930	1.740
Log bilateral trade	408262	6.451	2.817	-9.115	13.097
Colonial tie	417097	0.050	0.218	0.000	1.000
ATOP ally	437424	0.059	0.235	0.000	1.000
Common language	417097	0.112	0.315	0.000	1.000
Distance	417097	65.739	41.921	0.096	199.512
Difference in LJI score	425591	0.384	0.261	0.000	0.970
Both common law	424821	0.044	0.205	0.000	1.000
Both civil law	424821	0.392	0.488	0.000	1.000
Log firm age	430644	3.312	0.948	0.000	5.897
Log firm assets	408270	13.875	2.115	4.025	20.181
Log No. of host countries	437424	0.678	0.721	0.000	3.714
Economic complexity index	379359	0.181	1.045	-2.296	2.596
Total factor productivity	344520	0.687	0.259	0.182	1.408
Domestic credit to private sector	414198	53.348	47.907	1.201	241.883
No. of listed companies	325165	24.117	34.475	0.155	195.911
Secondary TCA	425811	0.718	0.450	0.000	1.000

the effect of BIT—when TCA is present—is stronger for countries with a lower LJI score, and diminishes as the LJI score increases.

The right graph presents the AMEs of TCA institutions. Absent BIT in force, the AMEs of TCA are statistically indistinguishable from 0 across the full range of LJI scores. When combined with BIT, however, TCA institutions become effective to attract investment from a parent company. Similar to BIT, the AMEs of TCA—when BIT is present—decrease as the level of judicial independence increases. From Figure 3.1, we can conclude that, first, a combination of BIT and TCA makes the host country an attractive FDI destination, while a separation of the two sets of international institutions does not have a similar effect. Though the left graph implies BIT itself is useful even when TCA is absent, the effect is substantially insignificant and, as is suggested in the following analysis, not robust to the inclusion of more control variables. Second, the effects of BIT and TCA, given the other is also present, decrease in the level of judicial independence. For countries that have completely dependent courts, embracing BIT/TCA when TCA/BIT is present leads to an approximately 7 percentage point increase in the probability of subsidiary creation. Therefore, a combination of BIT and TCA can indeed substitute for independent courts in terms of protecting foreign investors from government expropriation and enforcing private contracts. The AMEs of BIT and TCA calculated based on Column 3 and 4 reveal a similar pattern (see the Appendix B).

The coefficient on the LJI score is statistically insignificant at 95% level, indicating that judicial independence does not necessarily attract FDI. Moreover, the AME of the LJI score is negative and statistically significant at 99% confidence level when BIT and TCA both take the value of 1 (see Table 3.3). While the rule of law leads to solid property rights protection and strong contract enforcement, rigid legal rules may leave little flexibility for MNCs that can help them circle around government regulations and adapt quickly to the local market (Li 2005; Zhu 2017). From the perspective of business operations and profit maximization, foreign investors welcome such flexibility. However, when disputes with the host government or domestic actors closely connected

Table 3.2: The Effect of BIT and TCA on Subsidiary Creation

	(1)	(2)	(3)	(4)
BIT	.231***	.328**	.375***	.390***
	(.038)	(.135)	(.135)	(.136)
TCA	.189***	.265	.242	.254
	(.035)	(.181)	(.182)	(.182)
LJI score	-.262	-.167	-.095	-.118
	(.211)	(.242)	(.243)	(.242)
BIT*TCA		.979***	1.036***	1.022***
		(.227)	(.229)	(.229)
BIT*LJI score		-.404**	-.441**	-.461**
		(.189)	(.190)	(.190)
TCA*LJI score		-.400*	-.351*	-.362*
		(.209)	(.211)	(.212)
BIT*TCA*LJI score		-.691**	-.796***	-.786***
		(.299)	(.302)	(.303)
Industry FE	No	No	2-digit	3-digit
Baseline Controls	Yes	Yes	Yes	Yes
Number Obs.	356,959	356,959	353,340	353,340

The table displays coefficients and standard errors (in parentheses, clustered at parent company level). Two-tail tests.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

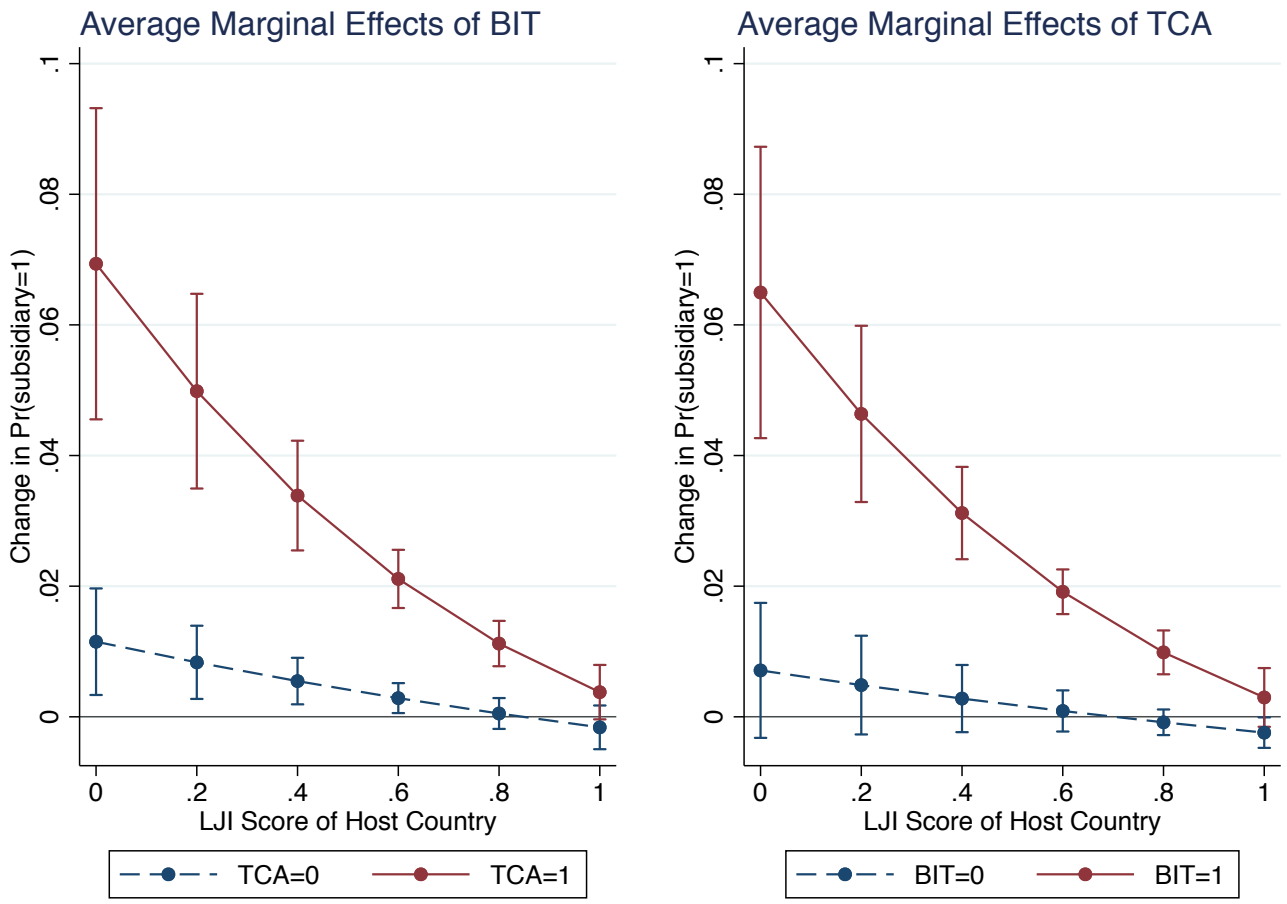


Figure 3.1: Average Marginal Effects of BIT and TCA (Column 4, Table 3.2)

The y-axis represents the change of the probability of foreign subsidiary creation in response to the discrete change of BIT/TCA from 0 to 1, with 95% confidence interval. The plot is based on coefficient estimates from Column 4 in Table 3.2. All other variables are left at their observed values.

to the government occur, they still prefer to resolve the disputes in an impartial venue in order to protect their assets. These incentives of MNCs explain why a high level of judicial independence does not necessarily make a host country an attractive investment destination, but a combination of BIT and TCA can.

Table 3.3: Average Marginal Effects of LJI Score

Value of BIT	Value of TCA	AME of LJI score	95% confidence interval
0	0	-.0028	[-.0141 .0085]
0	1	-.0111	[-.0231 .0010]
1	0	-.0140	[-.0253 -.0027]
1	1	-.0564	[-.0740 -.0388]

Note: The AMEs of LJI score at different values of BIT and TCA are calculated based on Column 4, Table 3.2. All other variables are left at their observed values.

Robustness Checks

I perform a number of robustness checks to evaluate the validity of my theory. The findings from the baseline models are robust to the inclusion of additional control variables, accounting for the effect of the 1958 New York Convention, accounting for BITs' signaling effect, using an alternative measure for judicial independence, excluding OECD host countries, and adding regional and less important TCA institutions.

(1) Additional control variables. Features of the parent company may influence its decision making on foreign subsidiary incorporation. Therefore, I include three firm-level variables, *logged firm age, logged firm assets*, and *logged number of host countries in which the firm operates*. These variables account for the parent company's experience, size, and international extensiveness, respectively. Similar to the baseline models, industry fixed-effects (denoted by NAICS 3-digit

Table 3.4: Robustness Checks of Essay Two

	(5)	(6)	(7)	(8)	(9)	(10)
BIT	.288*	-.009	-2.029	.501***	.074	-.240
	(.148)	(.152)	(1.353)	(.152)	(.054)	(.205)
TCA	.273	.683***	.276	-.131	.125	.922**
	(.199)	(.234)	(.198)	(.316)	(.133)	(.402)
BIT*TCA	.948***	1.219***	.934***	.689**	.612***	1.138***
	(.248)	(.271)	(.249)	(.271)	(.099)	(.400)
LJI score	-.407	-.049	-11.709***	-.982***		-2.952***
	(.248)	(.266)	(4.258)	(.302)		(.703)
BIT*LJI score	-.370*	-.072	9.287**	-.582***		.229
	(.208)	(.214)	(4.237)	(.209)		(.326)
TCA*LJI score	-.354	-.884***	-.354	-.099		.089
	(.230)	(.266)	(.229)	(.373)		(.732)
BIT*TCA*LJI score	-.587*	-.888**	-.567*	-.335		-2.091***
	(.327)	(.355)	(.328)	(.354)		(.718)
NYC			-1.836**			
			(.902)			
BIT*NYC			2.322*			
			(1.355)			
NYC*LJI score			11.292***			
			(4.238)			
BIT*NYC*LJI score			-9.668**			
			(4.230)			
Total BITs*TCA				.036***	.005**	
				(.005)	(.002)	
Total BITs*LJI score				.045***		
				(.006)		
Total BITs*TCA*LJI score				-.038***		
				(.006)		
Rule of Law					-.684***	
					(.099)	
BIT*Rule of Law					-.003	
					(.052)	
TCA*Rule of Law					-.382***	
					(.094)	
BIT*TCA*Rule of Law					-.288***	
					(.091)	
Total BITs*Rule of Law					-.001	
					(.001)	
TCA*Total BITs*Rule of Law					.001	
					(.002)	
Firm-level controls	Yes	Yes	Yes	Yes	Yes	Yes
More econ & finance controls	No	Yes	No	Yes	Yes	Yes
Number Obs.	324,245	230,467	324,245	230,467	230,467	155,751

The table displays coefficients and standard errors (in parentheses, clustered at parent company level). Industry (3-digit) fixed-effects and control variables are estimated but not reported. Two-tail tests.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

codes) are added and standard errors are clustered at the parent company level. The estimation result is reported in Column 5, Table 3.4.

The AMEs of BIT and TCA based on Column 5 are presented in Figure 3.2. We find that the AMEs of BIT and TCA are statistically insignificant (or barely significant) at 95% confidence level when the other set of institutions is absent, but become positive and statistically distinguishable from 0 when the other is present. Moreover, the AMEs of BIT and TCA, given the other set of institutions exists, are again decreasing in the level of judicial independence. This further confirms that a combination of BIT and TCA helps to attract MNCs, particularly for countries without independent courts.

I also include several variables to further account for the domestic economic and financial environment of the host country. First, I use the *economic complexity index* to capture the effect of the host country's economic structure (Hausmann et al. 2014). Second, *technological frontier*—proxied by a country's total factor productivity—is controlled for. The data on total factor productivity are collected from the Penn World Table (Feenstra, Inklaar and Timmer 2015). Third, I include *domestic credit to the private sector* (as a percentage of GDP) because underdeveloped domestic credit markets can be a result of weak property rights and affect MNC's decision on subsidiary creation. Finally, *the number of listed companies per 1,000,000 people*, which measures the size of the domestic financial market, is added to the right-hand side of the regression model. The data for the size of domestic credit and the number of listed companies are both obtained from the Global Financial Development Database (Cihák et al. 2012). The results are reported in Column 6, Table 3.4. The corresponding AMEs of BIT and TCA reveal a similar pattern to those presented in Figure 3.1 and 3.2 (see the Appendix B).

(2) The effect of the 1958 New York Convention. According to The Convention on the Recognition and Enforcement of Foreign Arbitral Awards, or the 1958 New York Convention (1958 NYC), domestic courts of signatory states and territories have the obligation to enforce arbitral awards—including awards issued by arbitration institution located in other states or territories.

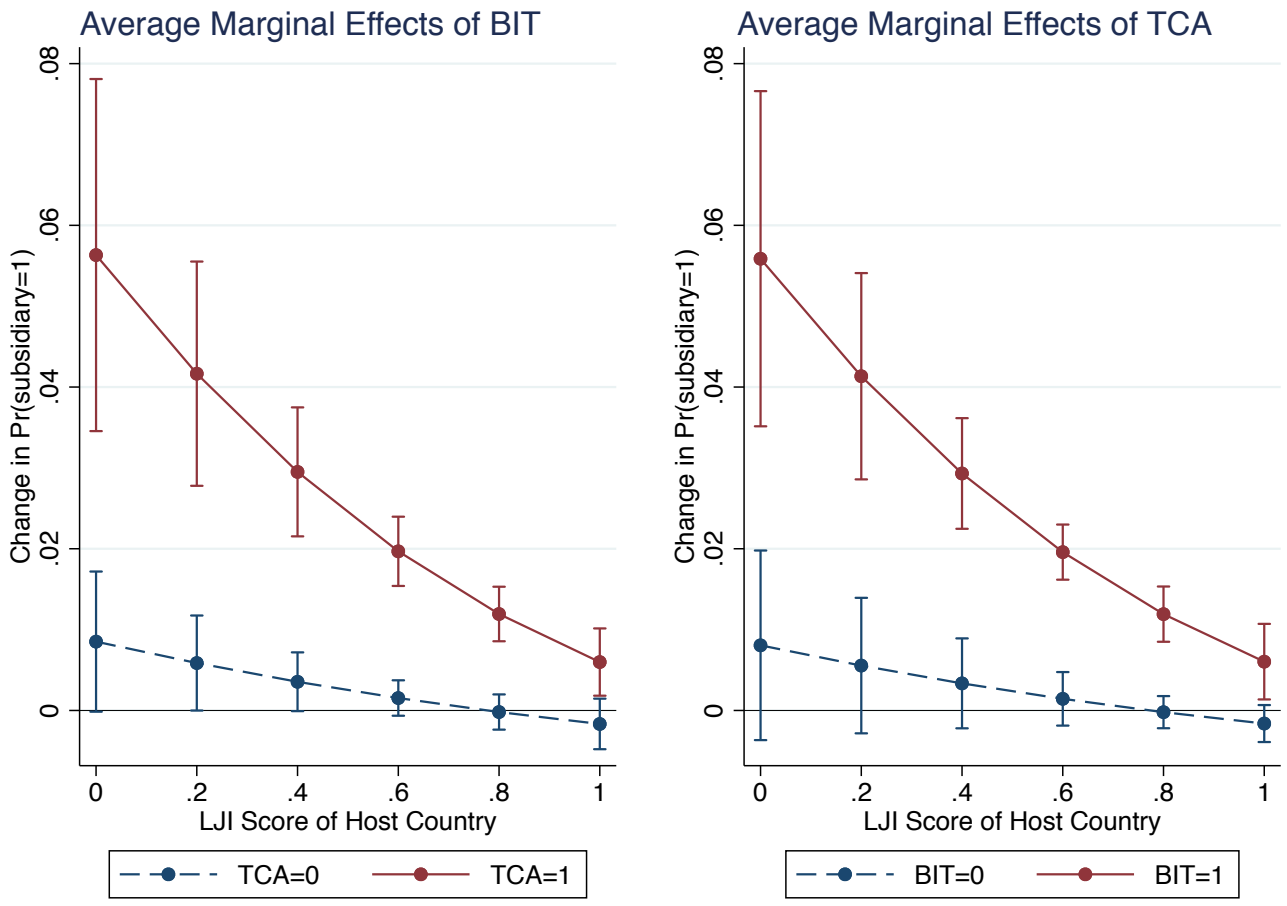


Figure 3.2: Average Marginal Effects of BIT and TCA (Column 5, Table 3.4)

The y-axis represents the change of the probability of foreign subsidiary creation in response to the discrete change of BIT/TCA from 0 to 1, with 95% confidence interval. The plot is based on coefficient estimates from Column 5 in Table 3.4. All other variables are left at their observed values.

Currently, there are 159 contracting states to the NYC. Most signatories declare either one or both of the following two reservations when joining the 1958 NYC: the "reciprocal" reservation and the "commercial" reservation. Upon the reciprocal reservation, the signatory will apply the Convention only to recognition and enforcement of awards made in the territory of another contracting state. Upon the commercial reservation, the signatory will apply the Convention only to differences arising out of legal relationships, whether contractual or not, which are considered as commercial under the laws of the signatory.[14] Hence, arbitration services provided by foreign TCA institutions may be available to MNCs investing in the 1958 NYC signatory states, but it is not certain that coverage by the 1958 NYC is equivalent to having TCA institutions in the territory of the host country. In particular, given the reservation clauses, we are not certain whether awards issued by foreign TCA institutions can be enforced in the host country. Indeed, in the case of China, awards issued by the CIETAC have a higher enforcement rate compared to foreign arbitral awards.[15]

I account for the effect of the NYC by including three-way interactions with the NYC, BIT, and the LJI score. The dummy variable *NYC* takes the value of 1 if the host country is a signatory state of the 1958 NYC, and 0 otherwise. The estimation result is reported in Column 7, Table 3.4.[16] First, we continue to see the same patterns for the AMEs of BIT and TCA as above. Second, regardless of the value of BIT, the AMEs of NYC on subsidiary incorporation are statistically indistinguishable from 0 if the host country has a LJI score lower than 0.3 (see the Appendix B). This result implies that TCA institutions built in the territory of a host country are different from accessibility to foreign TCA institutions granted by the NYC. Domestic TCA institutions can serve as a commitment device signaling that the government is not going to intervene in the dispute

[14]For a list of NYC contracting states and their declarations and reservations, see: http://www.newyorkconvention.org/countries.

[15]In 2015, four out of 44 foreign arbitral awards were not recognized or enforced by the Chinese courts, accounting for approximately 9% of all enforcement applications. In the same year, only 0.06% of awards issued by Chinese domestic arbitration institutions were refused to be enforced in China. See: CIETAC 2015 Report, pp. 17-19, available at: http://www.cietac.org/Uploads/201612/58678e45783ae.pdf

[16]The further economic and financial control variables are excluded from the estimation because they introduce a collinearity problem for the NYC variable and interaction terms with it.

resolution process when disputes occur between a foreign and a domestic firm. Such a commitment is credible because of the sunk-costs paid to establish domestic TCA institutions and the hand-tying effects of them (Yin 2018).[17] On the other hand, ratifying the NYC is not an as credible commitment because host governments can legally refuse to enforce foreign arbitral awards by invoking the reservation clauses. In particular, they can do so by interpreting the definition of "commercial" narrowly (Inoue 2006). We do not have comprehensive data on the enforcement rate of foreign arbitral awards in different host countries. But considering that many countries that have poor domestic courts and are unlikely to enforce foreign arbitral awards without reservation—such as North Korea and Sudan—are parties to the 1958 NYC, it is reasonable for foreign investors to question the effectiveness of the 1958 NYC as a commitment device when it is adopted by these countries.

(3) BITs' signaling effect. BITs could possibly increase FDI inflows through two different mechanisms: the signaling effect and the hand-tying effect. The hand-tying effect increases FDI inflows from the signatory, while the signaling effect increases FDI inflows from any states (Kerner 2009; Neumayer and Spess 2005). Kerner (2009) argues that signing BITs can attract FDI inflows from non-signatory states because of the sunk-costs paid to ratify BITs. The signaling effect should be stronger for countries that have ratified a larger number of BITs. To account for the signaling effect of BITs, I include three-way interactions with the total number of BITs, TCA, and LJI scores. The estimation result is reported in Column 8, Table 3.4. Again, the AMEs of BIT and TCA are positive when the other set of institutions is also present. Moreover, given the other institution is present, the AMEs of BIT and TCA are both decreasing in the host country's LJI scores (see the Appendix B). I also plot the graph of the AMEs of total BITs and find that for countries with

[17]Establishing TCA institutions is ex ante costly because TCA institutions necessarily increase the competition in the market of arbitration service and decrease the revenue or rents received by local courts. TCA institutions can also tie the hands of the government because of the kompetenz-kompetenz doctrine whereby a TCA institution has the competence to rule over its jurisdiction, thus to refute the jurisdiction of domestic courts when necessary. This doctrine is incorporated into domestic laws and supported by higher authorities such as the supreme court that has less incentive to protect local firms compared to local courts (Gu 2013; Greenberg, Kee and Weeramantry 2011).

LJI scores lower than 0.6 and without a TCA institution, the total number of BITs is negatively associated with the probability of foreign subsidiary incorporation. With TCA, however, the AMEs of total BITs become positive and slightly decreasing in the level of judicial independence (see Figure 3.3). In other words, similar to the hand-tying effect of BITs, in countries with weak rule of law, the signaling effect of BITs only exists in combination with TCA institutions. Note that the effect of total BITs is very small compared to the effect of a BIT signed between home and host country in the same dyad: signing one more BIT can at most increase the probability of subsidiary creation by 0.05 percentage point.

(4) Alternative measure for judicial independence. For robustness check, I replace the LJI score with the World Bank's rule of law indicator, which is one of the six Worldwide Governance Indicators and almost perfectly correlated with the LJI score. The estimation result is presented in Column 9, Table 3.4. Again, we see a similar pattern for the AMEs of BIT and TCA (see the Appendix B).

(5) Excluding OECD host countries. I estimate the model using a sample without OECD host countries. The estimation result is reported in Column 10, Table 3.4. The result suggests that the AMEs of BIT reveal a pattern very similar to those in the previous analysis. The AMEs of TCA also decrease in the LJI score, no matter whether a BIT exists between the home and host country or not. Besides, when BIT is present, the AMEs of TCA is positive and statistically distinguishable from 0 for countries with a LJI score lower than 0.8, though their confidence intervals overlap with those at BIT=0 (see the Appendix B). While not many non-OECD countries have established their own leading TCA institutions, those that have received over 30% of total FDI inflows to non-OECD countries in 2005.[18] Thus, the role of TCA institutions in developing countries should not be underestimated.

(6) Adding secondary TCA institutions. I create a dummy variable, *secondary TCA*, that is coded as 1 if the host country has established a regional, specialist and lesser-known generalist

[18]Calculated from the OECD Data, see: https://data.oecd.org/fdi/fdi-flows.htm.

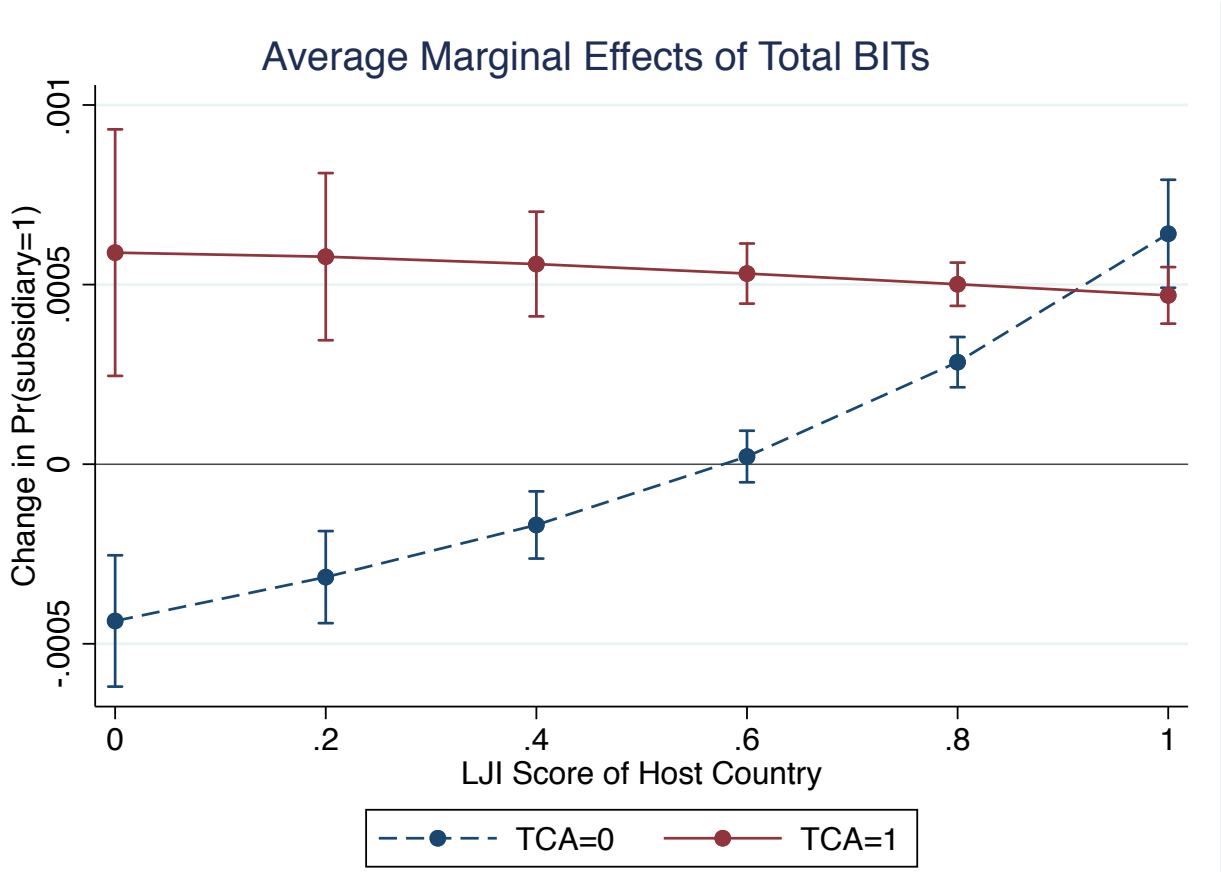


Figure 3.3: Average Marginal Effects of Total BITs (Column 8, Table 3)

The y-axis represents the change of the probability of foreign subsidiary creation in response to a unit change in the total number of BITs, with 95% confidence interval. The plot is based on coefficient estimates from Column 8 in Table 3. All other variables are left at their observed values.

arbitration center according to the IAI website. I also interact this variable with BIT and LJI score to see whether secondary TCA institutions have an effect on subsidiary incorporation similar to the leading ones. The estimation results are reported in Table 3.5. Column 11 includes no interaction terms. Column 12-14 include three-way interactions with BIT, leading TCA institution, and LJI score, as well as three-way interactions with BIT, secondary TCA institution, and LJI score. Column 15 incorporates the effect of the 1958 NYC. Similarly, we are interested in the AMEs of BIT and TCA across LJI scores. The AMEs of BIT and leading/secondary TCA calculated based on Column 12 are reported in Figure 3.4. The upper two graphs on the AMEs of BIT and leading TCA institutions reveal a pattern similar to the previous ones. There is also evidence that secondary TCA institutions behave like their leading counterparts. According to the bottom graphs of Figure 3.4, when BIT is present, the AMEs of secondary TCA institutions, like those of leading TCA institutions, are positive and decrease in the level of judicial independence. Moreover, when BIT is present, the marginal effects of leading and secondary TCA institutions are almost the same at a 0 LJI score—both are approximately 0.05. Since close to 100 countries have established a secondary TCA institution, my theory is not limited to the 18 countries that have a leading one. Instead, it concerns the impacts of TCA institutions and BIT in a much wider geographical scope.[19]

[19]In our sample with 113 host countries, 17 of them have a LJI score lower than 0.4 while have established a TCA institution—either leading or secondary—and ratified over 20 BITs. These countries include Algeria, China, Egypt, Jordan, Kazakhstan, Malaysia, Morocco, Pakistan, Russian, Serbia, Singapore, Tunisia, Ukraine, United Arab Emirates, Uzbekistan, Venezuela, Vietnam. Hence, the findings of this paper are not driven solely by China or countries from the same region.

Table 3.5: Including Secondary TCA Institutions

	(11)	(12)	(13)	(14)	(15)
LJI score	.178	.688*	.189	-1.240***	-8.847*
	(.210)	(.406)	(.428)	(.407)	(4.771)
BIT	.206***	-.293	-.651*	-.795**	-3.656**
	(.041)	(.333)	(.355)	(.346)	(1.439)
Leading TCA	.436***	.270	.298	.500**	.295
	(.042)	(.185)	(.201)	(.228)	(.200)
BIT*Leading TCA		.884***	.792***	1.068***	.781***
		(.235)	(.254)	(.273)	(.255)
BIT*LJI score		.688*	1.145**	2.012***	14.280***
		(.415)	(.450)	(.444)	(4.813)
Leading TCA*LJI score		-.217	-.193	-.456*	-.188
		(.217)	(.233)	(.261)	(.233)
BIT*Leading TCA*LJI score		-.442	-.209	-.583	-.192
		(.314)	(.339)	(.373)	(.340)
Secondary TCA	.663***	1.168***	1.072***	.310	1.023***
	(.062)	(.278)	(.286)	(.279)	(.286)
BIT*Secondary TCA		.763**	1.053***	.823**	1.100***
		(.337)	(.358)	(.378)	(.358)
Secondary TCA*LJI score		-.753**	-.528	1.197***	-.476
		(.328)	(.343)	(.331)	(.343)
BIT*Secondary TCA*LJI score		-1.320***	-1.737***	-2.203***	-1.786***
		(.416)	(.448)	(.462)	(.448)
NYC					-1.400
					(.941)
BIT*NYC					2.970**
					(1.383)
NYC*LJI score					8.985*
					(4.710)
BIT*NYC*LJI score					-13.104***
					(4.737)
Constant	-24.167***	-20.203***	-22.692***	-24.394***	-21.216***
	(.603)	(.651)	(.615)	(.686)	(1.151)
Firm-level controls	Yes	No	Yes	Yes	Yes
More econ & finance controls	Yes	No	No	Yes	No
Number Obs.	230,467	353,340	324,245	230,467	324,245

The table displays coefficients and standard errors (in parentheses, clustered at parent company level). Industry (3-digit) fixed-effects and control variables are estimated but not reported. Two-tail tests.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

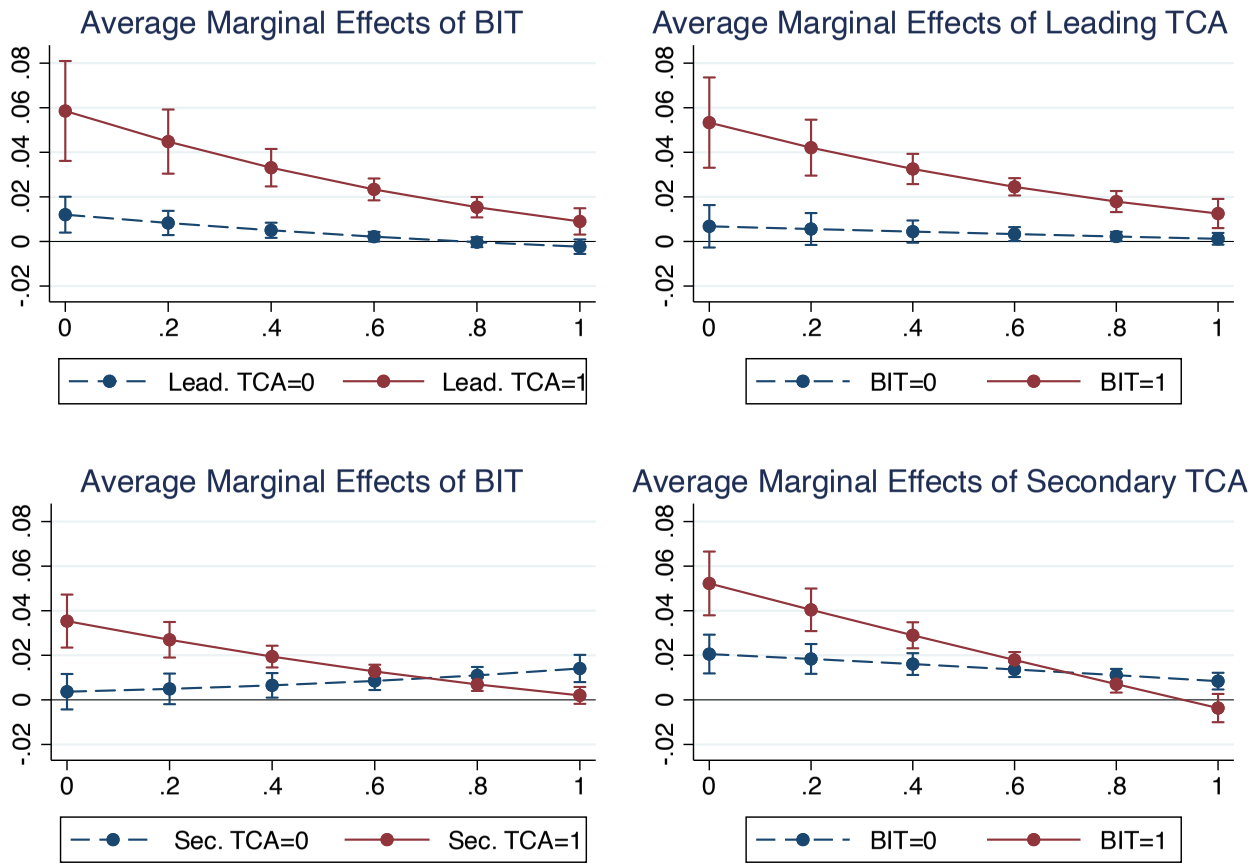


Figure 3.4: Average Marginal Effects of Total BITs (Column 12, Table 3.5)

The y-axis represents the change of the probability of foreign subsidiary creation in response to the discrete change of BIT/TCA from 0 to 1, with 95% confidence interval. The plot is based on coefficient estimates from Column 12 in Table 3.5. All other variables are left at their observed values.

3.4 Conclusion

In this paper, I study the institutional determinants for the location of FDI by bundling two sets of international institutions. I find that signing BITs (which mitigate political hazards) *and* establishing leading TCA institutions (which mitigate contractual hazards) can increase the probability of foreign subsidiary incorporation by MNCs. Moreover, a combination of BIT and TCA has a stronger effect in countries with a lower level of judicial independence. I test the hypotheses using a cross-sectional firm-level dataset. The empirical results support my theory. Specifically, the AMEs of BIT and TCA are substantially positive only when the other set of institutions is also present, and both decrease in the level of judicial independence. The results are robust to alternative explanations and measurements.

This paper contributes to the literature in the following three aspects. First, it provides a plausible explanation of why some countries with dependent and corrupt domestic courts and weak rule of law still attract a substantial amount of FDI. According to the findings of this paper, these countries become attractive FDI destinations because they adopt a combination of BITs *and* TCA institutions that can address both the political and contractual hazard concerns for foreign investors. Second, it adds to the growing literature on the effect of BITs. Existing works have been debating on whether BITs are useful to attract FDI and whether they can substitute for domestic governance, and the findings are mixed. The results of this paper suggest that BITs become useful when combined with TCA institutions. Finally, this paper identifies an important omitted variable in the politics of FDI, the contracting institutions. While this set of institutions has been playing an important role in resolving transborder contractual disputes between private actors, it remains relatively understudied compared to BITs as an institutional determinant for the location of FDI. This paper systematically examines the influence of TCA institutions on the location of FDI using a global sample.

Future research could study the effect of TCA institutions established in countries with de-

pendent courts on rule of law reform and political survival. The findings of this paper suggest that ratifying BITs and establishing TCA institutions can substitute for independent judiciaries in terms of providing solid property rights protection and strong contract enforcement for foreign investors. Would TCA institutions, combined with BITs, slow down the long-waiting reform in domestic courts? Would TCA institutions, combined with BITs, help authoritarian leaders stay in power (Arias, Hollyer and Rosendorff 2018; Massoud 2014; Mazumder 2016)? Answering these questions is not only of theoretical importance but is also policy-relevant.

4. THE EFFECTS OF INTERNATIONAL INSTITUTIONS ON CROSS-BORDER MERGERS and ACQUISITIONS

4.1 Introduction

Investing in a foreign market can be risky. To attract foreign capital, host governments try to assure that they will protect the assets of investors. After the investment is made and becomes sunk, however, host governments have the incentive to behave opportunistically and expropriate the assets of foreign firms (Vemon 1971). This time-inconsistency problem is more severe if the assets of foreign firms are less mobile. In addition to possible disputes with the host government, foreign investors may also have to settle disputes with domestic firms or individuals as a result of contract breach by either side. Hence, Henisz (2000) argues that two types of risks in the host country— political hazards and contractual hazards—both concern multinational corporations (MNCs)'s choice of investment destinations.

Institutions that mitigate the political and contractual hazards of the host country can assure foreign investors of their assets' safety. Independent courts are helpful to attract FDI because they can better protect property rights from government transgression and enforce private contracts between foreign and domestic firms (Staats and Biglaiser 2012). However, many countries with corrupt and dependent domestic courts still receive a substantial amount of FDI (Beazer and Blake 2018). To address this puzzle, international political economy (IPE) scholars examine the effect of international institutions as substitutes for good domestic governance (Ginsburg 2005). In particular, they look into how bilateral investment treaties (BITs), which are designed to resolve investor-state disputes and serve as a credible signal of the trustworthiness of the host government, increase FDI inflows (Allee and Peinhardt 2011; Kerner 2009; Neumayer and Spess 2005). The accumulated literature significantly enhances our understanding on the role of international institutions as sources of comparative advantage in international trade and investment.

However, existing work does not address all interesting questions on the connection between international institutions and cross-border economic transactions, in particular, FDI flows. First, previous research mostly focuses on how international institutions, such as bilateral investment treaties, protect investors from government expropriation. However, as is indicated by Henisz (2000), disputes with the host government are only one of the two types of disputes concerning foreign investors. Contractual disputes with domestic private firms can also occur and how they are addressed should also matter in MNCs' choice of investment destinations. Institutions that can effectively enforce private contracts become a comparative advantage in the sense that they have a positive effect on exports, especially in contract-intensive (i.e., complex) goods (Berkowitz, Moenius and Pistor 2006; Nunn 2007). But the effects of contracting institutions on FDI inflows remain understudied (Hale 2015).

Second, existing research does not distinguish the impacts of international institutions on different forms of FDI inflows. Multinational corporations (MNCs) invest in foreign markets using different entry modes. They can choose to establish joint ventures with domestic firms, set up a subsidiary (i.e., making greenfield investments) in the host country, or pursue the strategy of mergers and acquisitions (M&As). While investing in a foreign country can be risky in general, certain entry modes are more so. Specifically, compared to joint ventures and greenfield investments, M&As pose the greatest *political* risks to foreign investors (Lee, Biglaiser and Staats 2014). If this is true, international institutions addressing different types of hazards—political and contractual—should be weighted differently in the calculation of foreign investors who pursue the M&A strategy.

To fill these two gaps in existing literature, in this paper, I provide a systematic analysis of the linkage between international institutions and cross-border M&A investments. I argue that BITs—which mitigate political risks for foreign investors—have a positive effect on the number of cross-border M&A deals, while transnational commercial arbitration (TCA) institutions—which enforce private contracts between foreign and domestic firms, thus mitigate contractual hazards—

have a negligible effect on the *level* of M&A investments. Since TCA institutions make the choice of joint-ventures more attractive—thus increase total FDI inflows, they have a negative effect on the *share* of M&A investments relative to total FDI. To test my theory, I use the country-year dataset adapted and expanded from Betz and Pond (2019) in which the dependent variable is the count of M&A deals by U.S. firms in a host country. Besides, I also use an alternative dependent variable, which is the share of M&A investments in total FDI inflows. Based on the estimation results, I confirm that having a BIT in force with the U.S. is positively associated with M&A investments by U.S. firms, but the effect of having a TCA institution in the host country is different. The findings provide nuance for understanding the heterogeneity in the effects of international institutions on FDI.

This paper speaks to the literature on institutions as a source of comparative advantage in international trade and investment (Nunn and Trefler 2014). Specifically, it identities international institutions as one of the sources and reveals that they do not have a universal impact, as they address different concerns of capital owners. My paper is also related to the literature on the typology of institutions and the heterogeneity in the effects of institutions on economic transactions (Acemoglu and Johnson 2005). Some authors suggest that both "property rights institutions"—which protect citizens against expropriation by governments—and "contracting institutions" —which facilitate contract formation and contract enforcement between citizens—are both essential economic growth (Ogilvie 2011; Ogilvie and Carus 2014). Built on their arguments, the findings of this paper imply that one set of institutions can be more useful than the other, depending on whether the economic activities it concerns are more vulnerable to political risks or contractual hazards.

The paper proceeds as follows. In the next section, I provide a brief introduction to BIT and TCA institutions. I then explain why cross-border M&A investments are more vulnerable to political hazards than contractual hazards, thus respond positively to the so-called "property rights institutions" that protect investors from expropriation by host governments. The paper then proceeds

to research design, empirical results, and robustness checks. It concludes with further discussions and implications.

4.2 BIT and TCA

The first BIT was signed between West Germany and Pakistan in 1959. Currently, there are approximately 3000 BITs in force in the world (Betz and Kerner 2016). Signed between national governments, BITs provide dispute resolution mechanisms between foreign investors and host governments. In particular, with the coverage of BITs, investors can sue host governments not in domestic courts of the host country, which can be dependent, corrupt, or unprofessional. Instead, a lot of BITs allow foreign investors to settle their disputes with host governments in independent legal forums, such as the tribunals of the International Centre for Settlement of Investment Disputes (ICSID) or the Permanent Court of Arbitration (PCA). The awards issued by these tribunals are always complied by the host governments even if they lose the case, as inward FDI losses triggered by being sued in the ICSID are quite substantial (on average, $55 million reduction in annual FDI associated with one pending ICSID case), let alone not complying to the awards (Allee and Peinhardt 2011). Due to the potential ex post costs of treaty violation, some authors argue that ratifying BITs can effectively tie the hands of the government and credibly signal its trustworthiness to foreign investors (Ginsburg 2005; Kerner 2009; Neumayer and Spess 2005).

However, there is not yet a consensus on whether BITs can really increase FDI inflows. Some empirical results suggest that the effect of BITs is negligible or conditioned by many other factors. (Danzman 2016; Lee and Johnston 2016; Rose-Ackerman and Tobin 2005; Tobin and Rose-Ackerman 2011; Yackee 2008). The inconsistent findings on the BIT-FDI linkage result from the fact that existing literature fails to take into account the role of contracting institutions in the politics of FDI. In addition to investor-state disputes, disputes between MNCs and their domestic business partners may also occur. Political risks exemplified by government expropriation and contractual hazards caused by the breach of private contracts both concern foreign investors when they

are choosing investment destinations. While BITs may protect investors from the transgression of the government, they do not directly resolve contractual disputes between two private parties, thus cannot mitigate the concern of contractual hazards. To fully account for the effect of international institutions on FDI inflows, we should look into the role of both property rights institutions which constrain host governments as well as contracting institutions which facilitate contract formation and contract enforcement.

TCA institutions are one of the arrangements that resolve disputes between domestic and foreign private parties. Early TCA institutions emerged in Medieval Europe (Milgrom, North and Weingast 1990; Greif 1993). These so-called "private courts" generated information about the past behavior of the merchants and coordinated the sanction against dishonest ones. In other words, the contracts were enforced through reputation mechanisms. Generalized arbitration institutions available to all merchants regardless of their country of origin appeared in the Low Countries in early modern Europe. They adopted a similar set of arbitration rules and operated independently of governments. Interestingly, these generalized arbitration institutions were all respected by governments though they were not politically inclusive; spatial competition among commercial centers in the Low Countries incentivized these autocratic city-states to establish independent and affordable arbitration institutions in order to attract capital (Gelderblom 2015).

TCA institutions continue to play an important role in the contemporary world. In business practice, when a contract is signed between a foreign and a domestic party, it usually includes the so-called arbitration clause that designates a specific TCA institution as one of the dispute resolution mechanisms. When disputes do occur, an arbitration tribunal will be formed at the designated TCA institution, hear the case, and issue an arbitral award which is final and enforced by domestic courts of the host country. Usually, each party can nominate one arbitrator and co-nominate the third, or delegate the nomination to the designated TCA institutions, but the parties can also adopt a more flexible approach. As long as there is consensus between the parties, they themselves can decide on, for example, the number of arbitrators and the applicable arbitration

rules. Compared to formal litigation through domestic courts, TCA institutions are more flexible, thus can better cater to the need of the parties.

A key feature of TCA institutions is their neutrality. Governments do not intervene in their administrative, budgetary, or personnel affairs, even for those located in authoritarian countries (Inoue 2006). Many host countries also adopted a set of legal reforms to further strengthen the independence of TCA institutions. For example, following the UNCITRAL Model Law on International Commercial Arbitration,[1] a large proportion of countries incorporate the Doctrine of Kompetenz-Kompetenz into their arbitration laws, allowing an arbitration tribunal to rule over its jurisdiction; once an arbitration tribunal decides that it has jurisdiction over the dispute, domestic courts are prohibited to hear the case or refute the jurisdiction of the arbitration tribunal (Greenberg, Kee and Weeramantry 2011, 33-40). These arbitration-friendly clauses in domestic laws prevent host governments from intervening in the dispute resolution processes through manipulating corrupt and dependent courts.

Therefore, TCA institutions should address the contractual hazard concern for foreign investors by providing them a professional and independent forum to resolve contractual disputes with their business partners in the host country. However, these contracting institutions do not mitigate political risks, as they do not handle investor-state disputes resulting from direct expropriation or change of regulation policy by the host governments (Pelc 2017). Hence, economic activities that are vulnerable to political risks but not contractual hazards should expand if covered by BITs. Cross-border M&As are such a type of economic activities.

4.3 Political Risks, Contractual Hazards, and Cross-border M&As

MNCs invest in a foreign market through different entry modes. They can establish joint-ventures together with domestic firms, opt for greenfield investments, or pursue the strategy of M&As. These entry modes are associated with different levels and types of risks. In particular,

[1] United Nations Commission on International Trade Law, UNCITRAL Model Law on International Commercial Arbitration available at: https://www.uncitral.org/pdf/english/texts/arbitration/ml-arb/07-86998_Ebook.pdf.

joint-ventures are especially vulnerable to contractual hazards because every joint-venture contract is necessarily incomplete—it is impossible to specify contractual obligations for all possible future contingencies at the time of contract formation (Grossman and Hart 1986). Contractual hazards can arise from asset specificity, technological leakage, and free-riding on brand name and reputation (Henisz 2000). The returns to host country joint-venture partners of opportunistic behavior increase if mechanisms that can impartially judge which parties to a contract fail to fulfill contractual obligations are absent. On the other hand, joint ventures are more hedged against political risks, as host country joint-venture partners—which are sometimes the host government itself—can help MNCs better adapt to the local environment, particularly in countries with weak property rights protection and poor domestic governance. Shared equity stakes, rights, and losses incentivize domestic partners to make use of their connections with the host government to safeguard foreign investors from government expropriation (Oxley 1997, 1999).

Compared to joint-ventures and greenfield investments, M&A deals face greater political risks.[2] Built on Lee, Biglaiser and Staats (2014), I lay out the following two reasons. First, in the view of host governments, cross-border M&A investments do not enhance the productive capacity of the host country, but simply transfer ownership and control from domestic to foreign firms. In particular, M&As do not create as many new jobs as greenfield investments; M&As may even cause a loss of jobs. For example, M&A investors often displace local workers and employ personnel from the home country. For the job creation reason, greenfield investments are viewed more favorably than M&As by host governments, even though they are less connected to government officials compared to joint-ventures. Second, nationalists often perceive M&A investments as threats. Since the foreign acquirers are usually big firms, nationalists worry that these MNC giants may overwhelm the local economy or even undermine the national security through M&As. For example, China's takeover bid of the German engineering firm Leifeld collapsed because of national security con-

[2]For an exhaustive literature review on country-specific determinants of cross-border M&As, see Xie, Reddy and Liang (2017)

cerns among the German politicians.[3] Besides, hostile takeovers of domestic firms may provoke nationalist anger. Populist politicians have the incentive to respond to such nationalistic sentiments by bullying M&A investors and gain more political support. Simply put, host governments tend to under-appreciate the value of M&A investments and are more likely to behave opportunistically compared to FDI inflows by other entry modes. As a result, institutions that can effectively constrain host governments lead to a higher number of cross-border M&A investments. BITs are one of such property rights institutions that can mitigate the political risks of the host country. Therefore, I propose the following hypothesis to be tested in the empirical section:

H1: BITs have a positive effect on the level of cross-border M&A deals.

Though cross-border M&As are susceptible to government expropriation, they are less so to contractual hazards. Once the M&A deal takes effect, domestic firms are fully internalized to the governance structure of the acquirer. Asset specificity, technological leakage, and free-riding on brand name and reputation, which can cause contractual disputes between joint-venture partners, do not concern M&A investors as the problem of incomplete contracts no longer exists. On the other hand, improving contract enforcement by establishing contracting institutions should make other entry mode choices–particularly joint-ventures—more attractive than M&As, as joint-ventures are especially vulnerable to contractual hazards. Strong contract enforcement provided by TCA institutions allows MNCs to reap the benefits of joint-ventures—such as stronger connection with government officials—while decreases the risk of contractual disputes. Therefore, accessibility to the protection of TCA institutions should make joint-ventures a more attractive entry mode choice.

What will then be the impacts of TCA institutions on cross-border M&As? I argue that they should have a substantively negligible effect on the *level* of cross-border M&As but should decrease the *share* of it relative to total FDI. First, while stronger contract enforcement provided by TCA institutions makes the host country an attractive FDI destination, the increase in total FDI

[3] See: https://www.bbc.com/news/world-europe-45030537.

inflows stems from the growth of joint-ventures. Hence, the number of M&A deals should not respond to the TCA status of the host country. Second, TCA institutions should have a negative effect on the *share* of cross-border M&As. While establishing TCA institutions cannot increase the level of M&A investments, it does promote total FDI inflows through encouraging joint-ventures. Therefore, the share of M&A investments should be lower in countries with TCA institutions.

H2: TCA institutions have a negligible effect on the level of cross-border M&A deals.

H3: TCA institutions have a negative effect on the share of cross-border M&A investments.

4.4 Research Design and Empirical Results

To empirically test the effect of international institutions on cross-border M&As, I construct a country-year dataset on M&A investments by U.S. firms between 1998 and 2014. The dependent variable is the count of announced M&A deals by U.S. MNCs in host country i in year t. This variable is collected from Thompson One and adapted from (Betz and Pond 2019). The key independent variables are *BIT* and *TCA*. Both are binary measures. *BIT* takes the value of 1 if the host country i has a BIT in force with the U.S. in year t, and 0 otherwise. The *BIT* variable is based on the Database of Bilateral Investment Treaties available at the ICSID website [4] *TCA* takes the value of 1 if in the host country there is a leading TCA institution according to the website of "International Arbitration Information" (IAI) created by an international arbitration lawyer, and 0 otherwise.[5] The IAI website was created in order to make "information about international arbitration more readily available for businesses, lawyers, in-house counsel, government officials, students and academics alike."[6]

I control for a number of covariates that have been identified as explanatory variables for FDI inflows and are possibly correlated with either *BIT* or *TCA*, or both. Excluding them from model

[4] See: https://icsid.worldbank.org/en/Pages/resources/Bilateral-Investment-Treaties-Database.aspx#a9.

[5] See: https://www.international-arbitration-attorney.com/arbitral-institutions-and-arbitration- courts/.

[6] The website also provides a list of regional, specialist, and lesser-known generalist arbitration centers many of which do not possess a website. Lack of publicly available information indicates that these institutions are less reputational than the leading ones, thus are less influential in attracting FDI inflows. Although the distinction between leading and non-leading institutions are somewhat artificial, using the categorization proposed by legal practitioners can better proxy for the actual usage of TCA institutions.

specification may cause an omitted variable bias. There are five sets of control variables: (1) economic characteristics of the host country, (2) political and governance characteristics of the host country, (3) dyadic features, (4) financial characteristics of the host country, and (5) differences between the U.S. and the host country in governance measurements.

(1) Economic characteristics. I control for the following economic variables of the host country: log of GDP, GDP per capita, percentage of FDI inflows in total GDP, percentage of trade volumes in total GDP, and whether the host country is a tax haven. Log of GDP and GDP per capital proxy for market size and development level, respectively. The percentages of trade and FDI in total GDP measure the external exposure of the host country. The binary tax haven variable accounts for the effect of tax regimes and MNCs' incentives for tax avoidance.

(2) Political characteristics. I control for the host country's polity scores to partial out the effect of regime type on cross-border M&As (Li and Resnick 2003; Li, Owen and Mitchell 2018; Marshall and Jaggers 2006). In addition, I include the six World Bank's Worldwide Governance Indicators on the right hand side of the equation: rule of law, control of corruption, government effectiveness, political stability and absence of violence, regulatory quality, and voice and accountability. The quality of domestic governance matters in determining the entry mode choices of MNCs (Slangen and Tulder 2009). It also explains why some countries embrace liberal international institutions to attract FDI (Massoud 2014). Hence, these indicators should be controlled for in regression models. Note that a higher value of the indicators is an indication of better governance, such as a higher level of rule law, a lower level of corruption, etc.

(3) Dyadic features. The third set of control variables concern the political, economic, and geographical relationship between the U.S. and the host country. I control for the log of bilateral trade between the two countries, whether they have colonial ties (Hensel 2018), whether they are military allies (Leeds et al. 2002), whether they share the common official language, and the physical distance between them. These dyadic features may be correlated to both the dependent and independent variables simultaneously. For example, common colonial heritage, common lan-

guage, and alliance relationship between the home and host country encourage them to enter a BIT (Elkins, Guzman and Simmons 2006), while at the same time they also matter for the level of cross-border M&As (Xie, Reddy and Liang 2017). Thus, these dyadic control variables should be included in regression analysis.

(4) Financial characteristics. Various financial characteristics may be correlated with the level of cross-border M&As. Meanwhile, they are also the result of property rights protection provided by the host country (Betz and Pond 2019). First, I control for the economic structure of a host country by including the index of economic complexity (Hausmann et al. 2014).[7] Second, I use a host country's total factor productivity to account for the potential for technology transfers, which is a motivation for cross-border M&As (Feenstra, Inklaar and Timmer 2015). Third, to proxy for the depth of domestic financial market, domestic credit to private sector as a percentage of total GDP is added to the right hand side of the model (Cihák et al. 2012). Besides, I include the number of listed companies to account for another source of domestic financing (Cihák et al. 2012). A larger size of domestic financial market implies that the host country is less dependent on foreign financing, including M&A investments. Forth, I control for the net interest margin of domestic banks, which is defined as net interest revenue as a share of interest-earning assets. If banks earn higher margins on lending, the financial system is less efficient and borrowing from domestic banks is more costly (Cihák et al. 2012). Finally, following standard practice in the literature, I control for capital account openness and exchange rate of the host country as well (Chinn and Ito 2006; Cihák et al. 2012).

(5) Differences in governance measurements. The final set of control variables include the absolute difference in the six World Bank Governance Indicators and the polity scores between the U.S. and the host country. Existing research suggests that similarity between the home and host country in domestic institutional environment, rather than simply good governance, increases FDI flows between them (Beazer and Blake 2018; Morschett, Schramm-Klein and Swoboda 2010).

[7] Specifically, this measure captures the importance of knowledge in economic activities.

Differences in the quality of domestic governance also influence the choice of entry modes. MNCs investing in a sharply different institutional environment from their home country have a stronger incentive to partner with local firms and establish joint-ventures, or set up new ventures, instead of acquiring existing firms, which are difficult to manage (Xu and Shenkar 2002). Thus, differences in the governance indicators may have an impact on the level of cross-border M&A.

Summary statistics of the variables are reported in Table 4.1. Following the literature, I exclude host countries that are OECD founders from the sample.[8] Because the dependent variable is the count of M&A deals by U.S. acquirers, I estimate negative binomial models.[9] To address the non-independence of observations within countries, I cluster standard errors by host country. I also include year dummies in all models. The baseline results are reported in Table 4.2.[10]

Column 1 includes economic, political, dyadic, and financial control variables. Differences in governance are further added to column 2. In both models, the coefficients on *BIT* are positive and statistically significant at 95% confidence level. The coefficient on *TCA*, on the other hand, is statistically indistinguishable from 0 at 95% level for all models. The results support the hypotheses that sharing a BIT with the U.S. increases the level of cross-border M&A investments from U.S. firms while establishing TCA institutions does not lead to a similar outcome. According to the results in Column 2, a BIT with the U.S. increases the number of cross-border M&A transactions by 2.69 on average (with p=0.051). I compare the average marginal effects of *BIT* and *TCA* with some other covariates in Figure 4.1.[11] BITs have an effect stronger than an alliance relationship but weaker than a common language. This result implies that international economic institutions may better address political risks than intergovernmental security relationship, while the role of informal institutions such as linguistic and cultural connections between countries should not be neglected. A unit increase in the rule of law index leads to approximately 11.47 more M&A deals

[8] The results remain robust if OECD founders are included in the empirical analysis. See the discussion below.

[9] There is no data censoring problem for my dependent variable, thus Heckman selection model simplifies to OLS regression.

[10] Full results are reported in Appendix C.

[11] Except for the rule of law indicator, I only report the marginal effects of dummy variables to facilitate comparison.

Table 4.1: Summary Statistics of Essay Three

	count	mean	sd	min	max
M&A by U.S. firms	515	8.534	11.585	1.000	72.000
BIT with U.S.	515	0.351	0.478	0.000	1.000
TCA institution	515	0.140	0.347	0.000	1.000
Rule of law	515	0.084	0.729	-1.624	1.825
Log GDP of host country	515	12.006	1.340	8.683	15.624
GDP per capita of host country	515	10254.324	9008.968	642.166	52244.440
FDI-to-GDP ratio	515	0.040	0.105	-0.464	1.990
Trade-to-GDP ratio	515	0.855	0.605	0.147	4.022
Tax haven	515	0.031	0.174	0.000	1.000
Polity score	515	6.272	4.814	-10.000	10.000
Control of corruption	515	0.021	0.752	-1.336	2.326
Government effectiveness	515	0.263	0.688	-1.186	2.437
Political stability	515	-0.160	0.844	-2.374	1.378
Regulatory quality	515	0.332	0.685	-1.387	2.233
Voice and accountability	515	0.213	0.676	-1.907	1.293
Log bilateral trade	515	8.889	1.772	4.619	13.148
Colonial tie	515	0.029	0.168	0.000	1.000
ATOP ally	515	0.753	0.431	0.000	1.000
Common language	515	0.200	0.400	0.000	1.000
Distance	515	8776.738	3578.278	2549.896	16180.323
Economic complexity index	515	0.430	0.706	-1.892	1.964
Total factor productivity	515	0.607	0.162	0.172	1.109
Domestic credit to private sector	515	56.547	41.923	0.186	253.262
No. of listed companies	515	16.885	26.208	0.143	132.216
Net interest margin	515	4.623	2.346	0.546	16.409
Capital account openness	515	0.595	0.320	0.000	1.000
Exchange rate	515	476.444	1687.007	0.178	11865.211
Difference in polity score	515	3.728	4.814	0.000	20.000
Difference in Control of corruption	515	1.516	0.682	0.008	3.260
Difference in government effectiveness	515	1.370	0.630	0.026	2.834
Difference in political stability	515	0.892	0.665	0.000	3.081
Difference in regulatory quality	515	1.208	0.654	0.002	2.920
Difference in accountability	515	0.992	0.680	0.002	3.034
Difference in rule of law	515	1.506	0.722	0.012	3.264

on average. Hence, the marginal effect of signing a BIT is approximately equivalent to improving the level of rule of law from Saudi Arabia (0.068) to South Africa (0.271).

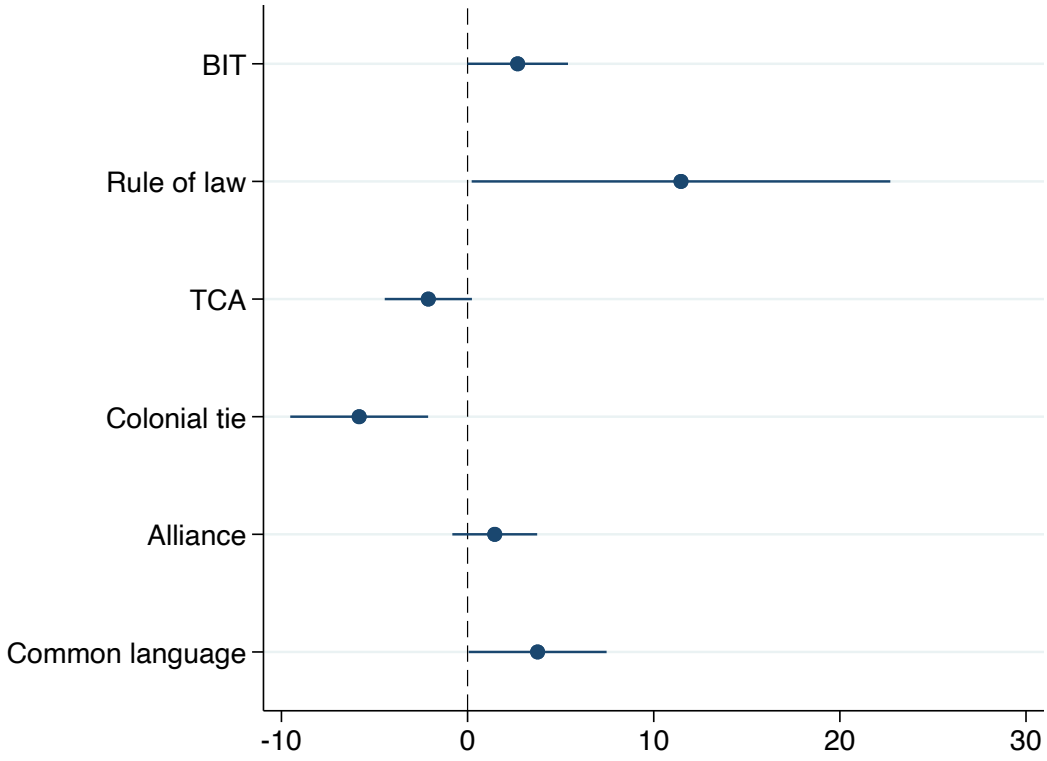
Table 4.2: Cross-border M&As by U.S. MNCs

	(1)	(2)	(3)	(4)	(5)
BIT	.339**	.321**	.349**	.330**	.363**
	(.164)	(.163)	(.161)	(.166)	(.170)
TCA	-.129	-.251*	-.208*	-.215	-.227
	(.140)	(.139)	(.121)	(.141)	(.144)
Rule of law	-.186	1.367**	1.470**	1.351**	1.319*
	(.160)	(.674)	(.630)	(.677)	(.676)
BIT*Rule of Law			-.360**		
			(.161)		
TCA*Rule of Law			-.032		
			(.236)		
New York Convention				-.396***	
				(.151)	
Total BITs					-.002
					(.003)
Number Obs.	515	515	515	515	515
Econ. controls	Yes	Yes	Yes	Yes	Yes
Poli. controls	Yes	Yes	Yes	Yes	Yes
Dyadic controls	Yes	Yes	Yes	Yes	Yes
Finance controls	Yes	Yes	Yes	Yes	Yes
Difference controls	No	Yes	Yes	Yes	Yes
Year dummies	Yes	Yes	Yes	Yes	Yes

The table displays coefficients and standard errors (in parentheses, clustered at country level). Two-tail tests.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

In Column 3, I add two interaction terms to test whether international institutions can substitute for good domestic governance as existing research suggests (Berkowitz, Moenius and Pistor 2006; Ginsburg 2005). I interact the two independent variables with the rule of law index, respectively. The interaction term on *BIT* and rule of law is negative and statistically distinguishable from 0 at 95% confidence level, implying that BITs may substitute for rule of law in terms of attracting FDI.



Average marginal effects with 95% confidence interval. Based on the results of Column 2 in Table 4.2.

Figure 4.1: Average Marginal Effects on the Number of M&As

On the other hand, the interaction term on *TCA* and rule of law is statistically insignificant at 90% level. Figure 4.2 presents the average marginal effect of the two institutional variables on the count of M&As. There is no strong evidence that the effects of BITs and TCA institutions are moderated by the level of rule of law, though the independent effects of the two sets of institutions meet my theoretical expectation. The coefficient on the rule of law index is positively associated with the level of cross-border M&As, confirming existing findings that strong courts, which effectively constrain the executives and enforce private contracts, increase FDI inflows (Staats and Biglaiser 2012). Since M&A investments are especially vulnerable to political risks, it is likely that the effect of rule of law on M&As is channeled through proctoring investors from government expropriation rather than resolving contractual disputes.

Robustness Checks

I perform several robustness checks on the baseline results. The findings are robust to addressing the effect of the New York Convention, incorporating the signaling effect of BITs, and using an alternative estimator.

(1) The effect of the 1958 New York Convention. I control for the effect of another international treaty, the Convention on the Recognition and Enforcement of Foreign Arbitral Awards, or the 1958 New York Convention (NYC). The NYC is also a set of contracting institutions as it requires domestic courts of signatory states and territories to enforce arbitral awards issued by arbitration institutions located in other states or territories. Currently, there are 159 contracting states to the NYC. I expect that unlike BITs, the ratification of NYC cannot increase cross-border M&A investments. First, foreign arbitral awards may not necessarily be enforced by domestic courts of the signatory states. Most signatories declare either one or both of the following two reservations when joining the 1958 NYC: the "reciprocal" reservation and the "commercial" reservation.[12]

[12]Upon the reciprocal reservation, the signatory will apply the Convention only to recognition and enforcement of awards made in the territory of another contracting state. Upon the commercial reservation, the signatory will apply the Convention only to differences arising out of legal relationships which are considered as commercial under the laws of the signatory. See: http://www.newyorkconvention.org/countries.

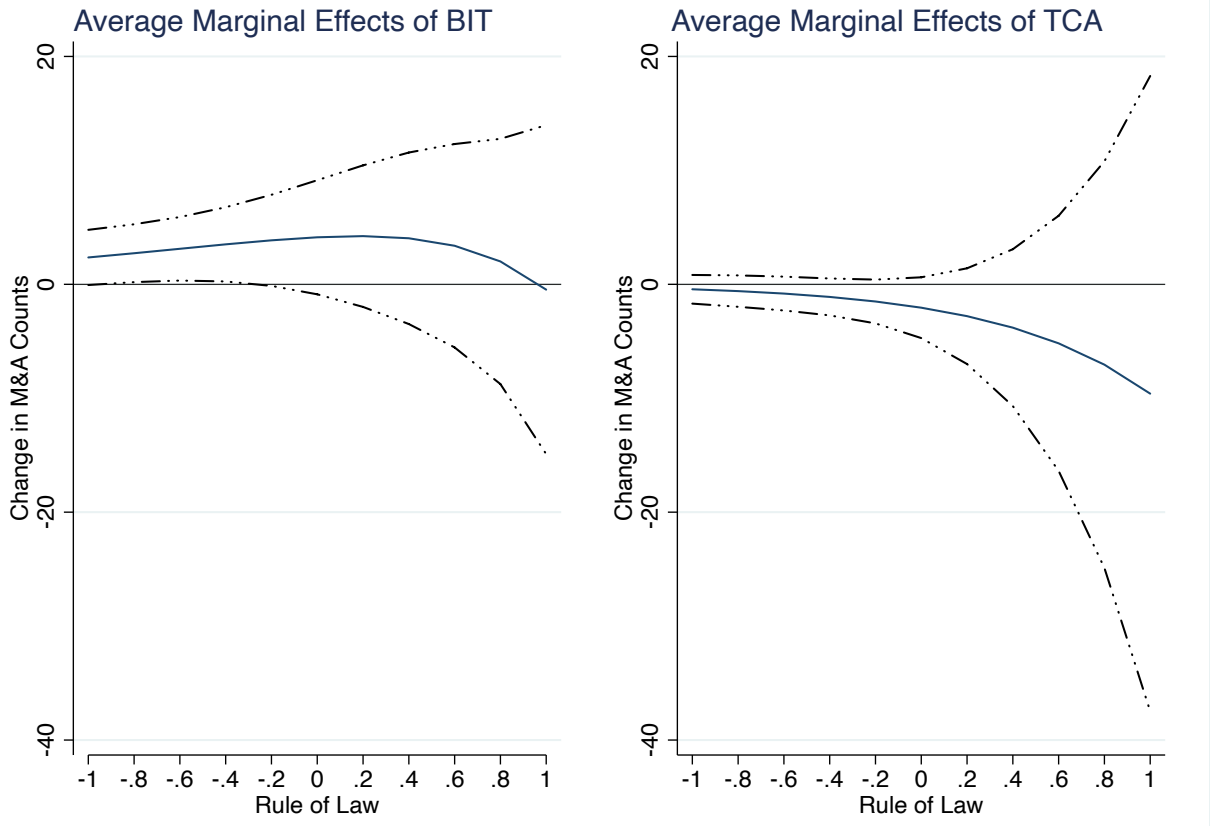


Figure 4.2: Average Marginal Effects of BIT and TCA

The plot is based on coefficient estimates from Column 3 of Table 4.2. All other variables are left at their observed values.

In practice, many developing countries are reluctant to enforce foreign arbitral awards without reservations (Greenberg, Kee and Weeramantry 2011). Second, even if foreign investors expect that foreign arbitral awards can be enforced in the host country, their enforceability has a stronger effect on reducing contractual hazards than political risks—which impose a more prominent threat to M&A investments. The coverage of the NYC means arbitration services provided by TCA institutions which mainly handle contractual disputes among private parties but not investor-state disputes are available to foreign investors. Hence, the NYC should promote entry modes other than M&As, such as export or joint-ventures (Berkowitz, Moenius and Pistor 2006).

In Column 4, I add a dummy variable which takes the value of 1 if the host country is a NYC signatory, and 0 otherwise. The coefficient on *BIT* remains positive and statistically significant at a high confidence level. In contrast, the NYC is negatively associated with the level of M&As. The average marginal effect of *BIT* and *TCA* is similar to the baseline result: signing a BIT with the U.S. increases the count of M&As by approximately 2.77 with p=0.05, while a leading TCA institution in the host country has no significant effect (p=0.134). The average marginal effect of the NYC is -2.77 with p=0.006. Hence, the NYC, which is also a set of contracting institutions, makes M&As a less attractive choice by promoting other entry modes such as joint-ventures.

(2) The signaling effect of BITs. BITs could increase FDI inflows through two different mechanisms: the signaling effect and the hand-tying effect. The hand-tying effect increases FDI inflows from the signatory, while the signaling effect increases FDI inflows from any states, including non-signatories (Kerner 2009; Neumayer and Spess 2005). Kerner (2009) argues that signing BITs can attract FDI inflows from non-signatory states because of the sunk-costs paid to ratify BITs. The signaling effect should be stronger for countries that have ratified a larger number of BITs. To account for the signaling effect of BITs, I include the total number of BITs in force for the host country in Column 5. The coefficient on this variable is statistically insignificant at conventional confidence levels so is its marginal effect. In contrast, signing a BIT with the U.S. can increase M&A investments from U.S. firms. The result suggests that BITs are credible commitments to

M&A investors because of their hand-tying rather than signaling effects (Fearon 1997). Similar to the abovementioned findings, the effect of TCA institutions is statistically indistinguishable from 0 at 95% level.

(3) Post-double selection (PDS) estimator. For robust checks, I use the PDS method to select the most relevant control variables (Belloni, Chernozhukov and Hansen 2014). This data-driven method is built on the least absolute shrinkage and selection operator, or LASSO for short. The LASSO estimator is most useful when a few out of many potential covariates have an effect on the outcome. Upon the PDS method, we use LASSO twice and estimate two LASSO regressions.

The LASSO estimator I employ in this paper is given by (Tibshirani 1996):

$$\hat{\beta}_{\lambda}^{R} = arg\ min \sum_{i} (\beta' x_i - y_i)^2 + \lambda R(\beta) \tag{4.1}$$

Essentially, it is a solution to a regularized regression which is a combination of residual sum of squares and a term $\lambda R(\beta)$ punishing for model over-fitting. $R(\beta)$ stands for the regularizer and is defined as $R(\beta) = \sum_{j=1}^{k} |\beta_j|^p$.[13] The tuning parameter λ is called the overall penalty level, which controls the overall strength of penalty. λ is selected through cross-validation. Specifically, the data are partitioned repeatedly into training and test data; the least-square model is fit using the training data while the prediction error is calculated using the test data. We then use cross-validation to choose the optimal λ such that it gives the least mean squared prediction errors. Finally, we substitute this optimal λ into Equation (4.1) and obtain the LASSO estimates. The general idea of LASSO is that it minimizes the sum of squared errors given the constraint imposed by the regularizer. Hence, without the regularizer, the LASSO estimator is identical to the OLS estimator. By driving irrelevant variables to 0, LASSO selects variables that are "true" predictors of the dependent variable.

In the course of the PDS method, I use the LASSO estimator twice. First, I estimate a LASSO

[13] k stands for the total number of covariates. p is determined by different regularization methods. It takes the value of 1 for LASSO.

regression with the log of M&A deals as the dependent variable while the five sets of control variables, the total number of BITs, TCA institution, the NYC status, and the year dummies as regressors. Second, I estimate another LASSO regression with the *BIT* treatment as the dependent variable while all control variables (including the total number of BITs, TCA, and NYC) and the year dummies as regressors. The two LASSO regressions yield two sets of variables. A union of them are predictors of both the level of M&As and the *BIT* treatment, thus should be controlled for in order to avoid omitted variable bias. I use the Stata package developed by Ahrens, Hansen and Schaffer (2018) to perform the PDS analysis. The sample includes non-OECD host countries only.

The results suggest that the positive effect of *BIT* on M&As remains robust. The coefficient on the BIT variable is 0.3583, with p=0.000.[14] Since the dependent variable in the PDS analysis is the log of M&A deals, the results indicate that host countries that share a BIT with the U.S. invite approximately 36% more M&A transactions by U.S. acquirers compared to countries that do not. The covariates that survive the PDS include the dummy variable of TCA institution, the total number of BITs, log of host country's GDP, control of corruption, regulatory quality, strength of accountability, log of bilateral trade, common official language, total factor productivity, domestic credits to private sector as a percentage of GDP, and the differences in polity scores, political stability, and rule of law between the home and host country. Two year dummies are also correlated with both the level of M&As and the *BIT* treatment variable, the year 1998 and year 2000. Many of the PDS-selected variables concern the governance quality of the host country, implying that domestic governance matters for both the level of cross-border M&As as well as the BIT status. I also perform a similar analysis using *TCA* as the treatment variable. The PDS result indicates that the coefficient on the *TCA* treatment is 0.1265 with p=0.244, suggesting that the effect of TCA institutions on the log of M&A deals is negligible. In sum, the positive effect of BITs and the negligible effect of TCA institutions on M&As are both robust to using the data-driven PDS

[14] Standard errors and test statistics obtained using the PDS method are only valid for the treatment variable.

method.

Relative Importance of M&As

To test Hypothesis 3, I use the share of global M&A inflows as a percentage of total FDI as the dependent variable, which captures the importance of M&A investments relative to other modes of entry, such as joint-ventures and greenfield projects. The variable is collected from the UNCTAD Cross-border Mergers and Inquisitions Database and is led by one year (Lee, Biglaiser and Staats 2014). Note that it measures M&A inflows from all countries, not just those from the U.S. Therefore, I use the total number of BITs to proxy for the effect of property rights institutions, though this variable cannot distinguish the signaling and hand-tying effects of BITs. Similar to the baseline analysis, a dummy variable *TCA* is created to account for the role of contracting institutions, which takes the value of 1 if the host country has a leading TCA institution and 0 otherwise. Finally, I control for the economic, political, and/or financial characteristics of the host country. The control variables are from the same source as the baseline analysis above.

I estimate OLS regressions with year dummies included and standard errors clustered at the country level. The results based on this new dependent variable are presented in Table 4.3.[15] Note that the dependent variable measures the *percentage point* of M&A inflows in total FDI. I control for the economic, political, and governance characteristics of the host country in Column 6. Financial characteristics are further added to Column 7. According to the results in Column 7, having one more BIT can increase the share of M&As by 0.42 percentage point, while establishing a TCA institution leads to a decrease by 25 percentage points. Both coefficients are statistically distinguishable from 0 at 99% confidence level and their opposite signs meet my theoretical expectation: TCA institutions decrease the share of cross-border M&As because they lead to an increase in total FDI inflows by promoting joint-ventures.

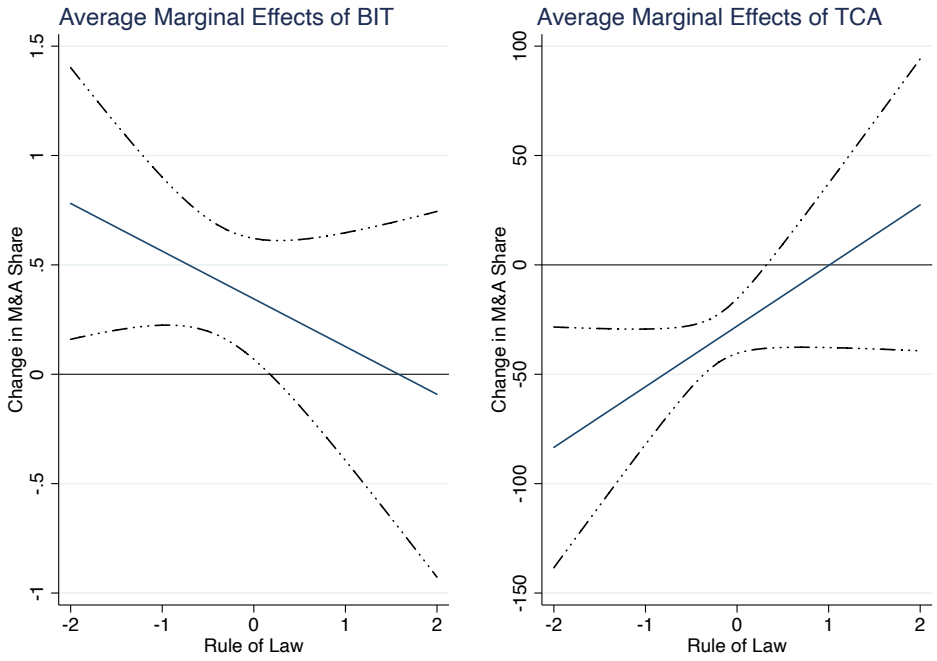
In Column 8, I interact the level of rule of law with the institutional variables to explore the conditionality in the effects of BITs and TCA institutions. The average marginal effect plot is

[15]The full results are reported in Appendix C.

presented in Figure 4.3. The results suggest that BITs have the strongest effect on the share of M&A inflows in host countries that have a small rule of law indicator. As the level of rule of law increases, the average marginal effects of BITs diminish and become statistically indistinguishable from 0. On the other hand, the effect of TCA institutions is negative for countries that lack rule of law and increases in the moderating variable. Courts in countries without rule of law can neither effectively constrain the government nor enforce private contracts (Staats and Biglaiser 2012). International institutions can substitute for domestic courts, but they are substituting for different functions of courts. Property rights institutions such as BITs can mitigate the political risks of these countries, thus they can make M&As, which are especially susceptible to political hazards, a more attractive entry mode relative to joint-ventures and greenfield investments. Contracting institutions such as arbitration courts can mitigate the contractual hazards but do not reduce the political risks MNCs confront, thus they can make joint-ventures more attractive, relatively to M&As. As a result, TCA institutions decrease the share of M&A inflows in countries where there is no mature rule of law. In countries with a high level of rule of law, both property rights protection from government expropriation and contract enforcement are provided by independent courts. Hence, the effects of both BITs and TCA institutions are negligible in these countries.

4.5 Conclusion

This paper provides a nuance for understanding the heterogeneous effect of international institutions on FDI. International institutions, like domestic ones, can be a source of comparative advantage in cross-border economic transactions in the sense that they can safeguard the assets of foreign investors and merchants. However, existing literature does not differentiate against whom international institutions are protecting. In general, there are two types of institutions that matter in economic growth and they address different concerns for capital owners (Acemoglu and Johnson 2005; Ogilvie and Carus 2014). Property rights institutions reduce the political risks by constraining the opportunistic behavior of the government while contracting institutions mitigate contractual



Average marginal effects with 95% confidence interval. Based on the results of Column 9 in Table 4.3.

Figure 4.3: Average Marginal Effects on the Share of M&A Inflows in Total FDI

Table 4.3: The Effect of BIT and TCA on the Share of M&A Investments

	(6)	(7)	(8)
Total BITs	.307**	.422***	.345**
	(.125)	(.126)	(.137)
TCA	-12.027	-25.022***	-27.983***
	(7.611)	(7.006)	(6.192)
Rule of law	-12.220	-10.836	-2.739
	(11.403)	(11.255)	(12.543)
Total BITs*Rule of law			-.218
			(.169)
TCA*Rule of law			27.716*
			(14.861)
Number obs.	222	193	193
Econ. controls	Yes	Yes	Yes
Poli. controls	Yes	Yes	Yes
Finance controls	No	Yes	Yes
Year dummies	Yes	Yes	Yes

The table displays coefficients and standard errors (in parentheses, clustered at country level). Two-tail tests.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

hazards by facilitating contract formation and contract enforcement between private actors. In the politics of FDI, BITs are among one of those property rights institutions that tie the hand of the host governments. They do so by offering fair and professional legal forums to resolve investor-state disputes, the so-called ICSID tribunals, as an alternative to formal litigation through domestic courts. On the other hand, TCA is an example of contracting institutions in which foreign investors resolve their contractual disputes with domestic parties. These TCA institutions are independent of the host government because they can rule over their own jurisdictions. Therefore, accessible to TCA tribunals, foreign investors do not need to rely on domestic courts, which can be corrupt and dependent, when contractual disputes occur.

In this paper, I study how the property rights and contracting institutions affect the entry mode choices of MNCs. In particular, I examine the effects of BITs and TCA institutions on cross-border M&A inflows. Compared to other entry modes such as joint-ventures and greenfield investments,

M&As are especially susceptible to government expropriation because in general they do not create as many new jobs as other entry modes for the locals and are often perceived as a threat by nationalists in the host country. Hence, property rights institutions such as BITs can increase M&A inflows by effectively tying the hands of the government. On the other hand, TCA institutions should a negligible effect on the level of cross-border M&As because they do not address the concern for political risks. Moreover, they should decrease the share of cross-border M&A investments in total FDI inflows because they make other entry modes, in particular, joint-ventures that are more susceptible to contractual hazards, a more attractive choice than M&As.

I use the data on M&As by U.S. acquirers to evaluate the two hypotheses. I confirm that, indeed, the number of M&A deals by U.S. firms is higher for countries that have a BIT with the U.S. but not so for countries with a TCA institution. Moreover, the share of M&As in total FDI inflows is lower for those that have established a TCA institution. Finally, I find that the effects of BITs and TCA institutions on the share of cross-border M&As are strongest—largest for BITs and smallest for TCA institutions—in countries with a low level of rule of law, indicating that the two sets of international institutions are substitutes for independent domestic courts, but they are substituting for different functions of courts.

The findings of this paper generate several implications to be further explored in future research. First, we should pay more attention to the heterogeneity in the effects of international institutions, which can be sources of comparative advantage for different reasons. Second, future IPE studies can focus more on the origin and consequences of contracting institutions in cross-border economic transactions. Despite being somewhat overlooked, these institutions have existed even before BITs started to appear in the 1950s and have been functioning as an indispensable part of the global economy (Hale 2015). A new research agenda on trans-border contract enforcement is needed.

5. CONCLUSION AND IMPLICATIONS

My dissertation addresses the puzzle of why some countries with corrupt and dependent courts can attract a substantial amount of FDI. To answer this question, the existing literature concentrates on studying how institutions—such as domestic courts and BITs—resolve investor-state disputes. However, this vast body of scholarship underappreciates the importance of arbitral institutions that enforce private contracts and resolve disputes between foreign investors and domestic firms. These legal institutions provide arbitration services to both domestic and foreign parties and operate independently of governments even in countries with poor domestic governance. They are not only critical to large firms but also to small and medium enterprises which constitute the basis of the economy. My dissertation provides the first systematic examination on the role of arbitral institutions in the political economy of FDI and has the potential to generate major theoretical innovations in the areas of comparative and international political economy.

My dissertation mainly consists of three quantitative essays. In the first essay, I confirm that TCA institutions can increase FDI inflows by focusing on the case of China. In the second essay, I find that a combination of BITs and TCA institutions can substitute for rule of law in attracting FDI because this combination can mitigate both political and contractual hazards for foreign investors. Moreover, the two sets of international institutions are most useful in countries with a low level of judicial independence and only useful when jointly present in the host country. The third essay studies the relationship between international institutions and entry mode choices. The results suggest that BITs have a positive effect on the level of M&As, which are more susceptible to political risks than contractual hazards, while TCA institutions decrease the relative importance of cross-border M&As as they make other entry modes, particularly joint-ventures, more attractive choices.

The major findings of the three essays generate several implications to be explored for IPE

scholars. First, given that BITs and TCA institutions allow authoritarian leaders to attract capital inflows without reforming domestic courts, these international institutions may also help them stay in power. A large body of literature examines how joining international institutions and international treaties affects domestic politics (Baccini and Kim 2012; Hollyer, Rosendorff and Vreeland 2015). Some of them study the effects of preferential trade agreements (PTAs)—agreements by states to limit trade barriers such as tariffs—on political survival (Hollyer and Rosendorff 2012; Rosendorff and Shin 2015). Recent scholarship also pays attention to the effect of BITs. For example, Arias, Hollyer and Rosendorff (2018) argue that BITs help authoritarian leaders stay in power because they improve the "investment climate" in signatory states, thus attract foreign capital that can boost economic development. Since better economic performance stabilizes authoritarian regimes at least in the short run, BITs increase the probability of staying in office for authoritarian leaders. Observationally, autocracies are indeed more likely to sign BITs compared to democracies (Rosendorff and Shin 2015).

Again, this emerging body of literature on political survival under-appreciates the effect of contracting institutions. Anecdotal evidence suggests that authoritarian leaders are indeed interested in promoting TCA to attract FDI. With strong TCA institutions, they can receive foreign capital needed to develop the economy while continue to oppress the oppositions and abuse human rights using dependent domestic courts (Massoud 2014). The history of TCA institutions also implies that they are compatible with authoritarian rule. Early TCA institutions emerged in autocratic city-states in the Low Countries—competition among commercial centers incentivized authoritarian leaders to improve arbitration services provided by local TCA institutions and safeguard the neutrality of them (Gelderblom 2015). For dictators who want to survive politically and economically, a combination of liberal economic courts—such as TCA institutions—and illiberal political courts is a more preferable option than reforming the domestic legal system. This "partial rule of law", or rule of law only in the economic domain, may be a key to understanding the resilience of authoritarian governments in the time of globalization and the slow progress of democratic transition

even in places with a thriving economy.

Second, the popularity of TCA institutions in the contemporary economy may also be a key to understand the puzzle of why in recent years some democratic countries raise trade barriers while many non-democracies advocate for free trade. Existing theories that link trade openness to democracy fail to explain the emerging anti-globalization populist movements in democracies as well as the economic liberalization policies adopted by many authoritarian regimes. The findings of my dissertation imply that international institutions matter. Developing countries that lack mature rule of law can resort to international contracting institutions to improve contract enforcement. Stronger contract enforcement increases relationship-specific investment to these countries, creating a pro free trade constituency. As a result, democracies lose their institutional comparative advantage relative to many autocracies. In particular, stronger contract enforcement provided by TCA institutions in developing countries encourages MNCs from industrialized democracies to manufacture their products overseas, nurturing anti-globalization sentiments in the home countries. International institutions that were created to promote globalization may have become a cause of the recent globalization backlash.

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APPENDIX A

Summary Statistics of All Control Variables (Essay One)

Table A.1: Summary Statistics of All Control Variables (Essay One)

	mean	sd	min	max
growth rate of fixed assets investment	0.16	0.11	-0.15	0.51
trade volume divided by GDP	0.34	0.42	0.03	2.17
government consumption divided by GDP	0.14	0.04	0.08	0.31
population of college and university students divided by total population	0.01	0.01	0.00	0.04
investment in state-owned fixed assets divided by total fixed-asset investment	0.55	0.16	0.16	0.87
total population, 10 thousand people	4518.69	2689.15	503.87	10505.00
number of listed companies	39.20	44.17	1.00	339.00
annual stock fundraising, 100 million yuan	105.41	262.02	0.00	2732.66
savings in RMB, 100 million yuan	9223.66	12875.39	140.44	86849.26
balance of savings deposit, 100 million yuan	4450.61	5426.06	85.68	39725.24
loans in RMB, 100 million yuan	6546.02	8350.97	163.65	52167.25
proportion of tertiary industry In GDP	39.23	7.61	27.57	76.10
proportion of secondary industry In GDP	44.68	8.38	19.74	60.10
share of employment of tertiary industry	30.26	9.67	11.69	74.40
share of employment of secondary industry	24.49	9.87	5.17	50.90
GDP, 100 million yuan	6695.17	8155.35	136.26	53210.28
GDP per capita, yuan	15125.61	14219.92	2257.00	81658.00
average wage of staff and workers employed, yuan	15737.57	11503.34	3375.00	75834.00
population growth rate, 0.1%	6.25	3.36	-3.20	14.50
share of employment of state-owned enterprises	0.15	0.10	0.00	0.63
highway mileage, km	75109.12	58809.51	4243.00	283268.00
per capita disposable income of urban residents, yuan	9394.97	5707.77	2503.00	32903.00
per capita disposable income of rural residents, yuan	3506.07	2346.68	654.48	14736.00
total fixed-asset investment, 100 million yuan	3151.13	4206.61	61.00	26770.70
total number of employed people, 10 thousand people	2482.74	1617.16	232.70	6485.60
number of self-employed people divided by total population	0.04	0.02	0.01	0.11
number of employees in privately-owned enterprises divided by total population	0.04	0.05	0.00	0.37
number of granted patent applications	8238.25	19939.41	66.00	199814.00
consumer price index, 1978=100	496.15	78.11	311.21	752.53
retail price index, 1978=100	395.43	51.50	248.96	571.52
per capita cash consumption expenditures of urban residents, yuan	6981.15	3862.23	175.34	21984.37
per capita consumption expenditures of rural residents, yuan	2556.85	1689.43	321.21	11077.66
proportion of civil servants in total population	0.01	0.00	0.00	0.03
Non-agricultural population divided by total population	0.32	0.14	0.14	0.87
general budgetary fiscal expenditure, 100 million yuan	888.23	1050.72	19.38	6712.40
general budgetary fiscal revenue, 100 million yuan	538.84	762.83	7.17	5514.84
tax revenue, 100 million yuan	443.93	643.78	6.76	4548.66
number of work-related crimes investigated, every 10 thousand people	32.06	10.89	8.33	65.48
number of self-employed households, 10 thousand households	99.22	68.95	6.80	348.48
number of private enterprises, 10 thousand households	13.08	18.01	0.10	119.79
Observations	407			

Summary Statistics of the PDS-selected Control Variables

Table A.2: Summary Statistics of the PDS-selected Control Variables

	mean	sd	min	max
trade volume divided by GDP	0.31	0.40	0.03	2.17
population of college and university students divided by total population	0.01	0.01	0.00	0.04
investment in state-owned fixed assets divided by total fixed-asset investment	0.54	0.17	0.05	0.87
proportion of tertiary industry In GDP	39.36	7.50	11.70	76.10
share of employment of secondary industry	23.75	10.07	5.17	60.88
population growth rate, 0.1%	6.48	3.79	-3.20	15.90
number of work-related crimes investigated, every 10 thousand people	31.03	12.13	3.39	139.02
Observations	546			

Parallel Trend Assumption for the Difference-in-Difference Estimation

The parallel trend assumption is needed for a valid difference-in-difference (DID) design, which is equivalent to the two-way fixed-effects models we estimate in Table 2.1. To examine whether this important identification assumption holds, I collapse the data into the annual mean of each group (with CIETAC and without CIETAC), then plot each group's trend line separately. The plot is presented in Figure A.1. We can see that the trends for the treatment and control group are largely parallel. Hence, the parallel trend assumption for a valid DID design holds in our analysis.

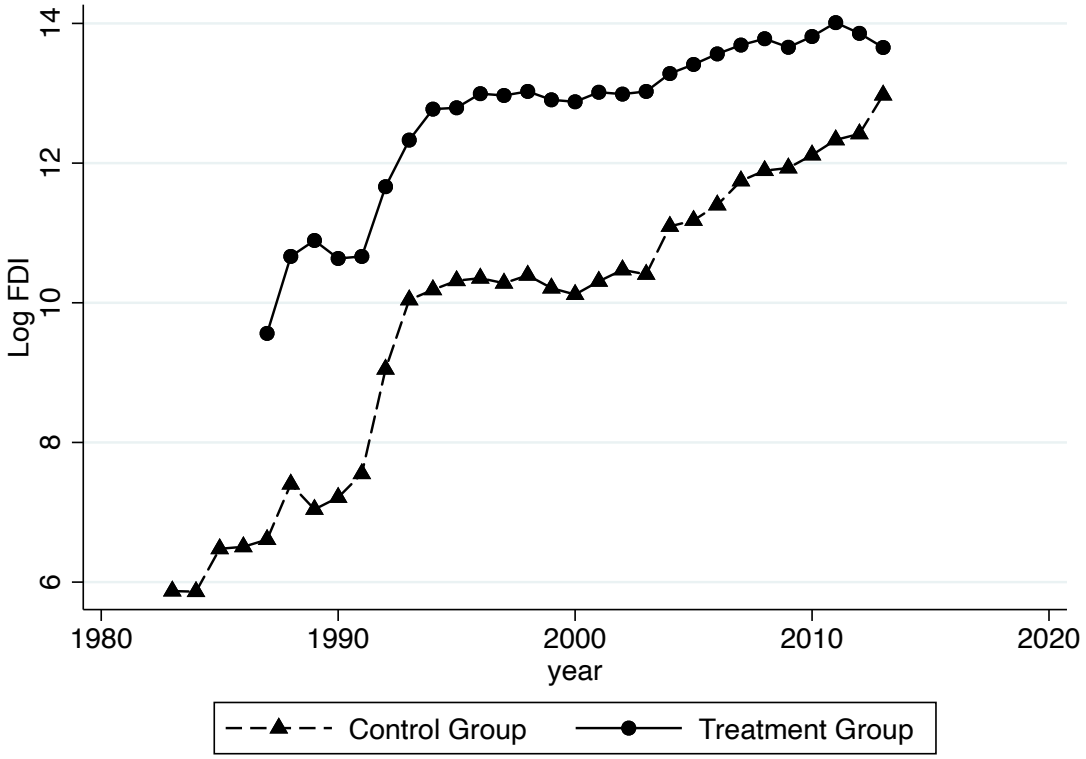

Figure A.1: Testing for Parallel Trend Assumption

APPENDIX B

Information on TCA Institutions

Table B.1: The List of Leading TCA Institutions

Name	Country	Founding Year
Australian Centre for International Commercial Arbitration (ACICA)	Australia	1985
Vienna International Arbitral Centre (VIAC)	Austria	1975
Common Court of Justice and Arbitration (CCJA)	Côte d'Ivoire	1998
China International Economic and Trade Arbitration Commission (CIETAC)	China	1956
Cairo Regional Centre for International Commercial Arbitration (CRCICA)	Egypt	1979
International Chamber of Commerce (ICC)	France	1923
German Institution of Arbitration (DIS)	Germany	1992
Chamber of National and International Arbitration Milan	Italy	1985
Centro de Arbitraje de México (CAM)	Mexico	1997
Permanent Court of Arbitration (PCA)	Netherlands	1899
Court of Arbitration of the Polish Chamber of Commerce	Poland	1950
Court of International Commercial Arbitration (CICA)	Romania	1953
Singapore International Arbitration Centre (SIAC)	Singapore	1991
Arbitration Institute of the Stockholm Chamber of Commerce (SCC)	Sweden	1917
Swiss Chambers Arbitration Institution	Switzerland	2004
Dubai International Arbitration Centre (DIAC)	UAE	1994
London Court of International Arbitration (LCIA)	UK	1891
American Arbitration Association	USA	1926

Countries and territories that have established regional, specialist and lesser-known generalist arbitration centers:

Argentina, Armenia, Australia, Azerbaijan, Bahrain, Belgium, Benin, Belarus, Bangladesh, Bolivia, Brazil, Bulgaria, Cambodia, Canada, Cameroon, Ivory Coast, Chile, China, Colombia, Costa Rica, Croatia, Cuba, Cyprus, Czech Republic, Denmark, Dominican Republic, Vietnam, Ecuador, Egypt, Estonia, Finland, France, Ghana, Germany, Greece, Georgia, Guatemala, Honduras, Hungary, Iceland, India, Ireland, Iran, Israel, Italy, Jordan, Japan, Kenya, Kyrgyzstan,

Kazakhstan, Latvia, Lebanon, Lithuania, Malaysia, Mauritius, Mexico, Moldova, Malta, Morocco, Mozambique, New Zealand, Nicaragua, Nigeria, Norway, Netherlands, Pakistan, Panama, Paraguay, Peru, Philippines, Portugal, South Korea, Romania, Russia, Rwanda, South Africa, El Salvador, Singapore, Slovakia, Spain, Sri Lanka, Sudan, Swaziland, Sweden, Switzerland, Taiwan, Thailand, Trinidad and Tobago, Turkey, United Arab Emirates, United Kingdom, Ukraine, Uruguay, United States of America, Uzbekistan, Venezuela, Serbia.

Estimation Results of the Control Variables, Essay Two

Table B.2: Estimation Results of Control Variables in Table 3.2

	(1)	(2)	(3)	(4)
Log GDP	.475***	.472***	.485***	.487***
	(.020)	(.021)	(.021)	(.021)
GDP per capita of host	-.017***	-.012***	-.012***	-.012***
	(.002)	(.003)	(.003)	(.003)
FDI-to-GDP	.010***	.008***	.008***	.008***
	(.001)	(.001)	(.001)	(.001)
Trade-to-GDP	-.001***	-.001*	-.001	-.001*
	(.000)	(.000)	(.000)	(.000)
Fuel exports	.026***	.023***	.022***	.022***
	(.002)	(.002)	(.002)	(.002)
Tax haven	.312***	.363***	.367***	.370***
	(.043)	(.045)	(.046)	(.046)
Total BITs	.007***	.009***	.008***	.008***
	(.001)	(.001)	(.001)	(.001)
GDP per capita of home	.006***	.006**	.007***	.008***
	(.002)	(.002)	(.002)	(.002)
GDP growth of home	.077***	.075***	.076***	.072***
	(.014)	(.014)	(.014)	(.014)
Polity score	.061***	.101***	.100***	.100***
	(.012)	(.013)	(.013)	(.013)
Control of corruption	-.122*	-.005	-.005	.003
	(.074)	(.078)	(.078)	(.079)
Government effectiveness	-.428***	-.550***	-.545***	-.552***
	(.089)	(.093)	(.094)	(.094)
Stability	-.071**	-.157***	-.166***	-.165***
	(.036)	(.037)	(.037)	(.037)
Regulatory quality	.282***	.334***	.330***	.329***
	(.075)	(.080)	(.081)	(.081)
accountability	1.070***	1.026***	1.032***	1.032***
	(.080)	(.087)	(.087)	(.087)
Log bilateral trade	.184***	.183***	.177***	.177***
	(.013)	(.014)	(.014)	(.014)
Colony	.365***	.367***	.366***	.369***
	(.043)	(.043)	(.043)	(.043)
Ally	.008	.010	-.025	-.032
	(.092)	(.093)	(.095)	(.095)
Common language	.139***	.111**	.121***	.113**
	(.044)	(.045)	(.045)	(.045)
Distance	-.007***	-.007***	-.007***	-.007***
	(.000)	(.001)	(.001)	(.001)
Difference in LJI score	-.636***	-.569***	-.527***	-.561***
	(.125)	(.129)	(.130)	(.129)
Both common law	.373***	.399***	.378***	.393***
	(.064)	(.066)	(.067)	(.067)
Both civil law	.053	.058	.087**	.085**
	(.041)	(.041)	(.042)	(.043)
Constant	-18.713***	-19.142***	-19.594***	-19.401***
	(.483)	(.492)	(.568)	(.560)
Number Obs.	356,959	356,959	353,340	353,340

The table displays coefficients and standard errors (in parentheses, clustered at parent company level). Two-tail tests.
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table B.3: Estimation Results of Control Variables in Table 3.4

	(5)	(6)	(7)	(8)	(9)	(10)
Log GDP	.541***	.599***	.539***	.627***	.619***	.653***
	(.019)	(.023)	(.019)	(.024)	(.025)	(.108)
GDP per capita of host	-.012***	.012***	-.012***	.017***	.024***	.007
	(.003)	(.004)	(.003)	(.004)	(.005)	(.007)
FDI-to-GDP	.008***	.038***	.008***	.045***	.038***	.093***
	(.001)	(.003)	(.001)	(.003)	(.003)	(.012)
Trade-to-GDP	-.000	-.001	-.000	-.001*	-.001	-.027***
	(.000)	(.000)	(.000)	(.000)	(.001)	(.004)
Fuel exports	.023***	.023***	.023***	.022***	.019***	.029***
	(.002)	(.003)	(.002)	(.003)	(.003)	(.005)
Tax haven	.373***	.154***	.372***	.060	.157***	-1.087***
	(.049)	(.055)	(.049)	(.057)	(.054)	(.311)
Total BITs	.009***	.012***	.009***	-.026***	.010***	.020***
	(.001)	(.001)	(.001)	(.005)	(.002)	(.002)
GDP per capita of home	.003***	.002**	.003***	.002**	.001	-.006*
	(.001)	(.001)	(.001)	(.001)	(.001)	(.003)
GDP growth of home	.066***	.066***	.066***	.065***	.061***	.008
	(.008)	(.008)	(.008)	(.008)	(.008)	(.018)
Polity score	.098***	.142***	.099***	.172***	.107***	.219***
	(.014)	(.016)	(.014)	(.017)	(.015)	(.038)
Control of corruption	.060	.142	.066	-.143	.424***	.544
	(.085)	(.086)	(.085)	(.094)	(.094)	(.334)
Government effectiveness	-.590***	-.411***	-.592***	-.057	.146	.512**
	(.102)	(.105)	(.102)	(.118)	(.108)	(.203)
Stability	-.206***	-.080	-.203***	.087	-.068	.417***
	(.039)	(.049)	(.039)	(.059)	(.053)	(.108)
Regulatory quality	.301***	.075	.299***	-.036	-.067	.609***
	(.089)	(.092)	(.089)	(.097)	(.093)	(.145)
accountability	1.123***	.753***	1.115***	.470***	.937***	.224
	(.095)	(.118)	(.095)	(.124)	(.126)	(.241)
Log bilateral trade	.158***	.159***	.157***	.158***	.141***	.085***
	(.009)	(.010)	(.009)	(.010)	(.010)	(.017)
Colony	.366***	.408***	.367***	.399***	.399***	.185*
	(.047)	(.049)	(.048)	(.049)	(.050)	(.107)
Ally	.016	.239**	.023	.220**	.212**	.259*
	(.097)	(.098)	(.097)	(.099)	(.099)	(.136)
Common language	.111**	.208***	.113**	.189***	.210***	1.207***
	(.048)	(.051)	(.048)	(.051)	(.050)	(.139)
Distance	-.008***	-.008***	-.008***	-.008***	-.008***	-.013***
	(.000)	(.000)	(.000)	(.000)	(.000)	(.001)
Difference in LJI score	-.792***	-.782***	-.793***	-.794***	-.787***	-.598***
	(.122)	(.120)	(.122)	(.120)	(.113)	(.208)
Both common law	.484***	.307***	.485***	.338***	.337***	-.437**
	(.071)	(.075)	(.071)	(.075)	(.075)	(.181)
Both civil law	.105***	.092***	.104***	.102***	.070**	.117*
	(.030)	(.031)	(.030)	(.031)	(.030)	(.066)
Log firm age	.006	.007	.006	.007	.007	.057**
	(.006)	(.007)	(.006)	(.007)	(.007)	(.024)
Log firm assets	.023***	.019***	.023***	.019***	.021***	.020
	(.003)	(.003)	(.003)	(.003)	(.003)	(.012)
Log No. of host	1.206***	1.215***	1.206***	1.216***	1.215***	1.172***
	(.011)	(.012)	(.011)	(.012)	(.012)	(.033)
Economic complexity index		-.300***		-.404***	-.375***	-.279
		(.042)		(.051)	(.052)	(.202)
Total factor productivity		-.574***		-.590***	-1.025***	-3.972***
		(.117)		(.124)	(.133)	(.257)
Domestic credit to private sector		-.002***		-.001**	-.003***	-.009***
		(.001)		(.001)	(.001)	(.002)
No. of listed companies		-.002*		-.001	-.003***	.012***
		(.001)		(.001)	(.001)	(.004)
Constant	-21.956***	-23.713***	-20.069***	-23.826***	-23.678***	-20.016***
	(.502)	(.612)	(1.045)	(.634)	(.652)	(3.030)
Number Obs.	324,245	230,467	324,245	230,467	230,467	155,751

The table displays coefficients and standard errors (in parentheses, clustered at parent company level). Two-tail tests.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

AMEs of BIT and TCA (Column 2, Table 2)

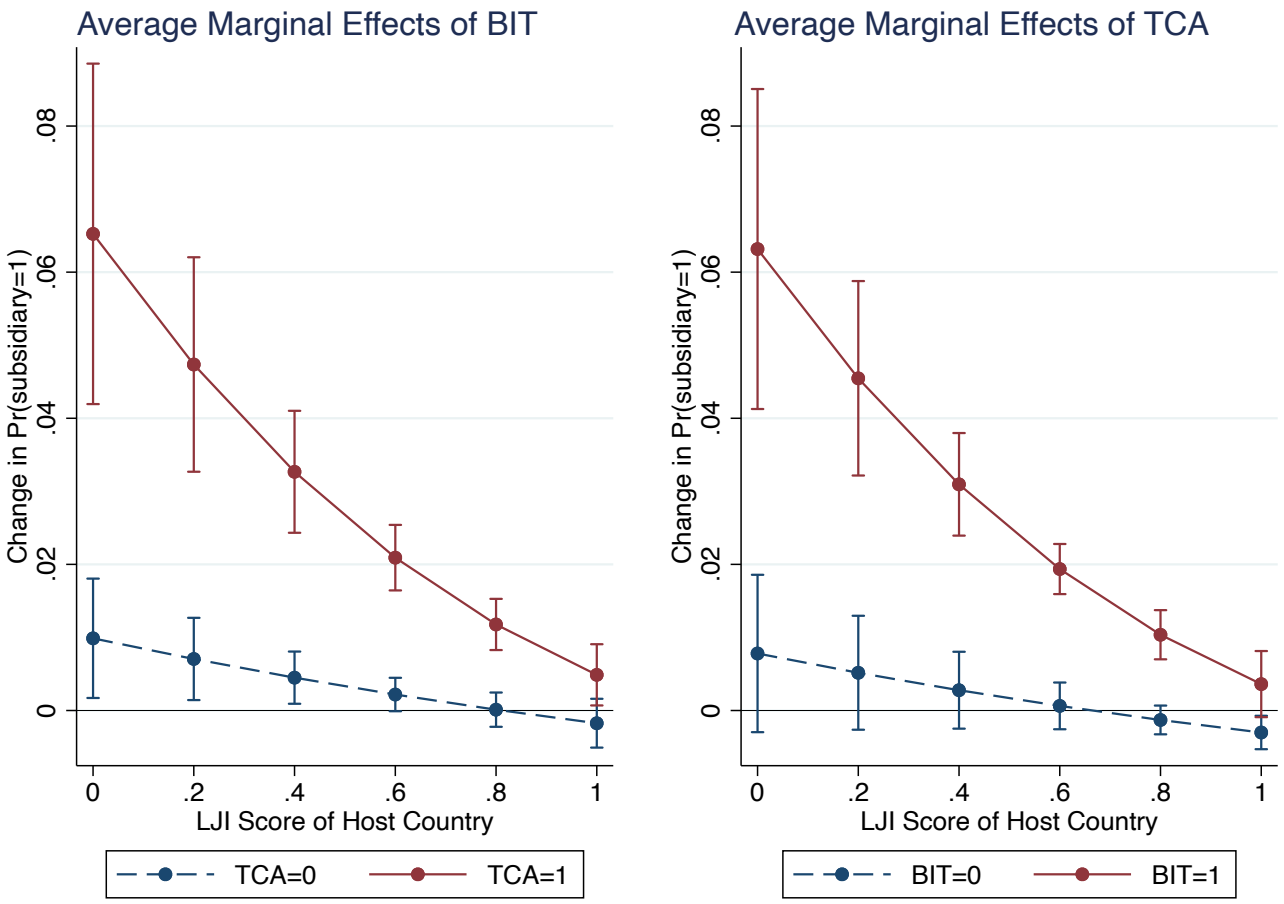

Figure B.1: Average Marginal Effects of BIT and TCA (Column 2, Table 2)

The y-axis represents the change of the probability of foreign subsidiary creation in response to the discrete change of BIT and TCA from 0 to 1, with 95% confidence interval. The plot is based on coefficient estimates from Column 2 in Table 2. All other variables are left at their observed values.

AMEs of BIT and TCA (Column 3, Table 2)

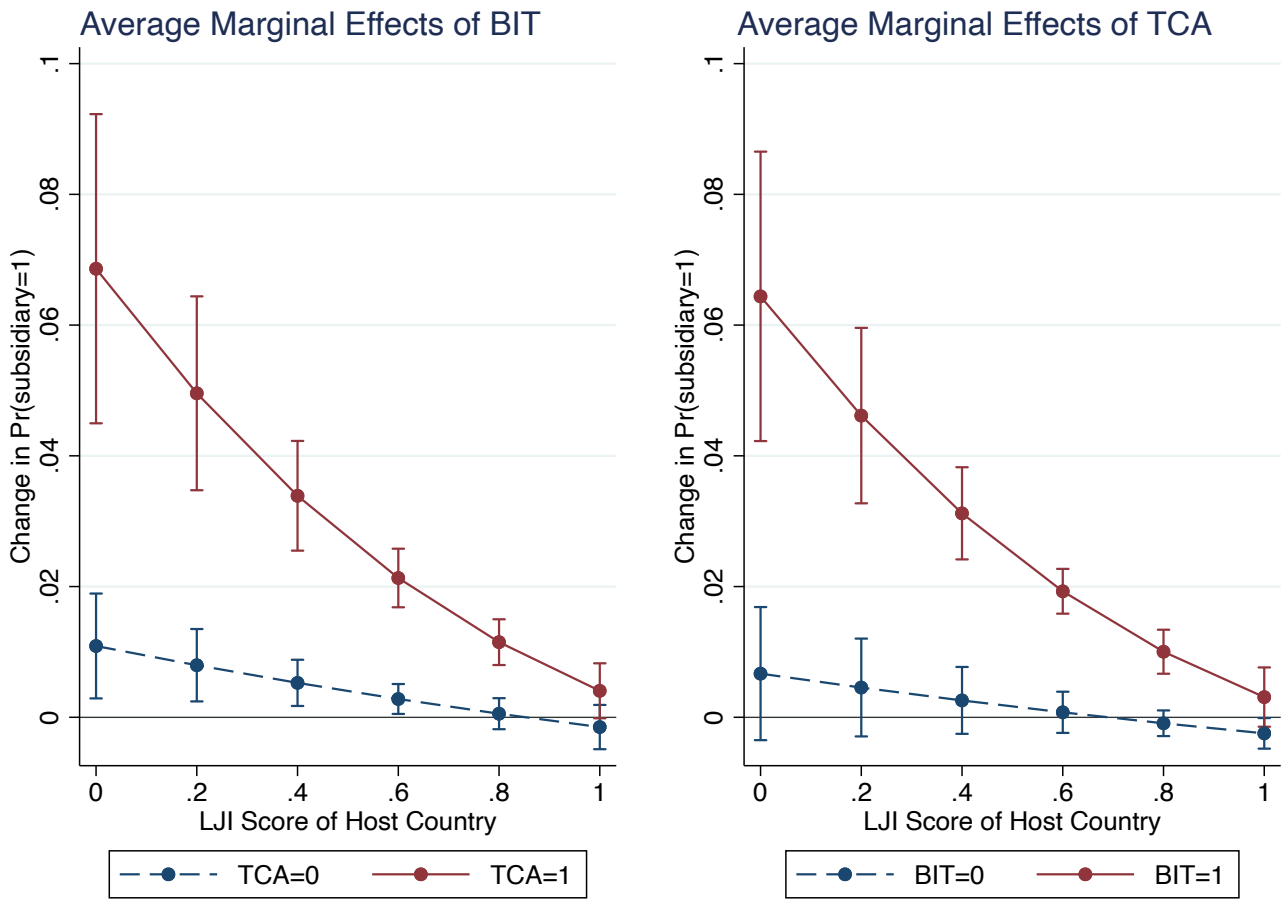

Figure B.2: Average Marginal Effects of BIT and TCA (Column 3, Table 2)

The y-axis represents the change of the probability of foreign subsidiary creation in response to the discrete change of BIT/TCA from 0 to 1, with 95% confidence interval. The plot is based on coefficient estimates from Column 3 in Table 2. All other variables are left at their observed values.

AMEs of BIT and TCA (Column 6, Table 4)

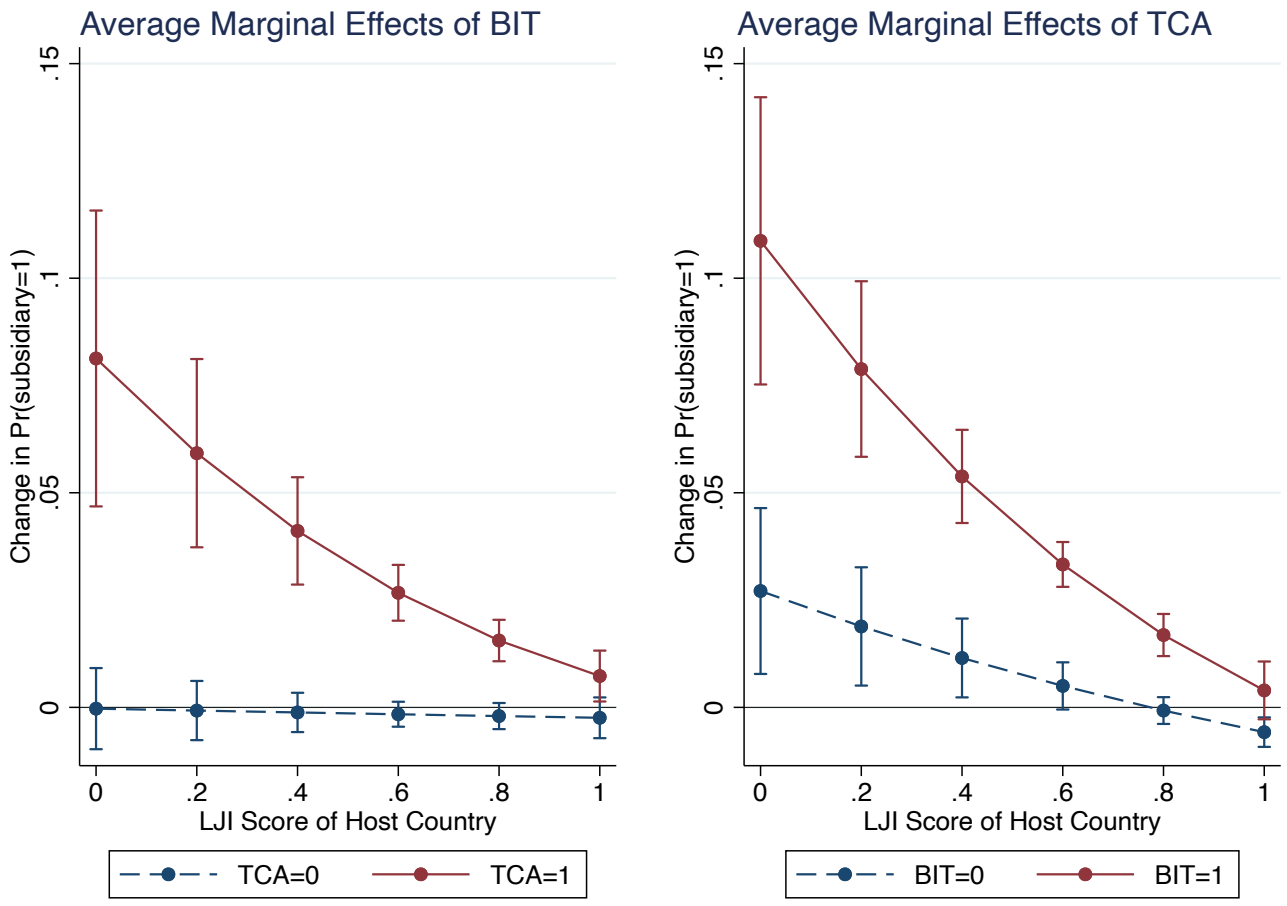

Figure B.3: Average Marginal Effects of BIT and TCA (Column 6, Table 4)

The y-axis represents the change of the probability of foreign subsidiary creation in response to the discrete change of BIT/TCA from 0 to 1, with 95% confidence interval. The plot is based on coefficient estimates from Column 6 in Table 4. All other variables are left at their observed values.

AMEs of BIT and TCA, Accounting for the NYC (Column 7, Table 4)

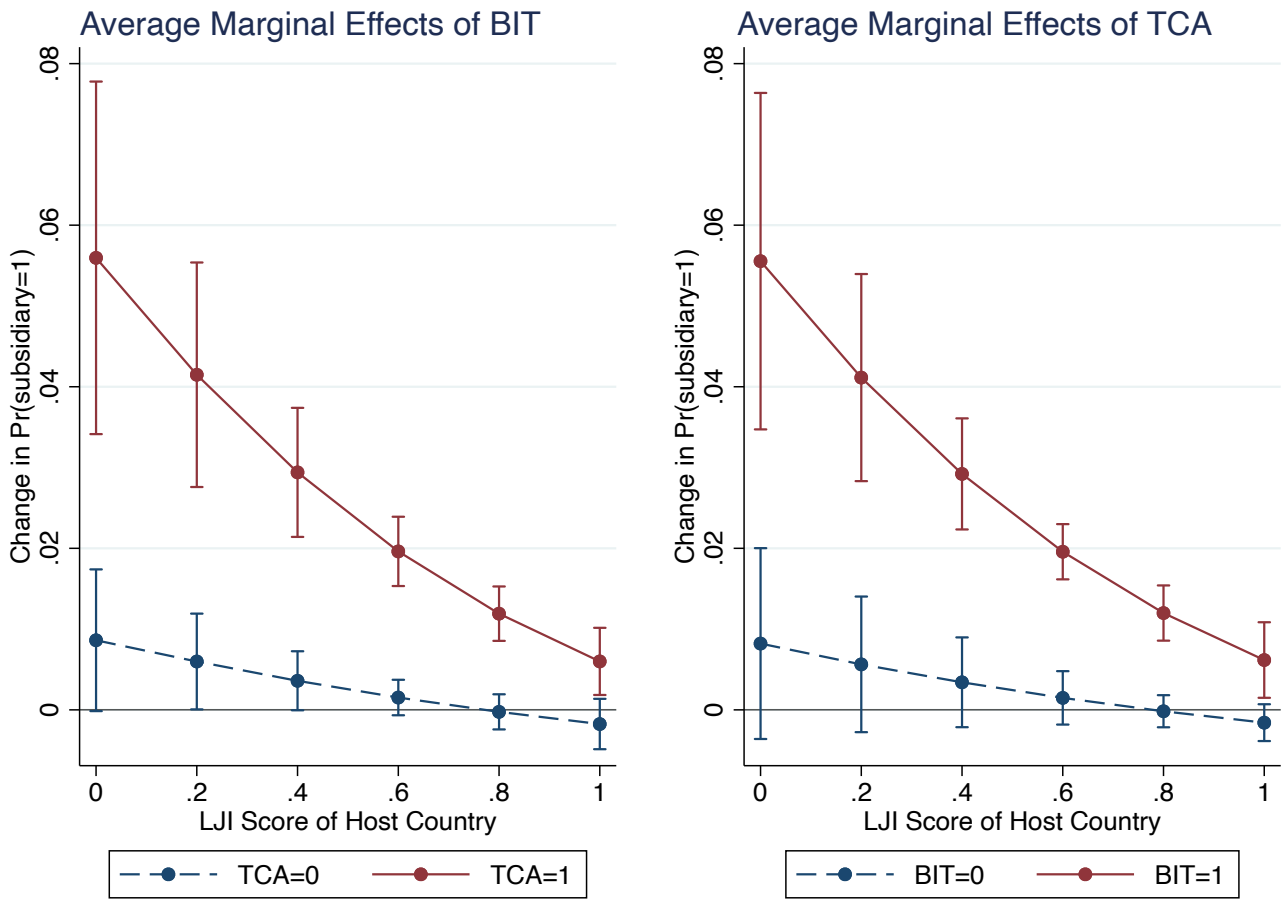

Figure B.4: Average Marginal Effects of BIT and TCA, Accounting for NYC (Column 7, Table 4)

The y-axis represents the change of the probability of foreign subsidiary creation in response to the discrete change of BIT/TCA from 0 to 1, with 95% confidence interval. The plot is based on coefficient estimates from Column 7 in Table 4. All other variables are left at their observed values.

AMEs of NYC (Column 7, Table 4)

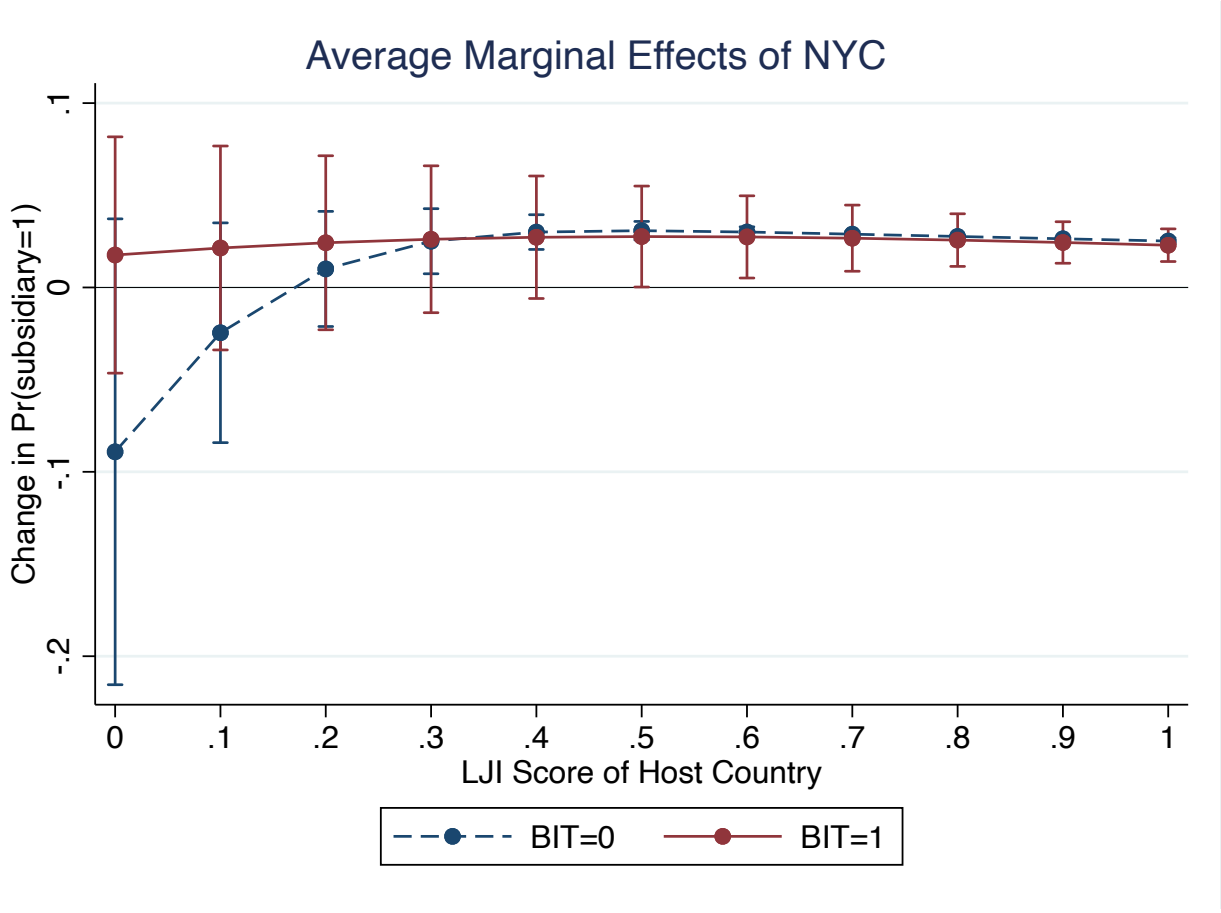

Figure B.5: Average Marginal Effects of NYC (Column 7, Table 4)

The y-axis represents the change of the probability of foreign subsidiary creation in response to the discrete change of NYC from 0 to 1, with 95% confidence interval. The plot is based on coefficient estimates from Column 7 in Table 4. All other variables are left at their observed values.

AMEs of BIT and TCA, Accounting for the Signaling Effect of BITs (Column 8, Table 4)

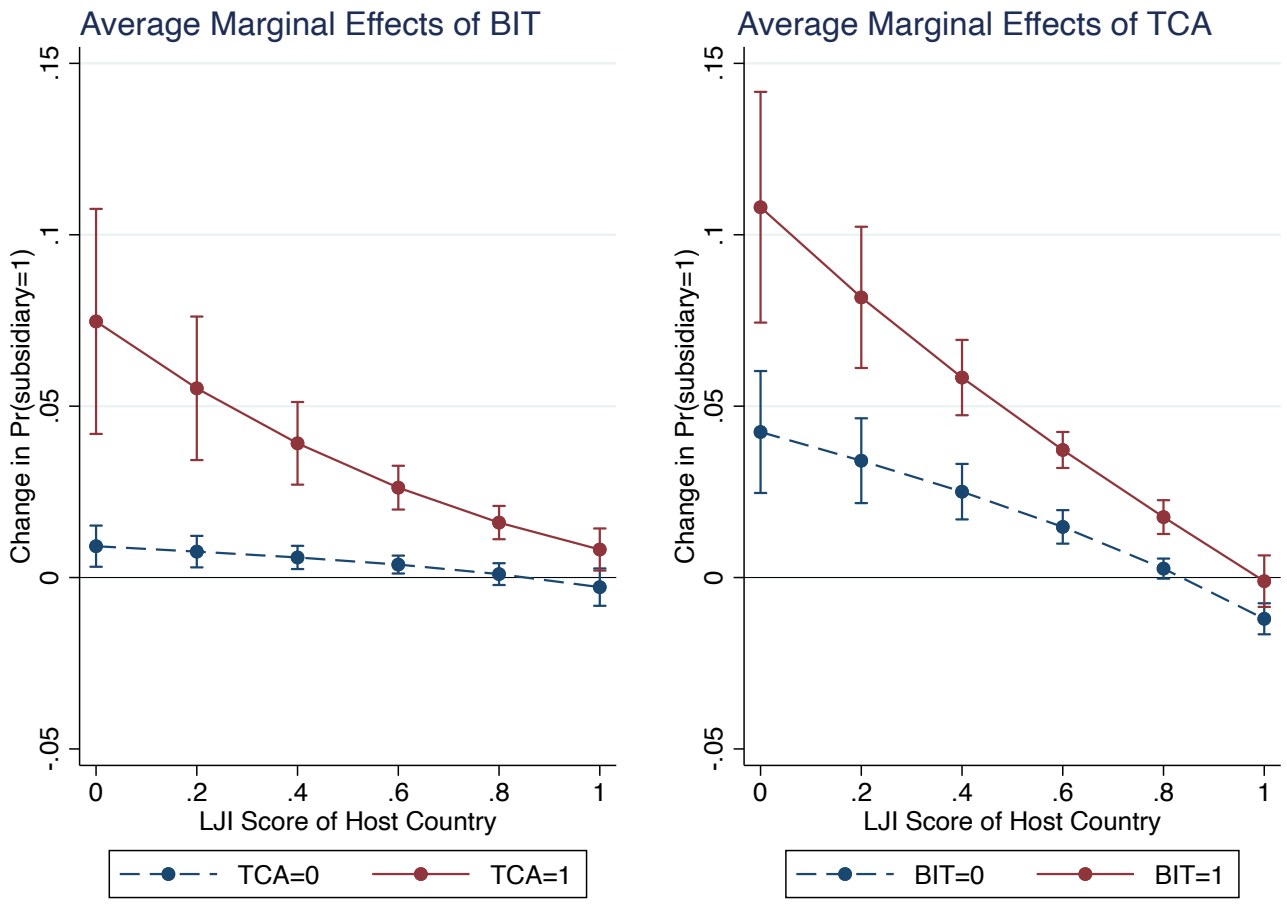

Figure B.6: Average Marginal Effects of BIT and TCA, Accounting for the Signaling Effect of BITs (Column 8, Table 4)

The y-axis represents the change of the probability of foreign subsidiary creation in response to the discrete change of BIT/TCA from 0 to 1, with 95% confidence interval. The plot is based on coefficient estimates from Column 8 in Table 4. All other variables are left at their observed values.

AMEs of BIT and TCA, Using Rule of Law Indicator (Column 9, Table 4)

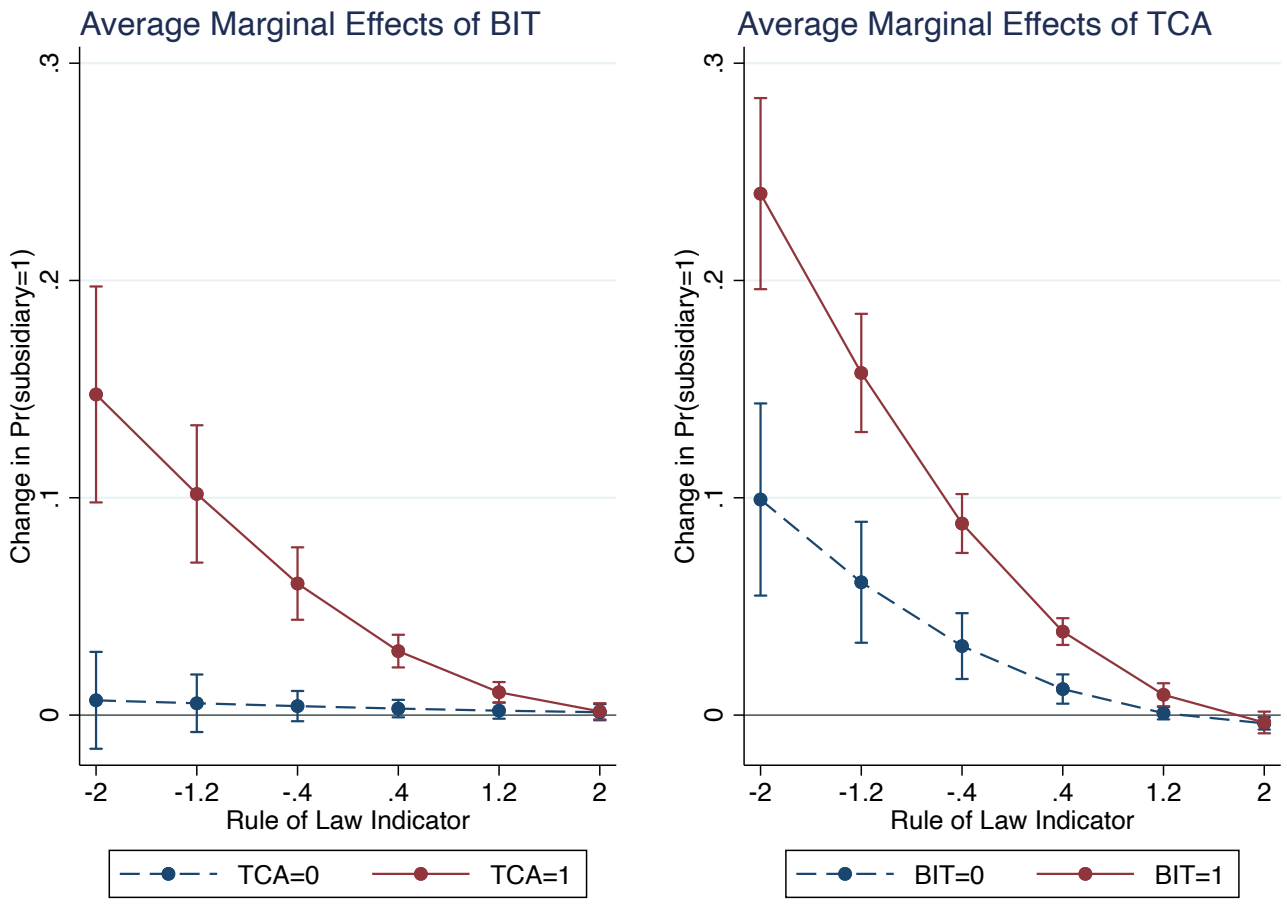

Figure B.7: Average Marginal Effects of BIT and TCA, Using Rule of Law Indicator (Column 9, Table 4)

The y-axis represents the change of the probability of foreign subsidiary creation in response to the discrete change of BIT/TCA from 0 to 1, with 95% confidence interval. The plot is based on coefficient estimates from Column 9 in Table 4. All other variables are left at their observed values.

AMEs of BIT and TCA, Excluding OECD Host Countries (Column 10, Table 4)

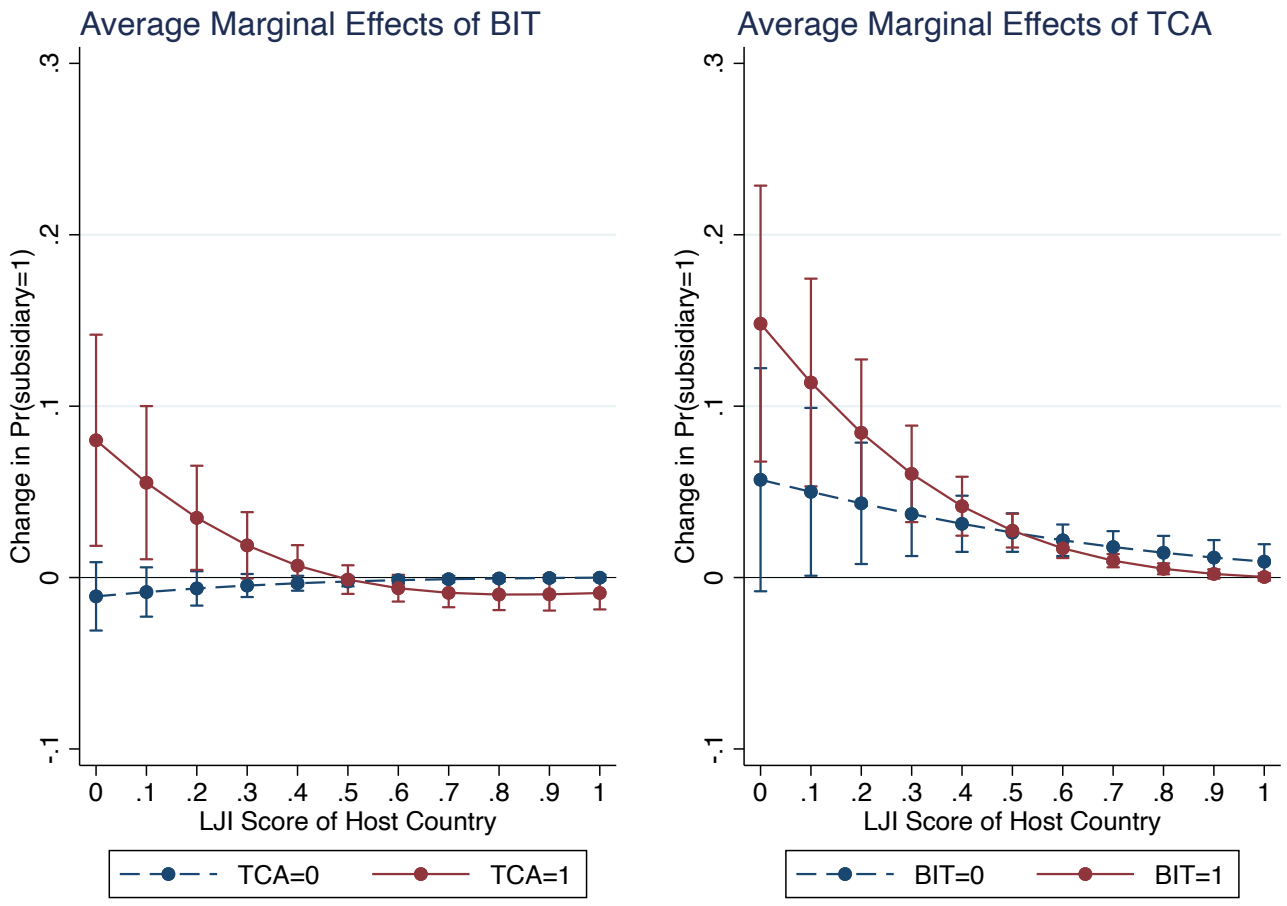

Figure B.8: Average Marginal Effects of BIT and TCA, Excluding OECD Host Countries (Column 10, Table 4)

The y-axis represents the change of the probability of foreign subsidiary creation in response to the discrete change of BIT/TCA from 0 to 1, with 95% confidence interval. The plot is based on coefficient estimates from Column 10 in Table 4. All other variables are left at their observed values.

APPENDIX C

Table C.1: Full Estimation Results, Table 4.2

	(1)	(2)	(3)	(4)	(5)
BIT	.339**	.321**	.349**	.330**	.363**
	(.164)	(.163)	(.161)	(.166)	(.170)
TCA	-.129	-.251*	-.208*	-.215	-.227
	(.140)	(.139)	(.121)	(.141)	(.144)
Rule of law	-.186	1.367**	1.470**	1.351**	1.319*
	(.160)	(.674)	(.630)	(.677)	(.676)
BIT*Rule of Law			-.360**		
			(.161)		
TCA*Rule of Law			-.032		
			(.236)		
New York Convention				-.396***	
				(.151)	
Total BITs					-.002
					(.003)
Log GDP of host country	.674***	.622***	.698***	.617***	.630***
	(.079)	(.072)	(.095)	(.072)	(.072)
GDP per capita of host country	-.000	-.000*	-.000**	-.000*	-.000*
	(.000)	(.000)	(.000)	(.000)	(.000)
FDI-to-GDP ratio	.615	.497	.401	.491	.500
	(.532)	(.480)	(.464)	(.474)	(.474)
Trade-to-GDP ratio	.010	-.293	-.226	-.278	-.287
	(.133)	(.198)	(.187)	(.196)	(.195)
Tax haven	-.080	-.123	-.377	-.123	-.077
	(.230)	(.240)	(.298)	(.242)	(.232)
Polity score	-.009	-.008	.001	-.010	-.006
	(.019)	(.020)	(.021)	(.020)	(.020)
Control of corruption	.169	.759	.718	.707	.688
	(.141)	(.616)	(.575)	(.615)	(.595)
Government effectiveness	.135	.099	.035	.135	.072
	(.214)	(.822)	(.746)	(.826)	(.798)
Political stability	-.127	-.160	-.160	-.176	-.153
	(.105)	(.132)	(.128)	(.130)	(.137)
Regulatory quality	.059	.332	.415*	.306	.328
	(.169)	(.221)	(.227)	(.219)	(.216)
Voice and accountability	.504***	2.370	3.583	2.342	2.410
	(.190)	(3.613)	(3.970)	(3.621)	(3.525)
Log bilateral trade	.167***	.174***	.133***	.176***	.169***
	(.053)	(.052)	(.051)	(.051)	(.052)
Colonial tie	-.771***	-.694***	-.560**	-.694***	-.740***
	(.236)	(.229)	(.251)	(.234)	(.234)
ATOP ally	.308**	.174	.159	.177	.216
	(.151)	(.139)	(.136)	(.140)	(.145)
Common language	.612***	.449*	.461**	.446*	.475**
	(.216)	(.229)	(.231)	(.231)	(.220)
Distance	-.000	-.000	-.000*	-.000	-.000
	(.000)	(.000)	(.000)	(.000)	(.000)
Economic complexity index	-.148	-.030	-.082	-.055	-.008
	(.124)	(.130)	(.149)	(.135)	(.128)
Total factor productivity	-.146	-.079	-.163	-.153	-.073
	(.369)	(.366)	(.374)	(.384)	(.361)
Domestic credit to private sector	-.002	-.002	-.002	-.002	-.002
	(.002)	(.002)	(.002)	(.002)	(.002)
No. of listed companies	.006**	.007**	.005	.007**	.007**
	(.003)	(.003)	(.003)	(.003)	(.003)
Net interest margin	-.026	-.025	-.023	-.027	-.026
	(.023)	(.021)	(.019)	(.021)	(.021)
Capital account openness	.292	.292	.314*	.313*	.323*
	(.192)	(.182)	(.178)	(.182)	(.181)
Exchange rate	-.000***	-.000***	-.000***	-.000***	-.000***
	(.000)	(.000)	(.000)	(.000)	(.000)
Difference in Control of corruption		.746	.701	.718	.716
		(.624)	(.573)	(.626)	(.603)
Difference in government effectiveness		-.098	-.197	-.103	-.150
		(.795)	(.727)	(.804)	(.772)
Difference in political stability		-.047	-.016	-.055	-.042
		(.109)	(.108)	(.107)	(.111)
Difference in regulatory quality		.251	.220	.252	.281
		(.230)	(.232)	(.228)	(.236)
Difference in voice and accountability		1.862	3.167	1.813	1.939
		(3.610)	(3.975)	(3.627)	(3.511)
Difference in rule of law		1.476**	1.438**	1.442**	1.368*
		(.681)	(.609)	(.681)	(.716)
Constant	-7.713***	-12.978**	-14.922**	-12.344**	-12.965**
	(.984)	(5.194)	(5.975)	(5.247)	(5.103)
Number Obs.	515	515	515	515	515

The table displays coefficients and standard errors (in parentheses, clustered at country level). Two-tail tests.
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table C.2: Full Estimation Results, Table 4.3

	(6)	(7)	(8)
Total BITs	.307**	.422***	.345**
	(.125)	(.126)	(.137)
TCA institution	-12.027	-25.022***	-27.983***
	(7.611)	(7.006)	(6.192)
Rule of law	-12.220	-10.836	-2.739
	(11.403)	(11.255)	(12.543)
Total BITs*Rule of law			-.218
			(.169)
TCA*Rule of law			27.716*
			(14.861)
Log GDP of host country	2.700	7.433**	4.873
	(2.090)	(3.082)	(3.655)
GDP per capita of host country	-.000	-.001	-.001
	(.000)	(.001)	(.001)
FDI-to-GDP ratio	-80.574	-89.757	-64.874
	(98.310)	(185.910)	(183.063)
Trade-to-GDP	-2.552	6.965	-6.275
	(7.889)	(9.782)	(13.329)
Tax haven	-5.449	-3.822	6.231
	(10.379)	(12.210)	(12.731)
Polity score	-.171	.615	.642
	(1.042)	(1.222)	(1.165)
Control of corruption	1.003	.596	-8.520
	(10.206)	(10.480)	(12.289)
Government effectiveness	17.690	11.595	16.178
	(12.911)	(14.227)	(15.866)
Political stability	-10.755***	-10.726*	-10.474*
	(3.641)	(5.380)	(5.219)
Regulatory quality	7.146	6.696	7.370
	(7.988)	(11.149)	(11.466)
Voice and accountability	6.907	1.358	-1.567
	(13.081)	(16.884)	(16.668)
Economic complexity index		-5.570	1.714
		(6.437)	(7.111)
Total factor productivity		67.922***	68.929***
		(12.256)	(11.969)
Domestic credit to private sector		.023	.071
		(.140)	(.137)
No. of listed companies		.145	.076
		(.250)	(.239)
Capital account openness		1.651	5.927
		(12.558)	(12.105)
Exchange rate		-.000	-.001
		(.001)	(.001)
Constant	1.363	-105.399**	-71.272
	(24.914)	(42.200)	(49.934)
Number Obs.	222	193	193

The table displays coefficients and standard errors (in parentheses, clustered at country level). Two-tail tests.
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$