Ecole Doctorale des Sciences Economiques, Juridiques, Politiques et de Gestion

Centre d'Etudes et de Recherches sur le Développement International (CERDI)

Université Clermont Auvergne, CNRS, IRD, CERDI, F-63000 Clermont-Ferrand, France

ESSAYS ON THE INSTITUTIONAL CHANGE POTENTIAL OF FOREIGN DIRECT INVESTMENT IN DEVELOPING COUNTRIES

Thèse Nouveau Régime

Présentée et soutenue publiquement le **16 Décembre 2021**

Pour l'obtention du titre de Docteur *ès* Sciences Économiques de l'Université Clermont Auvergne

Par

Assi OKARA

sous la direction de:

Pr. Patrick PLANE

Composition du jury:

Alban AHOURE	Professeur, Université Félix Houphouët Boigny	Rapporteur
Mathilde MAUREL	DR, CNRS, Université Paris 1 Panthéon-Sorbonne	Rapporteure
Simone BERTOLI	Professeur, CERDI, UCA	Suffragant
Michaël GOUJON	Maitre de conférences HDR, CERDI, UCA	Suffragant
Emmanuel PINTO MOREIRA	Dr., Directeur ECCE, African Development Bank	Suffragant
Patrick PLANE	DR CNRS, CERDI, UCA	Directeur

L'Université Clermont Auvergne n'entend donner aucune approbation ni improbation aux opinions émises dans cette thèse. Ces opinions doivent être considérées comme propres à leur auteur.

A ma fille Halley Andréa

A ma regrettée soeur Pélagie et mon regretté ami Baudelaire

Remerciements

Je bénis ton nom, Seigneur Jésus, de m'avoir fait la grâce d'aller jusqu'au bout de ce travail de recherche.

collègues avec qui j'ai collaboré.

A Ibrahima Diallo, merci pour ta grande sollicitude et ton inclinaison à toujours partager ton savoir qui a nourri des analyses dans cette thèse. Mohamed Boly, que nos discussions me manquent déjà! Et grand merci pour les outils échangés.

Ce travail de recherche est le résultat de belles années passées à Clermont-Ferrand. J'exprime ma reconnaissance à tous ceux qui étaient là dès le début pour faciliter mon intégration. Je pense en particulier à Landry Gbato et à Ali Compaoré. J'ai une pensée spéciale pour tous mes camarades de promotion avec qui on a partagé les mêmes passions mais aussi les mêmes difficultés (Nestor, Ali, Yashmina, Oulimata, Hugues, Alou, Arouna, Jérémy, Humaira, Aale Raja, Afrika, Pierre.)

Cette thèse est également le fruit d'interactions et discussions avec des ainés, amis et collègues doctorants (Sanogo, Eric, Mohamed, Seydou, Aissata, Melaine, Ibrahim, Olivier, Mahamady, Jean-Marc, Axelle, Moulaye, Régina, Camille, Yoro, Lucie, Claire, Jules, Camara, Aristide, Adil, Ibrahim, et bien d'autres.)

Être doctorant, c'est aussi savoir gérer le stress. C'est pourquoi je ne saurai oublier les séances de foot avec les coéquipiers du searchball (Michael, Ababacar, Samuel, Antoine, Johan, Camille, Sebastian, Florian, Damien, Camara, notre attaquant Nestor, et bien d'autres.)

J'exprime ma gratitude à Julienne Dapré, et à Yao Dapré pour leur soutien si précieux, ainsi qu'à l'Association des Ivoiriens en Auvergne. Merci à mes camarades de la promotion PTCI 2013-2015 pour leurs encouragements. J'ai une pensée très émue pour Yasmine qui nous a quittés trop tôt.

Je rends hommage à mon père, Okara Chiawa, qui a toujours souhaité que j'aille aussi loin que possible dans mes études et qui m'a toujours accompagné dans ce sens. Également à ma mère pour son amour. A mon oncle Alexis Gnamon et sa femme, mes seconds parents. Un grand merci à tous mes frères et sœurs pour leur soutien, en particulier à Marie-Jeanne et Narcisse. A ma compagne Asha pour avoir subi toutes les épreuves avec moi.

A toutes ces personnes qui de près ou de loin ont contribué à l'accomplissement de ce travail, je vous remercie du fond du cœur.

Résumé

La qualité des institutions est perçue comme l'un des déterminants majeurs, si ce n'est le plus important, de la croissance économique de long terme. Pour de nombreux spécialistes, les écarts de développement entre pays riches et pays en développement trouvent leur origine dans la faiblesse des institutions des derniers, qui elle-même est le résultat de facteurs interne et externe. Au sujet des facteurs externes, ces dernières décennies ont connu (globalement) une hausse rapide et continue des flux d'Investissement Direct Étranger (IDE) vers les pays en développement. Cet afflux d'IDE, au-delà de ses conséquences économiques sur les pays hôtes a d'autres implications, notamment sur l'environnement institutionnel. Parce que de bonnes institutions réduisent le coût des activités des multinationales, les États dans leur objectif d'être les destinations privilégiées des IDE ont tendance à aligner le cadre institutionnel aux besoins des investisseurs directs étrangers. Par ailleurs ces derniers s'engagent dans des actions de lobbying et de pression en vue d'influencer les institutions locales. Dans ce contexte, cette thèse examine comment les acteurs externes peuvent contribuer au développement institutionnel dans le monde en développement à travers l'IDE. Elle s'intéresse au potentiel de changement institutionnel des IDE dans les pays en développement à travers trois chapitres utilisant des outils statistique et économétrique appropriés. Chaque chapitre explore un aspect spécifique des institutions, à savoir les institutions économiques (Chapitre 2), la stabilité socio-politique (Chapitre 3) et la corruption (Chapitre 4). Cette thèse met également l'accent sur l'hétérogénéité dans les formes d'IDE qui pourrait donner lieu à des impacts institutionnels différentiés. Le Chapitre 2 examine comment la qualité des institutions économiques dans les pays en développement répond aux variations des flux d'IDE. Les résultats montrent que ces institutions s'améliorent davantage dans les pays avec des flux d'IDE plus importants et cet effet est tiré par les flux en provenance des économies développées alors qu'aucun lien significatif n'est détecté pour les IDE en provenance des économies en développement. En outre, les résultats indiquent que l'effet positif de l'IDE total est susceptible d'être

atténué dans les pays où le secteur des ressources naturelles représente un vecteur important des IDE. En définitive, les résultats suggèrent que la qualité des institutions dans les pays d'origine des IDE importe dans la relation IDE/institutions économiques dans le monde en développement. Le Chapitre 3 analyse le potentiel des IDE à prévenir l'instabilité socio-politique en améliorant les opportunités socio-économiques. Par conséquent, il se focalise sur l'IDE Greenfield pour son impact plus direct sur la croissance et la création d'emplois et donc ses externalités socio-économiques plus fortes. Les résultats montrent clairement que les IDE Greenfield favorisent la stabilité politique. Tenant compte de la possibilité pour les gouvernements de recourir à la répression politique pour imposer la stabilité politique, ce chapitre s'intéresse par ailleurs à l'influence de cette variable dans la relation IDE-stabilité politique. Les résultats indiquent que les IDE tendent à promouvoir une stabilité politique respectueuse des droits de l'homme, préservant ainsi le bien-être des individus. En conséquence, les pays devraient accorder plus d'attention à ces investissements qui ont un impact plus fort sur la croissance et la création d'emplois comme les IDE Greenfield. Le Chapitre 4 s'inspire de la littérature sur la malédiction des ressources naturelles pour examiner si l'impact des rentes de ressources naturelles sur la corruption est conditionné par l'origine du capital utilisé pour produire ces rentes, en se focalisant sur les IDE dans le secteur des ressources en Afrique. Les résultats montrent que les rentes liées aux ressources naturelles favorisent davantage la corruption dans les pays où les IDE dans le secteur des ressources sont plus importants, par rapport aux pays à faible IDE où la relation est mitigée. Nous montrons également que la qualité des institutions démocratiques détermine si ces pays peuvent éviter l'augmentation du niveau de corruption résultant d'IDE plus élevés dans le secteur extractif et de rentes plus importantes. Nos résultats soulignent qu'il est possible de contrer l'effet accélérateur des IDE dans l'industrie extractive sur la corruption par une démocratie plus participative qui contrôle et impose des contraintes sur l'exercice du pouvoir exécutif.

Mots-clés :   Institutions · droits de propriété · IDE · Greenfield · stabilité socio-politique · corruption · rentes de ressources naturelles · pays en développement.

Codes JEL :   F21 · C23 · E02 · C26 · D73 · D72 · O13.

Abstract

Institutional quality is considered one of the most important, if not the most important, determinants of long-run growth. For many development specialists, development gaps between rich countries and developing countries lie in the weakness of the latter group's institutions, which results from both internal and external factors. Regarding external factors, the recent decades have seen a (overall) rapid and continuous increase in Foreign Direct Investment (FDI) flows to developing countries. This surge in FDI inflows, beyond its direct economic consequences in host countries, has other implications, notably for the institutional environment. Because good institutions reduce the cost of doing business for Multinational Corporations (MNCs), governments competing to attract FDI tend to align the institutional framework in their countries with the needs of foreign direct investors. In addition, MNCs can resort to lobbying and pressure to influence local institutions. Against this backdrop, this thesis examines how external actors, through FDI, can contribute to institutional development in the developing world. This thesis, therefore, explores the institutional change potential of FDI in developing countries through three chapters using suitable statistical and econometric tools. Each chapter explores a specific aspect of institutions, namely economic institutions, approached notably with the protection afforded to private property (Chapter 2), socio-political stability (Chapter 3), and corruption (Chapter 4). This thesis also explores heterogeneity in the forms of FDI, which could result in differential institutional impacts. Chapter 2 investigates how the quality of economic institutions in developing countries responds to changes in FDI inflows. The results show that economic institutions improve in countries with larger FDI flows and this effect is driven by FDI from developed economies while no significant link is detected for FDI from developing economies. Furthermore, they indicate that the positive institutional impact of total FDI is likely to be mitigated in countries where the natural resources sector represents a major driver

of FDI. The findings suggest that the quality of the institutions in FDI origin countries matters in the FDI/economic institutions nexus in the developing world. Chapter 3 analyzes the potential of FDI to counter socio-political instability by improving economic opportunities. Therefore, it focuses on Greenfield FDI for its more direct impact on growth and job creation and thus its stronger socio-economic externalities. The results clearly evidence that Greenfield FDI favors political stability in the developing world. Accounting for the possibility for governments to use political repression to impose stability, this chapter also examines the influence of this variable in the FDI-political stability relationship. The results indicate that Greenfield FDI tends to promote political stability compliant with governments' respect for human rights, therefore preserving individuals' wellbeing. Accordingly, countries should pay more attention to such investments with the stronger impacts on growth and jobs creation as Greenfield FDI. Chapter 4 draws on the resource curse literature to investigate whether the impact of resource rents on corruption is conditional on the origin of capital used to produce these rents, focusing on FDI in the resource sector in Africa. We find that resource rents are more corruption-breeding in countries with higher FDI in the resource sector, compared to lower FDI countries where the relation is mixed. We also show that the quality of democratic institutions determines whether these countries can avoid the increase in their corruption resulting from higher resource FDI and higher rents. Our findings highlight that it is possible to counter the corruption-breeding effect resulting from higher resource FDI and rents through stronger democracy that promotes voice and accountability and therefore poses constraints on the exercise of the executive power.

Keywords :   Institutions · property rights · FDI · Greenfield · socio-political stability · corruption · resource rents · developing countries.

JEL Codes :   F21 · C23 · E02 · C26 · D73 · D72 · O13.

Contents

List of Figures

List of Tables

CHAPTER 1

General Introduction

"Commerce and manufactures can seldom flourish long in any state which does not enjoy a regular administration of justice, in which the people do not feel themselves secure in the possession of their property, in which the faith of contracts is not supported by law, and in which the authority of the state is not supposed to be regularly employed in enforcing the payment of debts from all those who are able to pay."

Adam Smith, Wealth of Nations

1.1 Context and Motivations

Except for some disruptions such as the sharp decrease in 2008-2009 due to the global financial crisis, Foreign Direct Investment (FDI) inflows have been on the rise over decades, becoming an indispensable source of external financing in the world. Steadier has been the increase in FDI flows to the developing world[1], which proved more resilient to global business cycles (Figure 1.1). Between 1990 and 2015, total FDI inflows in developing economies increased by more than 2000 percent, amounting to about USD 730 billion. These heightened levels of FDI in the developing world, although lower than levels observed in advanced economies, represent an important source of development financing for these countries. From 1990, these flows accounted for a higher share of GDP overall relative to developed economies, with an average of 2.4% of GDP, against 1.8% (Figure 1.2).

In a context of low capital endowments, FDI like other foreign capital such as portfolio investments, contribute to development financing by filling up the saving-investment gap. However, FDI differs from other forms of foreign investments as it

---

[1]Based on the UNCTAD classification. See https://unctadstat.unctad.org/EN/Classifications.html for details.
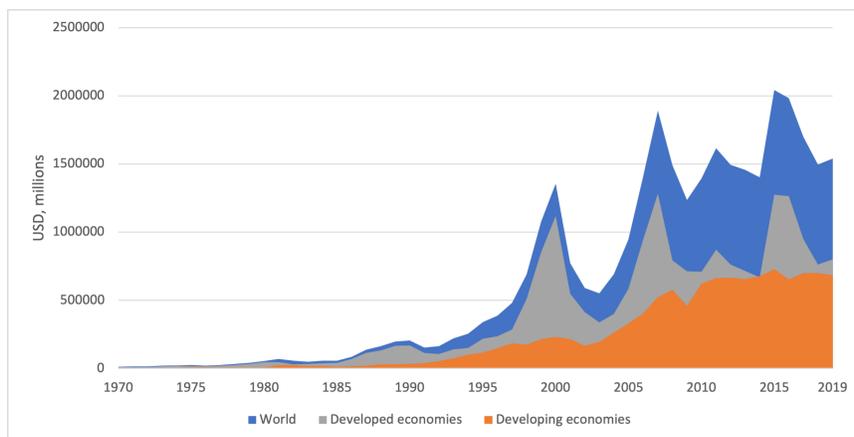
Source: UNCTAD statistics.

Figure 1.1: Trends in FDI inflows, USD in millions
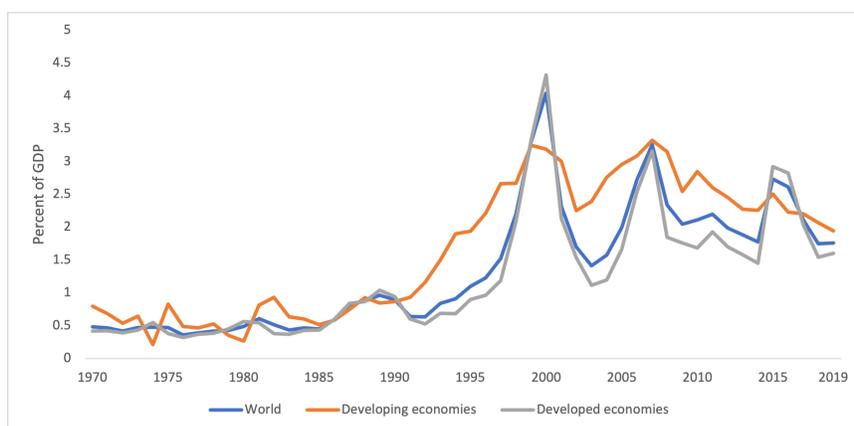
Source: UNCTAD statistics.

Figure 1.2: Trends in FDI inflows, percent of GDP

implies establishing a lasting interest by the direct investor in the host country through the control or a significant degree of influence over the management of the direct investment enterprise. As defined by the Balance of Payments and International Investment Position Manual: Sixth Edition (IMF, 2009), FDI arises when a unit resident in one economy makes an investment that gives control or a significant degree of influence over the management of a company that is resident in another economy. This concept is operationalized where a direct investor owns equity that entitles it to 10 percent or more of the voting power (if it is incorporated, or the equivalent for an unincorporated company) in the direct investment enterprise. As such, FDI has more economic potentials than other

forms of foreign capital flows, including productivity spillovers, advanced technology transfer, easier access to international markets and integration to global value chains, among others.

This characteristic of FDI has also other major implications beyond the direct economic sphere. The rapid growth of FDI inflows from the 1990s as briefly discussed above, along with the increased competition among economies to be attractive destinations for Multinational Corporations (MNCs) have sparked interest in other aspects of FDI impacts on host countries. Some voices and studies have warned of or evidenced adverse effects of FDI resulting from greater competition leading host countries to make concessions at the expense of the social welfare. These include sharp cuts in tax rates, abuse of workers' rights and non-compliance with environmental standards (Devereux et al., 2008; Garretsen and Peeters, 2007; Klemm and Van Parys, 2012; Oman, 2000). These adverse effects, sometimes referred to as "the race to the bottom", highlight the potential of FDI to bring about dramatic changes in host countries' landscape beyond its more direct effect on economic growth.

The institutional environment is reasonably one of the aspects of host countries' landscape most considerably subject to MNCs' influences. The role of institutions in determining a country's level of FDI attractiveness has received greater interest from the 1990s following the influential work of North (1990)[2]. From an economic standpoint, foreign investors choose a destination over another according to the costs associated with each choice. Countries with market-supporting institutions such as those favoring rule of law or the protection of property rights are likely to decrease costs and increase profitability and therefore attract more FDI. Conversely, countries with unreliable and unpredictable institutional environments due for example to political instability or higher corruption are likely to deter FDI by increasing costs and lowering profitability.

Against this backdrop, foreign investors not only search for economic opportunities such as market size, low wages, or resources but also demand better institutional quality, which governments competing to attract FDI will have incentive to provide. In this way, FDI may contribute to improving the institutional landscape in the host country. In line with this argument, the 2017 World Investment Report pointed out that there has been a global rush in many countries to promote a more favorable environment for foreign investors in 2016 with 108 countries, including

---

[2]See Bailey (2018) for a review.

106 developing countries adopting a total of 111 investment laws that promote investment (UNCTAD, 2017). In many cases, Investment Promotion Agencies (IPAs) are dedicated to this objective of strengthening the attractiveness of the business environment by promoting better institutional quality.

In their quest for cost-reducing environments, foreign direct investors also engage actively with FDI destination countries' governments, and influential groups like community and non-governmental organizations (e.g., Bouwen, 2002; Coen, 1997; Hahn, 1999; Hillman and Hitt, 1999) and take direct actions with consequences on local institutions. In other words, foreign direct investors resort to lobbying and pressure to frame cost-reducing institutions (Dang, 2013; Malesky, 2009). As suggested by Hewko (2002), two mechanisms serve to predict if they can succeed or not in influencing prevailing institutions: (i) the ability to provide the local policymakers with information on laws and regulations in other countries; (ii) and the ability to coerce them by threatening to leave for more hospitable investment environments. The potential of foreign investors as agents of institutional change is more relevant in developing host countries, given their relatively low bargaining power.

Although there is no consensus on how FDI affects economic and social outcomes, several studies have demonstrated and evidenced a positive effect of FDI on growth (for a review, see Iamsiraroj and Ulubaşoğlu, 2015). By stimulating growth and promoting good socio-economic conditions, FDI can improve those dimensions of institutions that are particularly responsive to the populations' living conditions. For example, the literature on the causes of socio-political instability argues that factors with the potential to improve economic opportunities are expected to favor socio-political stability by eliminating reasons for grievance and alleviating greed among people. In this regard, FDI appears to have institutions-improving effects through its socio-economic externalities.

However, the expected institutions-enhancing effect of FDI on recipient countries' institutions, whatever the mechanism at play, contrasts with a number of bad practices by foreign investors in the institutional sphere of host countries. The presence of MNCs has raised political issues regarding their potential to prevent institutional development or worsen the situation of already fragile institutions of host countries, especially in developing economies. A plethora of cases incriminates foreign direct investors for being responsible for conflicts, corruption, and authoritarian regime, to name a few. An example is the financial and logistical support

provided by the mining company AngloGold Ashanti in 2003-2004 to a rebel group operating in the gold-rich district of Ituri in the Democratic Republic of Congo (Berman et al., 2017). As I was writing this section, Vincent Bolloré, the French head of a conglomerate dealing in transport, energy and logistics, pleaded guilty to bribery for rights over Lomé and Conakry's ports management[3]. Another example is an alleged secret payment in 2014 for exploration rights over two offshore oil and gas fields involving a brother of Senegal's president and a foreign gas company, revealed in a BBC report[4].

The introduction of legal constraints in some developed countries to prevent their investors from altering institutions in investment countries confirms the reality of the issue. For example, the Foreign Corrupt Practices Act (FCPA) bans American firms from bribing foreign countries' officials. It was introduced in 1977 after US firms were found to pay bribes to foreign officials and to contribute to domestic political parties (Wei, 2000). Other initiatives such as the US Kleptocracy Asset Recovery Initiative, the UK Bribery Act, and the OECD's Convention on Combating Bribery of Foreign Public Officials in International Business Transactions follow similar principles. Moreover, the growth-enhancing effect of FDI lacks empirical consensus and the social development potentials of FDI are contested by many, especially by globalization critics, in particular the structuralist position, which points out globalization-driven opportunities to be associated with a discriminative redistributive process, paving the way to discontent (e.g., Koubi and Böhmelt, 2014; Olzak, 2011). In this regard, the effects of the socio-economic externalities of FDI discussed above may operate in the opposite direction, making FDI weaken institutional quality.

Despite FDI huge potential for institutional change, the literature on the institutional impact of FDI is relatively new and weakly explored. Most studies on the link between FDI and institutions have been interested in how different types of institutions determine FDI locations. Analyzing the impact of FDI on institutions in developing countries is important not only because of the ever-growing importance of foreign direct investors in developing economies but foremost for the role of institutions in long-run growth and comparative development and the weak institutional quality of developing economies.

---

[3]See for example https://goodwordnews.com/corruption-in-togo-justice-refuses-the-plea-guilty-of-vincent- bollore-international-news/.

[4]See https://www.bbc.com/news/world-africa-48753099.

Different definitions of institutions have been proposed by scholars. However, a common feature of these definitions is that they present institutions as the rules of the game. In his highly influential work, North (1990) defines institutions as the humanly devised constraints that shape human interaction. Based on North's definition, institutions structure political, social, or economic incentives. Close to this definition, Acemoglu and Robinson (2012) refer to institutions as the rules influencing how the economy works, and the incentives that motivate people. They distinguish between political and economic institutions. Political (economic) institutions determine the constraints on and the incentives of the key actors in the political (economic) sphere. Good or inclusive economic institutions are those that encourage people to invest in physical and human capital and in technology, which in turn favors economic performance[5]. Forms of such institutions include those that promote rule of law, secure property rights and allow a relatively equal access to economic opportunities and resources to the populations. On the opposite, bad or extractive economic institutions are those under which these features are absent for a broad cross-section of society.

Both dimensions of institutions are interrelated as political institutions lay the foundations of economic institutions. Good economic institutions are shaped by good political institutions, i.e., those which allow a broad distribution of political rights – democracy as opposed to dictatorship or autocracy, place constraints on the politicians' exercise so that they are accountable and responsive to citizens. Under political institutions that restrict political rights and power to a small elite, good economic institutions are difficult to sustain as individuals with political power tend to use it in their best interests at the expense of the great mass of people[6] A decomposition of political and economic institutions into some of the factors that have received great attention in literature provides a better insight into the different facets of the concept.

---

[5]Acemoglu and Robinson (2012) provide an extended definition: "to be inclusive, economic institutions must feature secure private property, an unbiased system of law, and a provision of public services that provides a level playing field in which people can exchange and contract; it also must permit the entry of new businesses and allow people to choose their careers."

[6]Acemoglu and Robinson (2012) argued that growth can emerge under extractive (bad) political and economic institutions referring to cases such as the economic growth industrialization of the Soviet Union by end on the 1920 until the 1970s, the industrialization of South Korea under General Park, and China's economic growth. However, they made clear that this growth cannot be sustained enough or be the type that is accompanied by creative destruction.

The form of government

The form of government determines the type of governance enjoyed by a country. Various forms of government feature the political institutions of countries in the world. In line with the definition of political institutions discussed above, they differ in the extent to which they grant political rights and civil liberties to citizens and political power to the government. These rights and power are in general specified in the constitution and constitute *de jure* laws and rules. In this regard, two main forms of government can be distinguished: democracy and autocracy or dictatorship[7]. Democratic governance allows a broad distribution of rights to citizens, such as rights to choose, to pose constraints on and sanction governments, freedom of speech and press. Under autocratic governance, these rights are absent or restricted to a strict minimum and give excessive political power to a small elite. A good approach of the form of government requires that one also accounts for *de facto* political governance, i.e., how legislation (*de jure* laws) is factually implemented. A country can have a *de jure* democratic form of government, and still experience *de facto* autocratic governance when *de jure* laws and rules are not or are roughly enforced.

Political (in)stability

Political stability broadly refers not only to the likelihood that the government will be destabilized or overthrown (Kaufmann et al., 2009), or its ability to stay in office and implement its program(s), but also to the absence of disruptive events such as violent demonstrations, social unrest, and risks of armed conflicts. Political instability does not allow or encourage the great mass of people to make the best use of their skills to participate in economic activities as it creates a disruptive environment to the economy. The uncertainty associated with politically unstable environments increases the costs of doing business and risks, which deters investments. Under political instability, good economic institutions would therefore be difficult or impossible to sustain.

(Control of) Corruption

Corruption can be defined as "the extent to which public power is exercised for private gain" (Kaufmann et al., 2009), or "the misuse of public office for private

---

[7]We consider other forms of government such as oligarchy, social democracy and the like to be variants of either democracy or autocracy.

gain" (Svensson, 2005). Practically, corrupt practices capture such activities as bribery, cronyism, patronage, and embezzlement of public funds. The "sand-in-the-wheel" view of corruption argues that, given officials' degree of discretionary power, corruption can lead to the creation of counterproductive regulations to extract more bribes, thereby reducing efficiency in markets and in the allocation of resources. Corruption limits incentives to invest as it makes it difficult to conduct business effectively by distorting the economic environment and reducing the efficiency of the government. It distributes opportunities to economic actors and businesses through patronage rather than ability. Good institutions, therefore, require effective control of corruption.

Rule of law and the enforcement of property rights

An unbiased (effective, impartial, and transparent) system of law with a legal system that protects property rights, and contract enforcement is the central piece of good economic institutions (Acemoglu et al., 2005a). This is considered the most important function of government in Fraser Institute's assessment of economic freedom[8]. Without the protection of persons and their rightfully acquired property, including the fruits of their labor, individuals will not have the incentive to invest in productivity-increasing assets such as human or physical capital or adopt better technologies. When economic agents lack confidence in contract enforcement and in the protection of the fruits of their productive efforts, their incentive to engage in productive activity is weakened. A legal environment that features secure private property is also essential for the efficient allocation of resources. Countries with partial courts, popular defiance of the law without effective sanction, and large deficiencies in broad and secure private property rights are unlikely to prosper.

It is well established that differences in institutions significantly explain cross-country differences in levels of economic development. Some scholars' view of institutions as the fundamental cause of long-run growth is unequivocal. Acemoglu et al. (2005a) statement that "*the question of why some societies are much poorer than others is closely related to the question of why some societies have much worse economic institutions than others*" is an example. The assessment of countries' institutional quality as provided by frequently used measures such as the Worldwide Governance Indicators (WGI) of the World Bank lays bare large institutional

---

[8]See https://www.fraserinstitute.org/economic-freedom/approach.
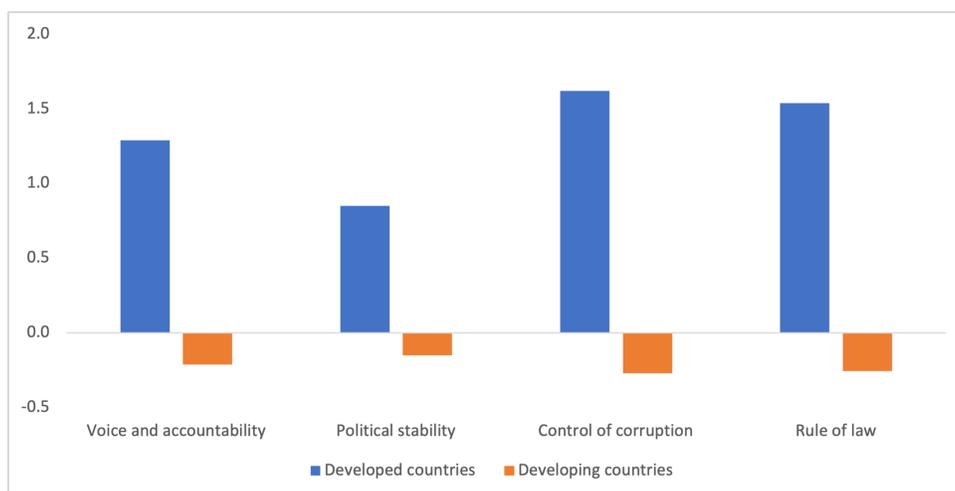
Source: World Governance Indicators (WGI).

Figure 1.3: Institutional factors in developing and developed countries, averages over 1996-2019

development gaps between developed and developing countries. Figure 1.3 compares the levels of institutional quality of countries based on their level of economic development, focusing on the four institutional factors discussed above and using WGI's measures. For each dimension of institutions, the WGI provides an indicator of the quality, ranging approximately between -2.5 (worst institutions) to 2.5 (best institutions)[9]. The figure shows striking differences between developed and developing countries over the period 1996-2019. In every dimension, the average quality of institutions in developing countries falls below zero, much lower compared with that of their developed counterparts with positive averages in all dimensions. The largest difference is observed in control of corruption, with an average level of about -0.3 in the developing world against 1.6 in developed economies. Although countries in developing countries are lagging behind in terms of institutional development on average, there is significant heterogeneity among them in their institutions dynamics. Some have managed to improve their environments over time. Examples include Georgia, Liberia, Rwanda, and Serbia based on the rule of law dimension (Figure 1.4). These countries need to sustain their effort to further improve their institutions while those with significant and persistent gaps need to revamp their institutional landscape.

---

[9]For details on the methodology, see https://info.worldbank.org/governance/wgi/Home/Documents.
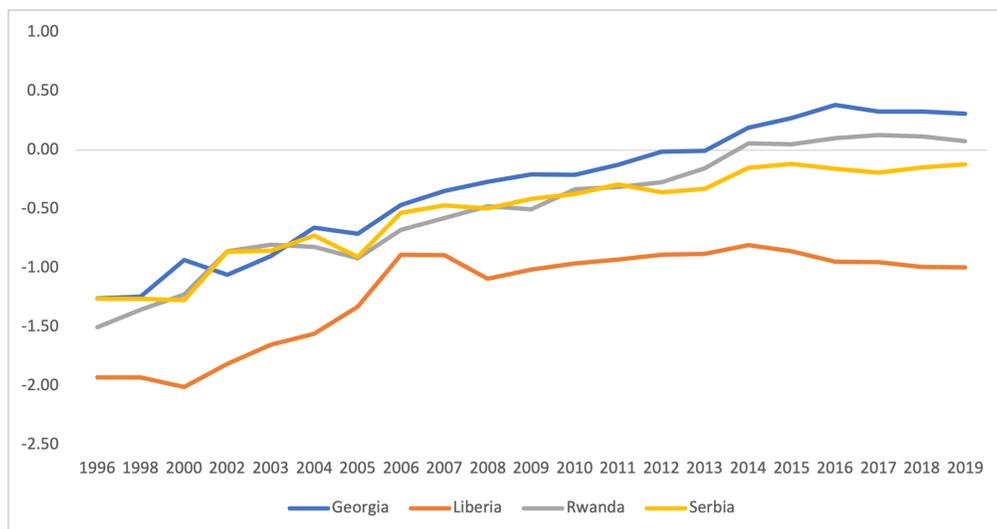
Source: World Governance Indicators (WGI).

Figure 1.4: Evolution of institutions based on the rule of law index of the WGI

In traditional neoclassical growth models, institutions were treated as exogenous as differences in growth were not explained by changes in institutions like variation in property rights affecting how goods and services are exchanged in markets. Following North and Thomas (1973)'s view of institutions as the fundamental cause of long-run growth, interest has emerged in factors shaping institutions. In that respect, Acemoglu et al. (2005a) showed that institutions are endogenous and result from choices made by the different groups of society for their economic consequences associated with the groups' interests. Based on the above discussion on the potential of FDI for institutional change and the increasing flows of FDI to developing countries, it appears important to question how FDI has been affecting developing host countries' institutions. Answering this question is the purpose of this thesis which investigates whether or not FDI is a boon to developing countries' institutions. Each chapter explores a specific aspect of institutions, namely economic institutions (Chapter 2), socio-political stability (Chapter 3), and corruption (Chapter 4).

The benchmark definition of FDI that a company's stake in a subsidiary must be at least 10 percent pools together different forms of FDI. However, all forms of FDI are not equivalent regarding their institutional impacts. First, the country of origin of FDI may matter. Transferring capital goes along with transferring norms (Kwok and Tadesse, 2006). The institutional norms in investing countries are therefore

likely to spill over in investment countries. Because of the deep institutional gaps between rich and poor countries, there may be differences between developed and developing country investors regarding their effects on FDI destination countries' institutions. Moreover, investors from developing countries are often accused of limiting developed countries' bargaining position for institutional change in the developing world because of their lower levels of conditionality and their lack of legal constraints of the kind of the FCPA for example (Demir, 2016). Second, the form of FDI (greenfield vs. Mergers and Acquisition – M&A) may also result in different effects on institutions. Greenfield FDI – the creation of a new production unit from scratch by a foreign investor – creates new capital assets and additional production capacity, thereby generating new economic activity and jobs. Unlike M&A which does not imply an immediate increase in the capital stock, greenfield FDI has more socio-economic externalities, and therefore higher indirect potential for institutional change. Third, the cross-sectoral heterogeneity of FDI is also expected to result in different institutional impacts of FDI. Primary sector FDI, especially resource-sector FDI is likely to end up with extractive institutions while secondary and tertiary sectors FDI would tend to develop market-supporting institutions. This thesis incorporates all these aspects of heterogeneity in FDI in investigating how institutions in the developing world respond to changes in FDI for a better understanding of the mechanisms at play.

1.2   Theoretical foundations

The theoretical foundations of this thesis are multiple. First, it is related to strands of literature that study the effect of FDI on the host economy. The first relevant body of literature focuses on economic effects through productivity spillover effects to domestic firms resulting from the advantages embodied in MNCs including superior technologies, access to international markets, integration to global value chains, and improved management techniques (Fosfuri et al., 2001; Liu, 2008; Markusen and Venables, 1999; Wang and Blomström, 1992). This thesis draws upon the theoretical insights from this literature to investigate the effect of FDI on host economies' institutions.

The question of the institutional impacts of FDI in developing countries is of great importance given the role of institutions for development. As such, this thesis also draws upon the institutional theories of development which demonstrate that differences in institutions are the fundamental cause of large wealth differences

across countries (Acemoglu et al., 2005a; Jones, 2003; North, 1990; North and Thomas, 1973; North, 1981). These theories argue that countries with better institutions structure economic incentives in society towards more investment in physical and human capital and the adoption of more efficient technologies. The quality of their institutions will allow them to use resources more efficiently to achieve higher and sustained economic growth. By the inclusive nature of good institutions, they make it possible for a broad cross-section of society to participate in the wealth generation process and enjoy the fruits of their investment and labor, making development a reality for all.

Third, this thesis relies on the theories on the determinants of institutions. Following North and Thomas (1973)'s view of institutions as the fundamental cause of long-run growth, interest has emerged in factors shaping institutions. For example, Acemoglu et al. (2005a) showed that institutions are endogenous and result from choices made by the different groups of society for their economic consequences associated with the groups' interests. Ultimately, prevailing economic institutions are highly influenced by individuals or groups with greater political power which comprises *de jure* and *de facto* political power. *De jure* political power is distributed by political institutions whereas *de facto* political power is possessed by groups with greater economic might even if they are not distributed *de jure* political power (Acemoglu et al., 2005a; Acemoglu and Robinson, 2012). Given the large amounts of capital they provide to developing economies, and their higher bargaining power relative to governments in these countries, foreign direct investors can be regarded as groups with political power and therefore with high influence on the host countries' institutions. This is all the more expected as their profitability largely depends on the local business environment. As a consequence, they can behave as strategic actors to influence local institutions in their favor (Hillman and Hitt, 1999).

1.3   Value added of the thesis and main results

This thesis contributes to the relatively recent and weakly explored literature on the institutional impacts of FDI in various aspects. In Chapter 2, I investigate how the quality of economic institutions in developing countries responds to changes in FDI inflows. To my knowledge, only Ali et al. (2011) have analyzed, for a cross-section of countries, the impact of FDI inflows on institutions from an economic perspective close to this study, focusing on property rights. This chapter uses a

more comprehensive measure of economic institutions based on the rule of law index of the WGI, a composite indicator capturing a number of elements including the protection afforded to property rights, the quality of contract enforcement as well as the strength of the rule of law. It also uses a more comprehensive sample of developing countries and relatively more recent data. In addition, Chapter 2 explores heterogeneity in the institutional effect of FDI according to the origin country of the investment: flows from developed origin countries vs. flows from developing origin countries. In disentangling the effect based on the country of origin, I follow Demir (2016), who unlike what is done in this chapter, was interested in the general political risk. Also, the chapter investigates heterogeneity in the FDI/economic institutions relationship based on the main sector driving the investments focusing on the resource sector. Accordingly, I test whether the effect differs between resource-dependent and non-resource-dependent countries for FDI, relying on the Fixed-Effects ANOVA model derived from Hsiao (2014) to distinguish between the two groups of countries. Lastly, while current empirical studies in this literature have commonly used OLS or System GMM estimations for dynamic panel models, the empirical method in this chapter relies on the Bootstrap-based bias Corrected Fixed Effects (BCFE) estimator proposed by Everaert and Pozzi (2007). As with GMM estimators, the BCFE addresses the "Nickel bias" arising when the standard Fixed Effects (FE) estimator is used to estimate dynamic models with a large number of cross-section units and a small number of time periods (see Nickell, 1981). However, the BCFE is shown to be more stable and to have superior small-sample properties. The results show that economic institutions improve in countries with larger FDI flows and this effect is driven by FDI from developed economies while no significant link is detected for FDI from developing economies. Furthermore, they indicate that the positive institutional impact of total FDI is likely to be mitigated in countries where the natural resources sector represents a major driver of FDI. The findings suggest that the quality of the institutions in FDI origin countries matters in the FDI/economic institutions relationship in the developing world.

Then, Chapter 3 analyzes the potential of FDI to counter socio-political instability, one of the most pressing challenges faced by developing countries. Some studies such as Bussmann (2010) and Mihalache-O'Keef (2018) have investigated the impact of FDI along with various measures of conflicts. This chapter rather examines how FDI can shape the institutional environment of destination countries in terms of its capacity to promote socio-political stability conditions and absence of

violence. Drawing on the literature on the causes of political instability and conflicts, where poverty and bad economic prospects have been found to feed instability, I hypothesize that FDI can favor socio-political stability by improving economic opportunities. Therefore, while previous studies in this literature were interested in total FDI, I depart from them by looking at greenfield FDI for its more direct impact on growth and jobs creation (e.g., Financial-Times, 2019; Harms and Méon, 2018; Wang and Wong, 2009) and thus its greater socio-economic externalities. On the methodological side, taking advantage of the bilateral structure of the FDI data used in this chapter, I develop a gravity-based instrumental variable approach a la Frankel and Romer (1999) and Feyrer (2019), never used before in this literature. The results clearly evidence that greenfield FDI favors political stability, and are robust to various specifications and estimations methods, as well as a series of sensitivity tests. They also indicate that greenfield FDI tends to promote a political stability compliant with governments' respect for human rights, therefore preserving individuals' wellbeing.

Chapter 4 draws on the resource curse literature, where natural resources rents are found to breed corruption, to investigate whether the impact of resources rents on corruption is conditional on the origin of capital used to produce these rents, focusing on FDI in the resource sector in Africa. To our knowledge, this chapter is the first study providing a rigorous empirical investigation of the FDI/rents/corruption relationship. Using Panel Smooth Threshold Regressions (PSTR), the results show that natural resource rents are more corruption-breeding in countries with higher FDI in the resource sector, compared to lower FDI countries where the relation is mixed. Our findings therefore highlight that the origin of the capital used to produce rents matters in the effect of rents on corruption. Investigating the transmission channels of the positive association between rents and corruption for high FDI countries, we find that the quality of democratic institutions determines whether these countries can avoid the increase in their corruption resulting from higher resource FDI and higher rents. More precisely, we find the positive association between rents and corruption in high resource FDI countries to turn negative in more democratic African countries where citizens' social control and pressures can push to greater accountability.

Building Stronger Economic Institutions in Developing Countries, the Role of FDI

Foreign Direct Investment flows to developing economies have increased significantly over the last decades, bringing about important changes in the developing world. This chapter is interested in the institutional aspect of these changes, a dimension weakly investigated in the development literature. More precisely, it explores how the quality of economic institutions in developing countries responds to changes in FDI inflows. The results based on extensive data on FDI for a large sample of developing countries, over the period 1990-2009 show that economic institutions are better in countries with larger FDI flows. On average, a 10-point increase in FDI inflows as a percent of GDP is associated with a 0.9-point increase in the quality of economic institutions. The results also show that this effect is driven by FDI flows from developed economies while no significant link is detected for FDI from developing economies. Furthermore, they indicate that the positive institutional impact of total FDI is likely to be mitigated in countries where the natural resources sector represents a major driver of FDI. The findings suggest that the quality of the institutions in FDI origin countries matters in the FDI/economic institutions relationship in the developing world. Overall, the results are robust to a series of sensitivity tests including the inclusion of additional control variables, the exclusion of outliers, the test of income group and regional effects, and heterogeneity analysis based on the level of institutional development of the origin countries

Keywords :   Economic institutions · property rights · FDI · developing countries.

2.1 Introduction

Foreign Direct Investment (FDI) has been a significant source of capital formation in the developing world since the 1990s. Between 1990 and 2015, total FDI inflows in developing economies[1] increased steadily[2] to about USD 730 billion, i.e., by more than 2000 percent. These high levels of FDI are viewed by many as an important source of development financing as they contribute to closing the investment-saving gap and allow the transfer of advanced technology or management techniques embodied in FDI (see for example Combes et al., 2019). However, other aspects beyond these traditional economic mechanisms also deserve attention to capture the full potential of FDI for economic development. The goal of this chapter is to explore the institutional aspect by examining the effects of FDI flows to developing economies on their economic institutions.

The increased competition among countries to attract FDI has led governments to provide cost-reducing conditions to foreign investors, such as tax cuts. Among the factors considered the main determinants of a country's level of FDI attractiveness is the quality of institutions. It is established both theoretically and empirically that countries with better institutions tend to attract larger FDI[3], everything else equal, for the lower costs of doing business associated with good institutions. Cognizant of investors' need for good institutions, governments, therefore, have incentives to improve their institutional environment to strengthen their competitiveness. Consistent with this argument, the 2017 World Investment Report pointed out that there has been a global rush in many countries to promote a more favorable environment for foreign investors in 2016 with 108 countries, including 106 developing countries adopting a total of 111 investment laws that promote investment (UNCTAD, 2017).

Unlike other forms of foreign capital such as portfolio investment, FDI implies establishing a lasting interest by the direct investor in the host country through the direct investment enterprise[4]. In their quest for cost-reducing environments,

---

[1]Based on the UNCTAD's classification of countries. Developed countries are Australia, Austria, Belgium, Canada, Switzerland, Cyprus, Germany, Denmark, Spain, Finland, France, Greece, Hong Kong, Ireland, Iceland, Israel, Italy, Japan, Luxemburg, Netherlands, Norway, New Zealand, Portugal, Sweden, United Kingdom, and the USA. Developing economies include all other countries including transition economies. See https://unctadstat.unctad.org/EN/Classifications.html.

[2]Except for some disruptions such as the decrease in 2009 due to the global financial crisis.

[3]See Bailey (2018) for a recent review.

[4]As defined by the Balance of Payments and International Investment Position Manual: Sixth

foreign direct investors resort to lobbying and pressure to frame cost-reducing institutions (Dang, 2013; Malesky, 2009). As suggested by Hewko (2002), two mechanisms serve to predict if they can succeed or not in influencing prevailing institutions: (i) the ability to provide the local policymakers with information on laws and regulations in other countries; (ii) and the ability to coerce them by threatening to leave for more hospitable investment environments. The potential of foreign investors as agents of institutional change is more relevant in developing host countries, given their relatively low bargaining power.

Institutions can be delineated in many ways. Following Acemoglu and Robinson (2012), we refer to institutions, as the rules influencing how the economy works, and the incentives that motivate people. Economic institutions determine the constraints on and the incentives of the key actors in the economic sphere. As argued by the same authors, good economic institutions are those that feature private property, a fair and well-functioning system of law and a provision of public services allowing people to contract and exchange effectively. Institutions with these features are engine of prosperity because they encourage people to invest in physical and human capital and in technology, which in turn favors economic performance.

While good economic institutions are instrumental for development, they also represent a significant foundation of transnational investments as they are crucial for investment contracts. Even countries with no liberal political institutions like China have adopted private property rights and freedom of contract as the authoritative basis for the agglomeration of Multinational Corporations (MNCs) as legal persons (Robé et al., 2016). Accordingly, economic institutions are more likely to respond to changes in FDI. Increasing FDI flows could therefore generate a greater scope for developing countries to achieve more inclusive economic institutions notwithstanding their overall weak levels of institutional quality.

Up to date, relatively little attention has been paid to the institutional impacts of FDI in host countries in literature. To my knowledge, only Ali et al. (2011) have analyzed, for a cross-section of countries, the impact of FDI inflows on institutions

---

Edition of the International Monetary Fund (IMF, 2009), FDI arises when a unit resident in one economy makes an investment that gives control or a significant degree of influence over the management of a company that is resident in another economy. This concept is operationalized where a direct investor owns equity that entitles it to 10 percent or more of the voting power (if it is incorporated, or the equivalent for an unincorporated company) in the direct investment enterprise.

from an economic perspective close to this study. This chapter complements current studies on the institutional impact of FDI in various aspects. First, it uses relatively more recent data compared to Ali et al. (2011) and a more comprehensive measure of economic institutions based on the rule of law index of the WGI.

Second, it explores heterogeneity in the institutional impact of FDI according to the origin country of the investment. Over the recent decades, FDI flows from developing countries to other developing countries have been growing with the rise of South-South cooperation. In 2010, South-South FDI outflows accounted for 63% of total FDI outflows from the developing region (UNCTAD, 2011). The difference in institutional quality between developed and developing FDI origin countries may result in different institutional impacts. In their economic relationship with other developing countries, Southern countries are often accused of not following or even undermining western countries efforts in promoting better institutions in the developing world. While legal provisions[5] in the North constrain their firms to observe a number of good practices in host economies, such provisions lack in developing investing countries. In disentangling the impact based on the country of origin, I follow Demir (2016), which unlike this chapter, was interested in the general political risk through a composite index of multiple indicators[6]. This chapter is rather interested in one specific dimension of institutions, economic institutions, captured by the protection afforded to property rights (the central piece of economic institutions as per Acemoglu and Robinson (2012)) as well as the quality of contract enforcement and the strength of the rule of law. This approach aligns with Voigt (2013)'s view that measures of institutions should refer to specific dimensions because aggregate measures are too broad and fuzzy to contain meaningful information.

Third, this chapter also investigates heterogeneity in the effect of FDI flows on economic institutions based on the main sector driving the investments focusing on the resource sector. While one may expect FDI in the manufacturing and services sectors, known to be competitive, to promote private property rights by pushing the local environment towards market-oriented institutions, it plausible that FDI in

---

[5]These include the US Foreign Corrupt Practices Acts of 1977; the OECD Anti-Bribery Convention of 1997; the US Kleptocracy Asset Recovery Initiative launched in 2010; and the U.K Bribery Act passed in 2010.

[6]Demir (2016)'s measure of institutions is based on the International Country Risk Guide (ICRG) political risk rating from the Political Risk Services, including ICRG's political, legal and bureaucratic measures of institutions.

the resource sector, known to be less competitive, contribute to extractive economic institutions. Therefore, I test whether the impact differs between resource-relying and non-resource-relying countries for FDI through an econometric method derived from Hsiao (2014).

Last but not least, while current empirical studies in this literature have commonly used OLS or System GMM estimations for dynamic panel models, the empirical method in this chapter relies on the Bootstrap-based bias Corrected Fixed Effects (BCFE) estimator proposed by Everaert and Pozzi (2007) and extended by De Vos et al. (2015). As with GMM estimators, the BCFE addresses the "Nickel bias" arising when the standard Fixed Effects (FE) estimator is used to estimate models with a large number of cross-section units and a small number of time periods (see Nickell, 1981). However, the BCFE is shown to be more stable and to have superior small-sample properties.

To preview the results, this chapter evidences that economic institutions improve in countries with higher FDI flows. The results also show that this effect is driven by FDI from developed economies while no significant link is detected for FDI from developing economies. Furthermore, they indicate that the positive institutional impact of total FDI is likely to be mitigated in countries where the natural resources sector represents a major driver of FDI. The findings suggest that the quality of the institutions in FDI origin countries matters in the FDI/economic institutions relationship in the developing world.

The rest of the chapter is organized as follows: the next section revisits the link between FDI and institutions. Section 2.3 presents the empirical methodology. Section 2.4 describes the data used in the study and provides some descriptive statistics. Section 2.5 discusses the empirical results followed by some robustness tests in section 2.6. The final section concludes.

2.2 Related literature

There is extensive literature on the effects of FDI on the host economy. The most direct effect consists of building the host economy's capital stock in a more stable manner as opposed to other forms of foreign capital (Levchenko and Mauro, 2007; Tong and Wei, 2011). Early and most studies also focus on productivity and growth spillover effects of FDI. MNCs are generally considered to have superior technologies and managerial expertise compared to domestic firms. The presence of foreign firms

in the host economy is therefore expected to enhance the productivity of domestic firms through various channels including increased competition (Markusen and Venables, 1999), labor mobility (Fosfuri et al., 2001), and technology transfer (Liu, 2008; Wang and Blomström, 1992). However, the empirical literature investigating the spillover effects of FDI finds mixed results with some studies supporting the prediction (Branstetter, 2006; Greenaway et al., 2004; Haskel et al., 2007), while others find no evidence (Aitken and Harrison, 1999; Haddad and Harrison, 1993). Likewise, no consensus has emerged from the literature on the effect of FDI on income growth. Blomström et al. (1996), and Li and Liu (2005), among others, find a growth-enhancing effect while others such as Durham (2004) fail to detect this effect. A bulk of this literature evidences that the contribution of FDI to growth in the host country is conditional on its absorptive capacity including human capital (Bengoa and Sanchez-Robles, 2003; Borensztein et al., 1998), the level of development (Xu, 20000), and financial development (Hermes and Lensink, 2003).

Foreign direct investors have become major actors in FDI recipient economies with the rapid growth of FDI flows since the 1990s. The growing importance of foreign investors has triggered a research interest in new aspects of FDI impacts in host economies beyond the traditional economic effects. Some studies have argued or evidenced adverse effects resulting from greater competition to attract FDI, referred to as "the race to the bottom". These include sharp cuts in tax rates, abuse of workers' rights and non-compliance with environmental standards (Devereux et al., 2008; Garretsen and Peeters, 2007; Klemm and Van Parys, 2012; Oman, 2000). Another aspect, which has received much lower attention compared to studies on the growth and productivity spillover effects of FDI, is the impact on local institutions.

Studies on the relationship between FDI and host countries' institutions have focused on how the quality of institutions determines FDI locations. Factors like democracy, rule of law, property rights, low levels of corruption, and political stability have been identified as being positively associated with FDI as they create cost and risk-reducing environments for investors (see Bailey, 2018). However, exploring the other side of the picture – how institutions respond to changes in FDI – brings useful additional insights into the linkage between FDI and institutions as (i) MNCs do not always adapt to the local environment, given their potential for political agency according to the profit-maximizing environment they need, in particular in developing countries where they are known to have high bargaining

power, (ii) FDI has induced institutional reforms in countries competing to attract foreign investment, (iii) FDI socio-economic effects can trigger institutional change.

In this context, some studies, albeit comparatively few, have explored the reverse link by investigating how FDI affects institutions in destination countries. A body of this research argues that MNCs engage in lobbying and pressure activities on investment countries' policymakers. Using firm-level data in China's regions, Long et al. (2015) found that FDI improved the institutional quality – measured with the tax and fee burden and the quality of rule of law experienced by Chinese domestic firms – in host regions. They pointed out lobbying and negotiation by foreign investors to influence local governments as one potential channel explaining this effect. Similar previous results on the same mechanisms were found by Dang (2013) in his study of FDI effect on institutional quality across Vietnam's provinces. Malesky (2009) also resorted to investors' lobbying efforts to demonstrate how FDI has contributed to economic reforms in Eastern Europe. These empirical evidence follow prior political strategy analyses which argued that investors can individually or collectively interact with government officials to reduce the risks they face (Hahn, 1999; Hillman and Hitt, 1999). If the main motive behind MNCs' attempts to bring about institutional change clearly appears to be the increase in profit margins, the outcome is however uncertain. As suggested by Hewko (2002), two mechanisms serve to predict if MNCs can succeed or not in influencing prevailing institutions: (i) the ability to provide the local policymakers with information on laws and regulations in other countries, (ii) the ability to coerce them by threatening to leave for more hospitable investment environments.

Economic exchanges have the potential to generate institutional spillovers between countries (Bahar et al., 2014; Bergstrand and Egger, 2013; Cheong et al., 2015). The existence of these spillovers is another channel through which FDI can influence institutions. Naming it the demonstration effect, Kwok and Tadesse (2006) proposed this channel to demonstrate a significant negative effect of FDI on corruption in a large sample of host countries. The idea is that the presence of MNCs in a country challenges the usual bad way business is done by demonstrating how business rooted in an environment built on trust and ethical conduct can be more efficient in the long run. The presence of MNCs therefore provides a concrete and real example to follow. Their findings echo Larraín B and Tavares (2004)'s assessment of the effect of openness on corruption which showed that FDI is significantly associated with lower corruption levels. However, Webster and Piesse (2018) found no difference in the behavior of foreign-owned firms and domestic firms with respect

to corrupt practices based on firm-level data in emerging countries.

The institutional spillovers transmission channel implies that the investor's country of origin may matter in analyzing the institutional effect of FDI. Because developed countries are endowed with better institutions than developing countries, one may expect institutions to get improved by FDI flows from developed economies but undermined by flows from developing economies. Moreover, while regulatory pressure in developed investing countries (e.g., the US Foreign Corrupt Practices Acts, the OECD Anti-Bribery Convention, the US Kleptocracy Asset Recovery Initiative, and the U.K Bribery Act) constrains their firms to observe a number of good practices when investing abroad, such provisions lack in developing investing countries. In this regard, Demir (2016) explicitly tested if there is any difference between the two investment origins (North vs. South) regarding their consequences on political risk. He did not find any significant effect of FDI flows on the institutional gap between home and host countries, except the case of aggregate South-South flows where a significant and negative effect is detected on host countries institutions[7].

Following extant studies on the institutional impact of FDI across various dimensions, this chapter is interested in the quality of economic institutions viewed as the constraints on and the incentives of the key actors in the economic sphere. As such, economic institutions are typically approached with elements including the system of private property, the strength of the rule of law, in particular the quality of contract enforcement (Acemoglu and Robinson, 2012). As market-based institutional factors, secure property rights and effective enforcement of contracts appear to be the type of environment foreign investors will tend to shape in host countries to have the risks and costs of their activities reduced. Several studies have revealed that overall, MNCs prefer to operate in a liberal environment (Globerman and Shapiro, 2003; Sethi et al., 2003). A market-supporting institutional environment positively influences profitability by decreasing costs in many ways. It allows foreign investors to exploit ownership advantages in investment countries (Grosse and Trevino, 1996; Li and Resnick, 2003), constrains opportunistic behavior (Fan et al., 2009), enables cost-saving benefits of internalizing production (Meyer and Nguyen, 2005).

---

[7]Similarly, literature on international migration and institutional change at origin has investigated heterogeneous effects based on common characteristics in destination countries. For example, Spilimbergo (2009) shows that foreign-educated students promote democracy at home if foreign education was acquired in democratic countries.

In analyzing the institutional change potential of FDI in developing countries, this chapter pays particular attention to the influence of natural resources, in line with the resource curse literature. In resource-rich countries, foreign investors are engaged in a contest, often competing to gain access to resources (Newman et al., 2016). The incentive of foreign investors to ensure access to the resources combined with that of the government to engage in rent-seeking activities can lead to extractive economic institutions under which the vast majority of the population has little or no secure property rights over the resource sector and many other related sectors. It then appears plausible that governments in resource-rich countries interact with multinationals – which possess the required technology – to appropriate more rents and serve their own interests at the expense of society. This may result in a lesser, if not detrimental, impact of FDI on economic institutions in countries where the main attracting sector of FDI is the natural resources industry.

To my knowledge, the paper most closely related to this chapter is Ali et al. (2011), who showed that FDI inflows promote property rights based on a panel data set of 70 developing countries. This chapter is similar in the approach, with important conceptual and technical differences. First, the analysis in this chapter uses a more comprehensive sample of developing countries and measure of economic institutions as well as relatively more recent data. Second, this chapter offers more insights into the relationship between FDI and economic institutions by exploring potential heterogeneity in the effect of FDI based on the origin of the investment – North vs. South, following Demir (2016), and on the main sector driving foreign investment – resource vs. non-resource sector, drawing on the literature of the resource curse. Third, the empirical method in this chapter relies on the Bootstrap-based bias Corrected Fixed Effects (BCFE) estimator proposed by Everaert and Pozzi (2007) for its higher stability and superior small sample properties over GMM estimators.

2.3 Empirical methodology

This section presents the empirical approach adopted to explore the FDI/economic institutions nexus in developing countries. Section 2.3.1 deals with the econometric model, and section 2.3.2 presents the estimation strategy.

2.3.1 Model specification

To investigate the link between FDI flows and economic institutions in developing countries, I resort to the following dynamic model relating FDI to institutions and

controlling for a host of time-varying determinants of economic institutions.

$$Inst_{it} = \alpha + \beta Inst_{i,t-1} + \gamma FDI_{i,t-1} + \sum_k \delta_k X_{it} + \varepsilon_{it} \qquad (2.1)$$

Where $Inst_{it}$ is a measure of economic institutions for country i at time t. The lagged value of this variable ($Inst_{i,t-1}$) enters the set of regressors to capture persistence in institutions. α is a constant. $FDI_{i,t-1}$ represents FDI inflows in country i at time $t-1$. Three measures of FDI are considered depending on the origin of the investments: total FDI (from all source countries), FDI from the North (flows from developed source countries), and FDI from the South (flows from developing origin countries). Using the lagged FDI in this model aims at accounting for delayed effects of FDI on changes in economic institutions. This also mitigates the endogeneity of FDI, especially by reducing the risk of reverse causality as institutional quality is found to be a strong predictor of cross-border investments in the literature on FDI determinants. X_{it} is a vector of control variables reflecting the main time-varying determinants of economic institutions. These are:

Real Gross Domestic Product per capita: institutional theories argue that institutions are shaped by economic factors, highlighting that institutions develop in response to a county's income level (Svensson, 2005). Indeed, wealthier economies are expected to have better economic institutions as building and promoting a sound institutional environment require resources.

Education: the human capital theory of institutions argues that growth in human capital favors institutional development (Glaeser et al., 2004). Educated citizens are more likely to understand the nation's major issues and how to influence them to their benefit. Literature presents mixed results of the effect of education on institutions. Some studies find a positive effect (Acemoglu et al., 2005b) while others like Murtin and Wacziarg (2014) evidence the contrary.

Natural resource rents: the distribution of property rights determines that of the economy's resources. When natural resource rents are viewed as manna by groups with political power, they tend to prevent a broad-based distribution of private property rights, hindering economic institutions. Research on the resource curse has also identified weak institutional quality as a channel of the resource curse (Barro, 1990; Collier and Hoeffler, 2004; Fearon and Laitin, 2003; Sala-i Martin and Subramanian, 2013).

Trade openness: integration into the global economy can affect institutions through the diffusion of good practices. Greater openness to the world markets may reinforce market-based institutions necessary to trade. Moreover, various studies, among which Rodrik et al. (2004), have shown that good institutions are correlated with openness.

Democracy: Acemoglu et al. (2005a) argue that economic institutions are the result of choices made by different groups of society for their economic consequences associated with the groups' interests. Ultimately, prevailing economic institutions are determined by groups with more political power which comprises *de jure* and *de facto* political power. The former originates from the political institutions whereas the latter depends on the society's economic resources (capital and human as well, which we take into account with some of the control variables). While some political institutions like democracy or constitutional monarchy lead to inclusive economic institutions, others like dictatorship or autocracy are more favorable to extractive economic institutions.

Government effectiveness: the protection of property rights requires effective administrative institutions, such as deed registration offices. Djankov et al. (Forthcoming) find that government effectiveness matters for the development of property rights.

2.3.2   Estimation strategy

Eq. 2.1 will be first estimated using fixed effects (FE) OLS regressions. However, the dynamic nature of the model combined with individual effects poses major econometric challenges in the context of FE estimations. As evidenced by Nickell (1981), the standard FE estimator is likely to be biased and inconsistent in panel models including the lagged dependent as a regressor with a large number of cross-section units and a fixed number of time periods, which I refer to as micro-dynamic panel models. Therefore, the OLS estimations will serve as a preliminary check of the relationship between FDI and developing countries' economic institutions.

A solution to the "Nickel bias" can be obtained with alternative estimators, among which the generalized method of moments (GMM) estimators, particularly the difference GMM and System GMM estimators (see Arellano and Bond, 1991; Arellano and Bover, 1995; Blundell and Bond, 1998). Under appropriate assumptions, the GMM estimators are unbiased when applied to micro-dynamic panel models. However, they are found to have poor small-sample properties due to the use of in-

strumental variables technique to solve the "Nickel bias." More precisely, the GMM estimators' standard deviation is larger relative to the FE estimator (Arellano and Bond, 1991; Kiviet, 1995). Also, they are subject to finite-sample bias caused by the issue of weak instrument (Bun and Kiviet, 2006; Bun and Windmeijer, 2010; Ziliak, 1997). Moreover, GMM estimations can lead to highly unstable estimates depending on which and how many instruments are used (Roodman, 2009).

To avoid these advantages in providing consistent estimations of Eq. 2.1, this chapter mainly relies on the extended version of Everaert and Pozzi (2007)'s bootstrap-based bias corrected FE (BCFE) estimator proposed by De Vos et al. (2015). The BCFE estimator provides bias-corrected estimates using a bootstrap-based correction procedure of the FE estimator bias. Monte Carlo simulations show that the BCFE estimator has superior small-sample properties compared with GMM estimators. The modified version by De Vos et al. (2015) consists notably of simplifying the core of Everaert and Pozzi (2007)'s algorithm by using the invariance principle – this resulting in a further bias reduction – and extending the algorithm to fit unbalanced and higher-order dynamic panels. Inference is performed under the BCFE using either a parametric or a nonparametric bootstrapped variance-covariance matrix or percentile intervals. De Vos et al. (2015)'s extended version allows for a range of initialization and resampling schemes to account for general heteroskedasticity patterns and error cross-sectional dependence. It is worth noticing that the BCFE is designed to address correlation between all regressors and the error due to the within transformation of the FE estimator, not traditional endogeneity (due for example to reverse causality, and omitted variables.) However, it is very likely that it provides causal effects of FDI on institutions as the use of the lagged FDI as well as the main time-varying determinants of economic institutions mitigates the risks of both reverse causality and omitted variable bias[8]. At least, one can expect it to significantly mitigate possible endogeneity bias of FDI if not reducing the bias to zero.

2.4 Data and descriptive statistics

2.4.1 Data

Economic institutions are measured with the rule of law index of the Worldwide Governance Indicators (WGI). This is a standardized measure that lies approxi-

---

[8]In the robustness section, I also consider two additional controls and the results prove robust.

mately between -2.5 (poorest institutions) and 2.5 (best institutions). Initiated by Kaufmann et al. (1999), the WGI reports governance indicators over six dimensions. The rule of law dimension is measured by a composite indicator capturing a number of elements including the protection afforded to property rights, the quality of contract enforcement as well as the strength of the rule of law[9]. As such, it appears to be a relevant measure of economic institutions in the sense used in this study. Previous studies that used it as a measure of economic institutions include Rodrik et al. (2004)

The **FDI** data are sourced from Demir (2016)[10] who collected yearly bilateral FDI flows data (in current US dollars) over the period 1990-2009 from the OECD, UNCTAD and national statistics institutes databases. I aggregate these bilateral FDI flows over origin country and year to obtain the aggregate FDI inflows for each host country and year, which I then compute as a percent of the host country's GDP using the World Development Indicator (WDI) data. In order to explore possible heterogeneity in the effects of FDI on institutions depending on the origin of the capital, I implement three levels of aggregation: over all source countries (total FDI), over developed origin countries (FDI from the North) and over developing source countries (FDI from the South).

Data on **real GDP per capita, trade openness** (proxied with the sum of exports and imports as a percent of GDP) and **natural resource rents** (calculated as the difference between the monetary value, at world price, of the physical quantities of total natural resources extracted or harvested by a country and the total cost of extracting those quantities, as a percent of GDP) are taken from the WDI of the World Bank.

Education is measured with the human capital (hc) variable of the Penn World Table database. The hc is a human capital index based on data on average years of schooling[11].

Democracy and **government effectiveness** are respectively measured with the voice and accountability and government effectiveness estimates of the WGI. Like the rule of law estimate, they are standardized measures varying between -2.5 (weakest score) and 2.5 (best score).

---

[9]See https://info.worldbank.org/governance/wgi/Home/Documents for more details.

[10]I thank Firat Demir (University of Oklahoma, Norman, USA) for graciously sharing the data with me.

[11]See https://www.rug.nl/ggdc/docs/human$_c$apital$_i$n$_p$wt$_9$0.pdf for details.

2.4.2   Descriptive statistics

Table 2.1 provides summary statistics for the variables entering the model depicted by Eq. 2.1. The final sample to serve for the econometric estimations is made up of 103 countries[12] over the period 1990-2009. In this sample, the mean score of the rule of law index, which measures economic institutions, is -0.3, with Congo, DR (-1.8) having the weakest economic institutions and Singapore (1.5) the best. There is little variation in the quality of institutions within income groups with standard deviations around 0.5, below the full sample standard deviation of 0.7 (Figure 2.1). In addition, the quality of economic institutions improves with the level of income[13], aligning with the institutional theories that institutions develop in response to a country's income level (Svensson, 2005). The strongest economic institutions are observed in high-income countries (with a mean of 0.6) followed by the upper-middle income group (about -0.4). There is also significant heterogeneity at the regional level. With its economic institutions measure averaging -0.6 (Figure 2.1), Africa is the region with the weakest institutions, far below the group of European developing countries (0.2). Four countries out of the bottom five are from Africa: Congo, DR (-1.8), Sudan, Angola, and Zimbabwe (-1.5 each). In general, these countries were ruled by totalitarian governments or embroiled in conflicts during the period of study, a fertile ground for the weakening of economic institutions.

Foreign Direct Investment flows to the sample of developing countries increased over time and accounted for a growing share of their GDP (Figure 2.2). Developed countries remained the main source of FDI over the period, however, with a declining share as South-South FDI gained more importance. This growing importance of developing countries as new sources of investment within the developing world is driven by outflows from Asia with China, Taiwan, the Republic of Korea, Singapore and Malaysia accounting for more than 40% of the outflows.[14]

---

[12]The sample selection is based on data availability. The list of the countries is provided in Appendix, Table 2.8.

[13]Based on the World Bank's income group classification.

[14]Based on the original sample.

Table 2.1: Summary statistics

Variable	Obs.	Mean	Std. Dev.	Min	Max
Rule of law	515	-0.319	0.734	-2.003	1.635
Total FDI (% of GDP)	721	1.301	3.188	-15.997	33.778
FDI, North (% of GDP)	715	1.089	2.733	-15.997	33.778
FDI, South (% of GDP)	477	0.342	1.008	-0.088	10.644
GDP per capita (Log)	721	7.892	1.297	5.358	11.098
Education (Log)	721	0.73	0.301	0.033	1.289
Rents (Log)	721	0.96	1.995	-7.982	4.012
Trade	705	77.63	46.288	13.616	413.361
Democracy	515	-0.245	0.768	-1.835	1.308
Effectiveness	515	-0.23	0.716	-1.884	2.354
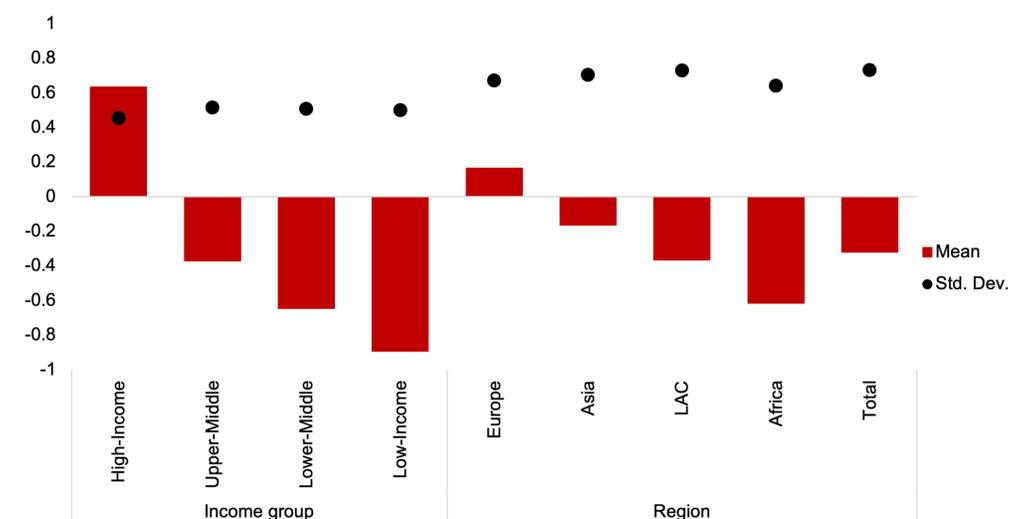
Source: Author's calculations based on WGI data.

Figure 2.1: Rule of law index scores by income group and region
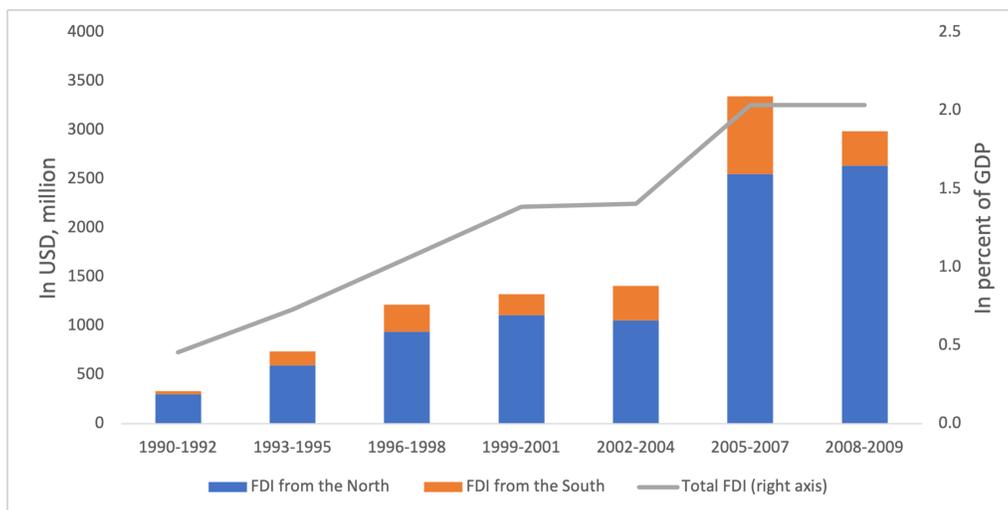
Source: Author's calculations based on data from Demir (2016) and the WDI

Figure 2.2: Trends in FDI inflows

2.5   Empirical results

The data underpinning the econometric estimations span the period between 1990 and 2009[15]. Given the relatively little variation over time of the institutional quality variable, I use three-year moving averages of the data, resulting in up to 7 time periods. For ease of interpretation, I rescaled the index so that it lies between 0 and 100[16], with 100 reflecting the best economic institutions for the purpose of this study. The results are organized in three main sections. First, I estimate the economic institutions model depicted by Eq. 2.1 using OLS and BCFE, and distinguishing between total FDI, FDI from the North and FDI from the South. Then, I explore whether there is a difference between countries in the FDI-institutions relationship depending on how much natural resources drive FDI. Lastly, I conduct a series of supplementary estimations to test the robustness of the main findings.

Table 2.2: Total FDI and economic institutions: OLS and BCFE estimates

	(1)	(2)	(3)
Dependent:	Economic institutions (RLE index)		
Method:	OLS		BCFE
RLE_{t-1}	0.182***	0.190***	0.468***
	(0.043)	(0.043)	(0.122)
Total FDI_{t-1}	0.111*	0.104*	0.087*
	(0.060)	(0.060)	(0.050)
GDPPC (log)	2.487*	2.554*	1.474
	(1.299)	(1.465)	(1.418)
Education (log)	-2.216	-4.669	2.831
	(5.371)	(7.516)	(7.482)
Rents (log)	-0.559	-0.568	-0.460
	(0.339)	(0.351)	(0.362)
Trade	-0.000	0.001	0.000
	(0.013)	(0.013)	(0.019)
Democracy	6.402***	6.367***	6.432***
	(0.816)	(0.816)	(0.928)
Effectiveness	8.230***	7.998***	7.700***
	(1.125)	(1.134)	(1.540)
Constant	25.418***	26.308**	
	(8.342)	(12.870)	
Observations	412	412	412
R-squared	0.490	0.496	
Countries	103	103	103
Country FE	Yes	Yes	Yes
Time FE	No	Yes	Yes

*** $p<0.01$, ** $p<0.05$, * $p<0.1$. BCFE regression results without time FE identical to that including both country and time FE. The BCFE uses 150 bootstrap samples with a deterministic initialization and the cross-sectional heteroscedasticity. OLS-based standard errors (SE) robust to heteroskedasticity, and BCFE-based SE calculated using bootstrap iterations.

2.5.1 Total FDI and economic institutions

Table 2.2 presents the results of the multivariate regression of economic institutions, proxied with the rule of law index of the WGI, on total FDI, controlling for a host of country characteristics. Columns (1) and (2) rely on standard fixed-effects estimations without time dummies and with time dummies respectively. In column (3), I resort to the bootstrap-based bias-corrected FE including both country and time fixed effects[17]. The results clearly evidence that past FDI inflows significantly explain a part of the cross-country variations in economic institutions. FDI is positively and significantly (at 10%) associated with the quality of economic institutions across regressions. A 100 point-increase in FDI inflows as a percent of developing countries GDP results in an 8.7 improvement in their institutional environment in terms of the protection afforded to property rights, the quality of contract enforcement as well as the strength of the rule of law, based on column (3), the baseline regression. These results suggest that the quality of economic institutions is on average better in countries with larger foreign direct investment, everything else being equal. This supports the main hypothesis that FDI contributes to better economic institutions and is consistent with previous studies (e.g., Ali et al., 2011; Dang, 2013; Long et al., 2015; Malesky, 2009).

Regarding the control variables, the positive and highly significant coefficients on the lagged rule of law index across the regressions are indicative of positive inertia in institutions in the developing world. Consistent with the view that building sound institutions requires resources and that institutions develop in response to a county's income level, real GDP per capita is found to be positively and significantly (in columns (1) and (2)) associated with the measure of institutional quality. The results also confirm that democratic political institutions are favorable to inclusive economic institutions, as evidenced by the positive and highly significant coefficient on the variable *Democracy*, and that the government effectiveness matters for good economic institutions.

---

[15]The period is dictated by the years for which data on bilateral FDI have been collected by Demir (2016).

[16]Using the min-max approach.

[17]I do not show the results without time dummies because they are identical to those based on both country and time fixed effects.

2.5.2 Does the origin of the investment matter? FDI from the North vs. FDI from the South

Through the second set of estimations, I investigate whether the positive effect of FDI on economic institutions is actually driven by flows from developed countries (FDI from the North). These countries are endowed with better institutions, which can be embodied in FDI and spillover to host countries. In addition, they have introduced legal constraints to prevent their investors from undermining the institutions of the investment countries as opposed to developing countries which institutions are weak and where such legal constraints are lacking. Therefore, I replicate the previous estimations after splitting the total flows into flows from the North and flows from the South. Table 2.3 provides the estimations results. The estimations in columns (1) through (3) are based on flows from the North and the next three columns use FDI from the South.

The results suggest that the contribution of total FDI to better economic institutions in developing countries is driven by flows from the North. Across all regressions, FDI from the North is found to positively and significantly affect economic institutions, unlike FDI from the South where the link is also positive but not significant. The importance of FDI from the North as the main driver of positive institutional change is also confirmed by the magnitude of the coefficients larger than those based on total FDI in the previous regressions, 12.2 against 8.7 for a 100-point increase in the share of FDI in GDP, based on the BCFE regressions. The results seem to indicate that the type of institutional environment in the origin country matters in the FDI/economic institutions relationship. However, they do not evidence that South-South FDI is detrimental to host countries' institutions as the link is also positive although not significant. These findings differ from Demir (2016) who found the effect on host countries political risk to be non-significant for aggregate North-South FDI flows and significant and positive for aggregate South-South FDI. Regarding the control variables, they behave like in the regressions based on total FDI, in addition to the fact that the negative coefficients on natural resource rents become significant in many of the regressions.

Table 2.3: FDI and institutions: flows from the North vs. flows from the South

	(1)	(2)	(3)	(4)	(5)	(6)
Dependent:	Economic institutions (RLE index)					
Origin:	From the North			From the South		
Method:	OLS	OLS	BCFE	OLS	OLS	BCFE
RLE_{t-1}	0.184***	0.192***	0.470***	0.192***	0.194***	0.593***
	(0.042)	(0.043)	(0.106)	(0.054)	(0.054)	(0.181)
FDI_North_{t-1}	0.138*	0.129*	0.122*			
	(0.070)	(0.071)	(0.063)			
FDI_South_{t-1}				0.161	0.123	0.003
				(0.213)	(0.216)	(0.171)
GDPPC (log)	2.448*	2.543*	1.416	4.824***	6.473***	4.655**
	(1.299)	(1.464)	(1.407)	(1.466)	(1.854)	(1.844)
Education (log)	-2.288	-4.546	2.723	-6.443	0.168	-4.329
	(5.368)	(7.512)	(7.012)	(6.615)	(9.089)	(9.160)
Rents (log)	-0.570*	-0.575	-0.463	-0.859**	-0.718*	-0.820
	(0.338)	(0.350)	(0.328)	(0.384)	(0.395)	(0.547)
Trade	-0.000	0.002	0.000	-0.002	0.007	0.004
	(0.013)	(0.013)	(0.019)	(0.016)	(0.017)	(0.026)
Democracy	6.382***	6.350***	6.422***	6.735***	6.755***	6.769***
	(0.815)	(0.816)	(0.966)	(1.113)	(1.112)	(1.350)
Effectiveness	8.283***	8.046***	7.735***	7.269***	7.116***	7.358***
	(1.125)	(1.135)	(1.290)	(1.419)	(1.422)	(1.736)
Constant	25.683***	26.193**		8.905	-12.110	
	(8.346)	(12.848)		(9.657)	(18.269)	
Observations	412	412	412	277	277	276
R-squared	0.491	0.496		0.470	0.479	
Countries	103	103	103	72	72	71
Country FE	Yes	Yes	Yes	Yes	Yes	Yes
Time FE	No	Yes	Yes	No	Yes	Yes

*** p<0.01, ** p<0.05, * p<0.1. The BCFE uses 150 bootstrap samples with a deterministic initialization and cross-sectional heteroscedasticity. OLS-based standard errors (SE) robust to heteroskedasticity, and BCFE-based SE calculated using bootstrap iterations.

2.5.3 How influential are natural resources?

The negative association of natural resource rents with economic institutions found in the previous estimations supports the hypothesis that institutions decadence is one of the channels of the resource curse phenomenon. Given this prediction and that foreign investors are a key player in the resource industry in developing countries, the influence of this variable deserves particular attention in the analysis of the FDI/institutions relationship. Foreign investors can influence investment countries property rights systems differently depending on their resources endowments. In resource-rich countries, foreign investors are engaged in a contest, often competing to gain access to the resources (Newman et al., 2016). The incentive of foreign investors to ensure access to the resources combined with that of the government to engage in rent-seeking activities can lead to extractive economic institutions under which the vast majority of the population has little or no secure and well-enforced property rights over the resource sector and many other related sectors. Resource-driven FDI are thus likely to feed poor economic institutions.

As the dataset pertaining to the analysis does not contain information on the sector of investment, I test this hypothesis by differentiating the institutional effect of FDI according to the strength of the nexus between resource rents and FDI. More precisely, I assess how successful are natural resources in attracting FDI in the whole sample and for every single country in a one-step estimation using a Fixed-Coefficient model also called Fixed-Effects ANOVA model (see Hsiao, 2014). The coefficient on natural resource rents for every economy is then compared with the average coefficient (on the full sample.) Countries with a coefficient greater than the average are considered more reliant on the resource sector in attracting FDI relative to countries with a value below the average. I name the former group of countries rentier states for the purpose of the comments. The econometric specification is given by Eq. 2.2 which is a fixed-effects panel data model with coefficients that vary over time and cross-sectional units.

$$FDI_{it} = (\bar{\beta} + \alpha_i + \lambda_t)Resources_{it} + \mu_{it} \tag{2.2}$$

Natural resources are proxied with total natural resource rents. $\bar{\beta}$ indicates the average coefficient on rents, α_i is the country-specific coefficient on rents to be compared with $\bar{\beta}$, and λ_t refers to the time-specific coefficient. When $\alpha_i - \bar{\beta}$ is positive and statistically different from 0, the country i is considered a rentier state, i.e., it attracts FDI via natural resources to a greater extent than the average

country. The estimations results[18] are summarized in Table 2.9 in Appendix. Three groups of countries are distinguished: rentier states (countries with $\alpha_i - \bar{\beta}$ positive and significantly different from 0), non-rentier states (with $\alpha_i - \bar{\beta}$ negative and significantly different from 0), and neutral sates (with α_i not significant).

In line with the above argument, one should expect the effect of FDI on economic institutions to be negative or at best positive but smaller for the group of rentier states, compared with the group of non-rentier states. To test this hypothesis, I augment the specification in Eq. 2.1 by adding to the set of explanatory variables dummies reflecting the link between rents and FDI and their interactions with FDI as depicted by Eq. 2.3.

$$Inst_{it} = \alpha + \beta Inst_{i,t-1} + \gamma_1 FDI_{i,t-1} + (\gamma_2 Rent_i + \gamma_3 Neut_i)FDI_{i,t-1} + \sum_k \delta_k X_{it} + \varepsilon_{it}$$
$$(2.3)$$

Where $Rent_i$ is a dummy equal to 1 for the group of rentier states, and 0 otherwise, and $Neut_i$ is a dummy variable for countries where no significant link between natural resources and FDI was detected from the previous regressions[19]. Non-rentier states represent the comparison group. The results of the estimations are provided in Table 2.4. As expected, the positive effect of total FDI flows on economic institutions is mitigated in countries where the mining and quarrying sector represents a major driver of FDI as the coefficient on the interaction between $Rent_i$ and $FDI_{i,t-1}$ is negative in all regressions. However, the coefficient is not statistically different from zero at the conventional levels. Therefore, the prediction that economic institutions in countries with larger FDI in the resource industry would be worse than those of their low-resource FDI counterparts fails to receive strong support based on this sample of developing countries.

---

[18]Eq. 2.2 is estimated using the Stata command $xtfixedcoeftvcu$ developed by Diallo (2016)

[19]I do not include the dummies separately (without interacting them) as they will be captured by the country FE in the estimations.

Table 2.4: FDI and economic institutions: rentier vs. non-rentier states

	(1)	(2)	(3)
Dependent:	Economic institutions (RLE index)		
Method:	OLS	OLS	BCFE
RLE_{t-1}	0.183***	0.191***	0.472***
	(0.043)	(0.043)	(0.136)
Total FDI_{t-1}	0.141	0.122	0.149
	(0.139)	(0.140)	(0.277)
$\text{FDI}_{t-1} \times Rentier$	-0.106	-0.095	-0.162
	(0.180)	(0.180)	(0.295)
$\text{FDI}_{t-1} \times Neutral$	-0.005	0.011	-0.031
	(0.159)	(0.159)	(0.279)
GDPPC (log)	2.444*	2.508*	1.452
	(1.311)	(1.475)	(1.861)
Education (log)	-2.317	-4.965	2.617
	(5.392)	(7.559)	(8.604)
Rents (log)	-0.529	-0.543	-0.424
	(0.344)	(0.355)	(0.424)
Trade	-0.000	0.002	-0.000
	(0.013)	(0.013)	(0.017)
Democracy	6.413***	6.376***	6.452***
	(0.818)	(0.818)	(1.016)
Effectiveness	8.255***	8.032***	7.693***
	(1.135)	(1.144)	(1.298)
Observations	412	412	412
R-squared	0.491	0.497	
Countries	103	103	103
Country FE	Yes	Yes	Yes
Time FE	No	Yes	Yes

*** p<0.01, ** p<0.05, * p<0.1. OLS standard errors (SE) robust to heteroskedasticity, BCFE-based SE calculated using bootstrap iterations.. All regressions include a constant.

2.6   Robustness checks

This section provides sensitivity checks on the main findings. First, I augment the control variables by considering two additional possible determinants of the quality of institutions, namely the (log of the) size of the population and migrants remittances as a percent of GDP. Setting up broadly distributed and secure property rights, creating the conditions for contracts enforcement are easier to achieve for a limited number of people. In consequence, countries with smaller populations are more likely to develop better economic institutions. Literature argues that remittances reduce the utility of government patronage (Pfutze, 2012) and can lead migrants and remittance recipients to pressure governments to pursue political reforms (Williams, 2017). In this context, remittances can contribute to better economic institutions. Data on both variables (population and remittances) are sourced from the WDI.

In Table 2.5, I repeat the previous main estimations after including these variables as additional controls one at a time. The results, based on the BCFE, show that the two variables are not significant determinants of economic institutions after the previous variables are controlled for. In addition, the main findings are robust to their inclusion. Total FDI still positively affects the institutional variable in columns (1) and (2) and this link is significant in column (1) which controls for remittances. Likewise, FDI from the North is positively related to economic institutions and significant in column (4) controlling for population, while the estimations still fail to detect a significant link for FDI from the South in columns (5) and (6).

Second, I test the sensitivity of the findings to the exclusion of possible influential observations. More concretely, I repeat the estimations on a new sample excluding Lithuania, Singapore, and Bulgaria which registered total average FDI/GDP ratios of 32% (for Lithuania) and more than 7% (for the two others) over the period of study, far above the sample average of 1.2%. The results, reported in Table 2.6, are similar to those based on the full sample.

Next, I test whether the results are conditional on the income group of host countries based on the World Bank classification using dummy variables for each group. Similarly, I analyze the sensitivity of the results to regional differences. The results are provided in Appendix by Table 2.10 (using the group of low-income countries as comparison group) and Table 2.11 (Europe being the reference group), respectively. Table 2.10 does not indicate income differences in the FDI/economic

Table 2.5: BCFE estimations, controlling for population and remittances

	(1)	(2)	(3)	(4)	(5)	(6)
Dependent:	Economic institutions (RLE index)					
Origin:	Total FDI		From the North		From the South	
RLE_{t-1}	0.479***	0.474***	0.482***	0.475***	0.477***	0.592***
	(0.131)	(0.116)	(0.145)	(0.112)	(0.163)	(0.148)
FDI_Total$_{t-1}$	0.097*	0.082				
	(0.060)	(0.055)				
FDI_North$_{t-1}$			0.115	0.118*		
			(0.078)	(0.063)		
FDI_South$_{t-1}$					0.133	-0.025
					(0.247)	(0.223)
GDPPC (log)	2.402	1.265	2.361	1.190	4.381**	4.285*
	(2.218)	(1.436)	(2.212)	(1.497)	(1.923)	(2.320)
Education (log)	-3.355	5.387	-3.352	5.398	-4.087	-1.765
	(6.470)	(8.469)	(6.250)	(8.833)	(8.184)	(11.841)
Rents (log)	-0.363	-0.405	-0.373	-0.404	-0.568	-0.759
	(0.424)	(0.372)	(0.401)	(0.344)	(0.459)	(0.529)
Trade	-0.004	0.001	-0.004	0.001	-0.016	0.006
	(0.024)	(0.019)	(0.020)	(0.020)	(0.026)	(0.024)
Democracy	6.853***	6.483***	6.825***	6.475***	6.815***	6.759***
	(1.298)	(0.973)	(1.239)	(0.977)	(1.706)	(1.343)
Effectiveness	8.001***	7.760***	8.056***	7.797***	7.664***	7.457***
	(1.580)	(1.497)	(1.654)	(1.334)	(1.838)	(1.540)
Remittances	0.003		0.004		0.031	
	(0.110)		(0.103)		(0.177)	
Population (log)		-1.550		-1.623		-1.824
		(2.319)		(2.495)		(6.147)
Observations	363	412	363	412	261	276
Countries	94	103	94	103	68	71
Country/Time FE	Yes	Yes	Yes	Yes	Yes	Yes

*** $p<0.01$, ** $p<0.05$, * $p<0.1$. The estimations use 150 bootstrap samples with a deterministic initialization and the cross-sectional heteroscedasticity with bootstrapped SE.

Table 2.6: Excluding possible influential observations

	(1)	(2)	(3)
Dependent:	Economic institutions (RLE index)		
RLE_{t-1}	0.443***	0.445***	0.552***
	(0.123)	(0.131)	(0.175)
FDI_Total_{t-1}	0.104*		
	(0.076)		
FDI_North_{t-1}		0.131*	
		(0.091)	
FDI_South_{t-1}			0.144
			(0.306)
GDPPC (log)	1.352	1.283	4.562***
	(1.764)	(1.763)	(1.710)
Education (log)	2.991	2.941	-2.636
	(8.338)	(7.982)	(7.817)
Rents (log)	-0.392	-0.393	-0.716
	(0.392)	(0.364)	(0.457)
Trade	-0.007	-0.007	-0.012
	(0.018)	(0.017)	(0.026)
Democracy	6.453***	6.434***	6.916***
	(0.853)	(0.822)	(1.454)
Effectiveness	7.965***	8.012***	7.503***
	(1.411)	(1.443)	(1.983)
Observations	400	400	264
Countries	100	100	68
Country/Time FE	Yes	Yes	Yes

*** p<0.01, ** p<0.05, * p<0.1. The estimations use 150 bootstrap samples with a deterministic initialization and the cross-sectional heteroscedasticity with bootstrapped SE. All regressions include a constant

institutions relationship as none of the interaction terms is significant whatever the type of FDI considered. Likewise, Table 2.11 suggests that the effect of FDI on institutions does not significantly differ across regions.

Behind the hypothesis that FDI flows from the North are more likely to lead to positive institutional change compared to flows from the South is the idea that developed countries are endowed with better institutions which can be embodied in their FDI outflows and spillover to host countries in developing host countries. Accordingly, it appears relevant to question whether what really matters for institutional change is the quality of institutions in the origin country rather than its level of development. To this end, I replicate the previous estimations after splitting the total flows into flows from countries with developed institutions and flows from countries with weak institutions. The results are given in Table 2.7. In column (1) FDI origin countries with developed institutions are those with average rule of law index above the sample first quartile, and countries with weak institutions are below the sample first quartile in column (2). The distinction between flows from countries with developed institutions and weak institutions is made in a similar way in columns (3) and (4) based on the sample median, and in columns (5) and (6) based on the sample third quartile. Like the distinction between flows from the North and flows from the South, the results show that flows from origin countries with developed institutions positively affect economic institutions in the host developing countries when based on the first quartile in column (1) and the third quartile in column (3). On the other hand, flows from FDI home countries with weak institutions have no statistically significant link with the institutional variable.

Table 2.7: FDI and economic institutions: heterogeneity based on the quality of institutions in the origin country

	(1)	(2)	(3)	(4)	(5)	(6)
Dependent:			Economic institutions (RLE index)			
RLE$_{t-1}$	0.468***	0.249**	0.470***	0.283**	0.469***	0.577***
	(0.119)	(0.112)	(0.119)	(0.125)	(0.119)	(0.162)
FDI_Dev_Q1$_{t-1}$	0.092*					
	(0.053)					
FDI_Weak_Q1$_{t-1}$		0.123				
		(2.638)				
FDI_Dev_Q2$_{t-1}$			0.088			
			(0.079)			
FDI_Weak_Q2$_{t-1}$				-0.289		
				(0.844)		
FDI_Dev_Q3$_{t-1}$					0.100*	
					(0.059)	
FDI_Weak_Q3$_{t-1}$						0.172
						(0.324)
GDPPC (log)	1.469	7.717**	1.457	6.476**	1.453	3.107
	(1.440)	(3.514)	(1.610)	(2.997)	(1.437)	(1.922)
Education (log)	2.853	-11.625	2.865	-10.270	2.796	-1.675
	(7.545)	(16.617)	(6.608)	(14.992)	(7.582)	(8.551)
Rents (log)	-0.465	-2.461***	-0.465	-1.464*	-0.464	-0.757
	(0.331)	(0.805)	(0.350)	(0.780)	(0.331)	(0.495)
Trade	0.000	-0.039	0.000	-0.046	0.000	-0.004

	(0.019)	(0.046)	(0.017)	(0.037)	(0.019)	(0.019)
Democracy	6.435***	11.064***	6.433***	11.587***	6.435***	6.705***
	(0.938)	(2.299)	(0.936)	(2.315)	(0.938)	(1.609)
Effectiveness	7.708***	5.395*	7.715***	7.296**	7.730***	7.584***
	(1.397)	(2.947)	(1.523)	(2.800)	(1.402)	(2.141)
Observations	412	104	412	124	412	281
Countries	103	31	103	37	103	73
Country/Time FE	Yes	Yes	Yes	Yes	Yes	Yes

*** $p<0.01$, ** $p<0.05$, * $p<0.1$. The estimations use 150 bootstrap samples with a deterministic initialization and the cross-sectional heteroscedasticity with bootstrapped SE. All regressions include a constant.

2.7 Concluding remarks

Foreign Direct Investment represents an important source of development financing for developing countries, bringing about important changes in these countries. While the literature on the effects of FDI on host countries has focused on the economic aspects of these changes, this study contributes to the relatively recent and weakly explored research on the institutional aspects of these changes by examining how FDI influences the economic institutions of developing host countries.

The presence of MNCs in developing countries may shape their institutional environment in several ways. Foreign direct investors not only search for economic opportunities such as market size, low wages, or resources, but also demand better institutional quality, which governments competing to attract FDI have incentive to provide. MNCs can also resort to lobbying and their relatively high bargaining power in developing countries to pressure policymakers to pursue institutional reforms. This study therefore assumes that MNCs do not always adapt to the host country institutional context but can resort to their institutional change potential to frame a supportive institutional environment to their activities. Moreover, the quality of property rights and contract enforcement represents an important foundation of transnational investments as they are crucial for investment contracts.

Accordingly, economic institutions are likely to respond to the increasing flows of FDI.

This chapter empirically investigates the question based on extensive data on FDI and economic institutions measured with the rule of law index of the WGI for a large sample of developing countries, over the period 1990-2009. First, consistent with the prediction, I find that economic institutions are better in countries with larger FDI flows. On average, a 100-point increase in FDI inflows as a percent of GDP is associated with an 8.7 increase in the rule of law index in developing countries.

Investigating the possible sources of the change in developing countries' economic institutions resulting from FDI, I test whether the effect differs depending on the origin of the flows (North vs. South.) Because institutions in developed economies (North) are more developed than those in developing countries (South), FDI from the North may be more likely to cause institutional development as transferring capital may go along with transferring institutions. Moreover, the behavior of foreign direct investors from developed economies is constrained by regulatory pressure aimed at preventing them from weakening institutions in the investment countries while such legal constraints lack in developing economies. After splitting total FDI flows into flows from the North and flows from the South, I find that the positive effect of total FDI on economic institutions in developing countries is driven by flows from the North. However, the results do not evidence that flows from the South are detrimental to economic institutions as the link is positive but not statistically significant. These findings suggest that the type of institutional environment in the origin country matters in the FDI/economic institutions relationship. This suggestion is supported by further estimations where I split total flows into flows from origin countries with developed institutions and flows from origin countries with weak institutions, and where FDI from the former group of countries is found to be positively associated with economic institutions while no significant link is found for FDI from countries with weak institutions.

Some important policy implications for policymakers and development organizations emerge from these findings. The increasing FDI flows from all origins represent a source of institutional development for developing countries that needs to be sustained. If politics is the problem preventing inclusive economic institutions in developing countries, external actors through foreign direct investors can be part of the solution if barriers to cross-border flows of FDI are lifted to

support investments. This requires the promotion of FDI from all source countries. Preferential investment agreements with a specific type of investing countries may have a limited impact on institutions in developing countries. Governments and development organizations concerned with institutions should encourage more open and competitive investment policies for all types of origin countries (North and South as well). In addition, unleashing the full potential of FDI for institutional development would require making the existing legal constraints in the North more effective on the one hand, and the introduction of similar regulatory pressure on investors from the South on the other hand.

The empirical results also highlight that the main sector driving FDI may matter. In particular, the positive impact of total FDI flows on economic institutions is mitigated in countries where the mining and quarrying sector represents a major driver of FDI although the results fail to detect a statistical significance on this relationship. However, they warn of the necessity to promote efficiency-seeking investments through a rebalancing of FDI driving sectors rather than largely relying on the resource sector.

The findings of the study are robust to series of sensitivity tests including the inclusion of additional control variables, the exclusion of outliers, the test of income group and regional effect, and heterogeneity analysis based on the level of institutional development of the origin countries. The relatively low levels of statistical significance in most regressions (generally 10%) might highlight the necessity of not pooling together all forms of FDI as they may not be equivalent regarding their institutional impacts. In this regard, the next chapters further explore heterogeneity in FDI by focusing on greenfield FDI (in Chapter 3) and resource sector FDI (in Chapter 4).

2.8   Appendices of Chapter 2

Table 2.8: List of countries

Country	Region	Country	Region	Country	Region
Angola	Africa	The, Gambia	Africa	Niger	Africa
Albania	Europe	Guatemala	LAC	Nigeria	Africa
United Arab Emirates	Asia	Guyana	LAC	Nicaragua	LAC
Argentina	LAC	Honduras	LAC	Nepal	Asia
Armenia	Asia	Croatia	Europe	Pakistan	Asia
Burundi	Africa	Haiti	LAC	Panama	LAC
Benin	Africa	Hungary	Europe	Peru	LAC
Burkina Faso	Africa	Indonesia	Asia	Philippines	Asia
Bangladesh	Asia	India	Asia	Poland	Europe
Bulgaria	Europe	Iran	Asia	Paraguay	LAC
Bahrain	Asia	Jamaica	LAC	Romania	Europe
Belize	Europe	Jordan	Asia	Russia	Europe
Bolivia	LAC	Kazakhstan	Asia	Rwanda	Africa
Brazil	LAC	Kenya	Africa	Saudi Arabia	Asia
Barbados	LAC	Kyrgyz Rep.	Asia	Sudan	Africa
Brunei	Asia	Cambodia	Asia	Senegal	Africa
Botswana	Africa	Korea, Rep.	Asia	Singapore	Asia
Central African Rep.	Africa	Kuwait	Asia	Sierra Leone	Africa
Chile	LAC	Lao PDR	Asia	Slovakia	Europe
China	Asia	Sri Lanka	Asia	Slovenia	Europe
Cote d'Ivoire	Africa	Lithuania	Europe	Togo	Africa
Cameroon	Africa	Latvia	Europe	Thailand	Asia
Congo, DR	Africa	Macao SAR	Asia	Tajikistan	Asia
Congo	Africa	Morocco	Africa	Tunisia	Africa
Colombia	LAC	Moldova	Europe	Turkey	Europe
Costa Rica	LAC	Madagascar	Africa	Tanzania	Africa
Czech Republic	Europe	Mexico	LAC	Uganda	Africa
Dominican Republic	LAC	Mali	Africa	Ukraine	Europe

Algeria	Africa	Mongolia	Asia	Uruguay	LAC
Ecuador	LAC	Mozambique	Africa	Venezuela	LAC
Egypt	Africa	Mauritania	Africa	Vietnam	Asia
Estonia	Europe	Mauritius	Africa	South Africa	Africa
Gabon	Africa	Malawi	Asia	Zambia	Africa
Ghana	Africa	Malaysia	Asia	Zimbabwe	Africa
		Namibia	Africa		

LAC stands for Latin America and Caribbean

Table 2.9: Rentier vs. non-rentier states, the Fixed-Effects ANOVA results

	(1) Common coefficient	(2) Country-specific	(3) Time-specific
Full sample	-0.480***		
	(0.112)		
Constant	0.255		
	(0.450)		
Aruba		0.781*	
		(0.474)	
Angola		0.344**	
		(0.157)	
Albania		0.081	
		(0.150)	
United Arab Emirates		0.53	
		(0.329)	
Argentina		0.943	
		(0.709)	
Armenia		0.663	
		(0.440)	
Azerbaijan		1.329***	
		(0.347)	
Burundi		0.174	
		(0.160)	
Benin		-0.162	
		(0.135)	
Burkina Faso		0.032	
		(0.158)	
Bangladesh		2.018***	
		(0.435)	
Bulgaria		16.993***	

	(3.756)
Bahrain	-0.112
	(0.157)
Bahamas	-8.056*
	(4.414)
Bosnia and Herz.	1.441***
	(0.333)
Belarus	-1.539***
	(0.365)
Belize	0.799*
	(0.425)
Bolivia	0.814*
	(0.433)
Brazil	0.836**
	(0.362)
Barbados	-2.302
	(3.175)
Brunei	0.564**
	(0.275)
Botswana	0.762**
	(0.319)
Central Afr. Rep.	0.047
	(0.140)
Chile	1.321***
	(0.242)
China	1.634***
	(0.410)
Côte d'Ivoire	0.006
	(0.337)
Cameroon	0.099
	(0.163)
Congo, DR	0.190

	(0.158)
Congo	0.817**
	(0.324)
Colombia	0.538**
	(0.266)
Comoros	-1.753***
	(0.654)
Cabo Verde	1.943
	(1.235)
Costa Rica	-0.642
	(0.415)
Cuba	0.068
	(0.344)
Czech Republic	-6.164***
	(2.224)
Dominica	0.985***
	(0.231)
Dominican Republic	-0.279
	(0.429)
Algeria	0.288
	(0.187)
Ecuador	0.324*
	(0.196)
Egypt	0.838*
	(0.467)
Eritrea	-0.388*
	(0.211)
Estonia	6.390*
	(3.33)
Ethiopia	0.125
	(0.134)
Fiji	-0.895

	(0.637)
Gabon	0.480**
	(0.203)
Georgia	1.931***
	(0.576)
Ghana	0.302
	(0.192)
Guinea	0.128
	(0.144)
Gambia, The	-0.586**
	(0.240)
Guinea Bissau	0.046
	(0.137)
Equatorial Guinea	0.428**
	(0.190)
Guatemala	-1.559**
	(0.633)
Guyana	0.313*
	(0.186)
Honduras	-0.950***
	(0.305)
Croatia	-3.454
	(2.366)
Haiti	3.128***
	(0.867)
Hungary	-8.422
	(5.453)
Indonesia	0.556***
	(0.172)
India	0.011
	(0.370)
Iran	0.178

	(0.144)
Jamaica	-0.142
	(1.094)
Jordan	0.914***
	(0.200)
Kazakhstan	1.160***
	(0.398)
Kenya	-0.095
	(0.197)
Kyrgyz Republic	-0.028
	(0.361)
Cambodia	0.639*
	(0.352)
Korea, Republic	0.659***
	(0.198)
Kuwait	0.235
	(0.144)
Lao PDR	0.181
	(0.229)
Lebanon	0.741***
	(0.183)
St. Lucia	0.591***
	(0.199)
Sri Lanka	1.321***
	(0.272)
Lithuania	-31.819***
	(4.545)
Latvia	0.024
	(0.542)
Macao	0.769***
	(0.167)
Morocco	1.229***

	(0.263)
Moldovia	1.050***
	(0.317)
Madagascar	0.031
	(0.224)
Mexico	0.840***
	(0.210)
Macedonia	1.971***
	(0.637)
Mali	0.014
	(0.222)
Mongolia	0.744***
	(0.195)
Mozambique	0.234
	(0.183)
Mauritania	0.201
	(0.222)
Mauritius	0.090
	(0.305)
Malawi	0.038
	(0.146)
Malaysia	0.873***
	(0.177)
Namibia	0.191
	(0.416)
Niger	-0.090
	(0.158)
Nigeria	0.326**
	(0.158)
Nicaragua	-0.909***
	(0.285)
Nepal	-3.141***

	(1.136)
Oman	0.275**
	(0.136)
Pakistan	-0.389
	(0.513)
Panama	-1.411**
	(0.563)
Peru	0.458
	(0.310)
Philippines	-0.221
	(0.387)
Papua New Guinea	0.411
	(0.292)
Poland	-0.559
	(1.193)
Paraguay	-0.805
	(0.674)
Romania	1.036
	(0.760)
Russia	0.437**
	(0.206)
Rwanda	-0.029
	(0.142)
Saudi Arabia	0.295*
	(0.165)
Sudan	0.652***
	(0.159)
Senegal	-0.296
	(0.340)
Singapore	-0.332*
	(0.194)
Solomon Islands	0.545

	(0.357)
Sierra Leone	0.063
	(0.139)
Suriname	0.722**
	(0.292)
Slovakia	-0.255
	(0.725)
Slovenia	1.030***
	(0.242)
Seychelles	0.943***
	(0.247)
Chad	-0.135
	(0.572)
Togo	0.252
	(0.204)
Thailand	1.333***
	(0.287)
Tajikistan	1.878***
	(0.473)
Turkmenistan	0.212
	(0.145)
Trinidad and Tobago	0.832**
	(0.356)
Tunisia	0.393
	(0.432)
Turkey	0.761**
	(0.330)
Tanzania	0.011
	(0.160)
Uganda	0.356***
	(0.125)
Ukraine	1.086*

	(0.600)	
Uruguay	1.005**	
	(0.424)	
Uzbekistan	0.187	
	(0.183)	
St Vincent & the Grenad.	0.877***	
	(0.190)	
Venezuela	0.483***	
	(0.144)	
Vietnam	0.368	
	(0.244)	
Vanuatu	-8.967*	
	(5.349)	
Samoa	0.160	
	(0.551)	
Yemen	0.426**	
	(0.182)	
South Africa	1.192***	
	(0.447)	
Zambia	0.206	
	(0.201)	
Zimbabwe	0.210	
	(0.157)	
Constant	0.505	
	(0.346)	
1990-1992		-0.053
		(0.082)
1993-1995		-0.143
		(0.163)
1996-1998		0.176
		(0.163)

1999-2001			0.150
			(0.267)
2002-2004			0.232
			(0.222)
2005-2007			-0.274*
			(0.153)
2008-2009			-0.590
			(0.416)
Constant			0.502***
			(0.107)
Observations	945	945	945
R-squared	0.419	0.419	0.419
Countries	135	135	135

*** p<0.01, ** p<0.05, * p<0.1. Robust standard errors in parenthesis.

Table 2.10: Test of income group effect: BCFE estimates

	(1)	(2)	(3)
	Economic institutions (RLE index)		
Dependent:			
RLE$_{t-1}$	0.468***	0.477***	0.580***
	(0.108)	(0.130)	(0.154)
FDI_Total$_{t-1}$	0.003		
	(0.862)		
FDI_Total$_{t-1}\times LMI$	0.199		
	(0.901)		
FDI_Total$_{t-1}\times UMI$	-0.104		
	(0.848)		
FDI_Total$_{t-1}\times HI$	0.139		
	(0.868)		
FDI_North$_{t-1}$		1.046	
		(1.622)	
FDI_North$_{t-1}\times LMI$		-0.966	
		(1.662)	
FDI_North$_{t-1}\times UMI$		-1.125	
		(1.618)	
FDI_North$_{t-1}\times HI$		-0.850	
		(1.642)	
FDI_South$_{t-1}$			3.014
			(140.558)
FDI_South$_{t-1}\times LMI$			-2.451
			(140.561)
FDI_South$_{t-1}\times UMI$			-4.097
			(140.505)
FDI_South$_{t-1}\times HI$			-2.923
			(140.558)
GDPPC (log)	1.523	1.477	4.633***
	(1.586)	(1.539)	(1.481)

Education (log)	1.471	1.662	-6.162
	(7.289)	(6.595)	(6.935)
Rents (log)	-0.376	-0.390	-0.794*
	(0.388)	(0.314)	(0.443)
Trade	0.001	-0.001	0.009
	(0.017)	(0.019)	(0.022)
Democracy	6.420***	6.407***	6.773***
	(1.102)	(0.930)	(1.494)
Effectiveness	7.564***	7.634***	7.206***
	(1.169)	(1.569)	(1.420)
Observations	412	412	276
Countries	103	103	71
Country/Time FE	Yes	Yes	Yes

*** $p<0.01$, ** $p<0.05$, * $p<0.1$. The estimations use 150 bootstrap samples with a deterministic initialization and the cross-sectional heteroscedasticity with bootstrapped SE. LMI=Lower-Middle Income, UMI=Upper-Middle Income and HI=High-Income.

Table 2.11: Test of regional effect: BCFE estimates

	(1)	(2)	(3)
Dependent:	Economic institutions (RLE index)		
RLE$_{t-1}$	0.467***	0.467***	0.594***
	(0.128)	(0.114)	(0.141)
FDI_Total$_{t-1}$	0.079		
	(0.061)		
FDI_Total$_{t-1}\times Afr$	-0.214		
	(0.306)		
FDI_Total$_{t-1}\times Asia$	-0.142		
	(0.279)		
FDI_Total$_{t-1}\times LAC$	0.146		
	(0.115)		
FDI_North$_{t-1}$		0.107	
		(0.099)	
FDI_North$_{t-1}\times Afr$		-0.207	
		(0.255)	
FDI_North$_{t-1}\times Asia$		-0.022	
		(0.362)	
FDI_North$_{t-1}\times LAC$		0.101	
		(0.137)	
FDI_South$_{t-1}$			-0.004
			(0.386)
FDI_South$_{t-1}\times Afr$			2.099
			(3.411)
FDI_South$_{t-1}\times Asia$			-0.001
			(0.489)
FDI_South$_{t-1}\times LAC$			-0.174
			(2.097)
GDPPC (log)	1.236	1.337	4.609***
	(1.942)	(1.952)	(1.714)

Education (log)	4.626	3.999	-4.374
	(7.268)	(7.318)	(7.355)
Rents (log)	-0.483	-0.477	-0.821
	(0.339)	(0.317)	(0.498)
Trade	0.000	-0.001	0.003
	(0.019)	(0.020)	(0.025)
Democracy	6.376***	6.395***	6.757***
	(0.922)	(1.003)	(1.450)
Effectiveness	7.959***	7.888***	7.551***
	(1.324)	(1.307)	(1.638)
Observations	412	412	276
Countries	103	103	71
Country/Time FE	Yes	Yes	Yes

*** $p<0.01$, ** $p<0.05$, * $p<0.1$. The estimations use 150 bootstrap samples with a deterministic initialization and the cross-sectional heteroscedasticity with bootstrapped SE. Afr is shorthand for Africa, LAC for Latin America and Caribbean.

CHAPTER 3

Does Foreign Direct Investment Promote Political Stability? Evidence from Developing Economies

This chapter investigates the potential of Foreign Direct Investment (FDI) to counter socio-political instability, one of the most pressing challenges faced by developing countries. Socio-political (in)stability is approached from an institutional perspective and linked to one particular type of FDI, greenfield FDI, for its more direct socio-economic externalities and their influences on greed and grievance. The issue of causality is primarily addressed using a gravity-based instrumental variable for FDI, taking advantage of bilateral greenfield projects data. The empirical results using data over the period 2003-2017 for a large sample of developing countries show that FDI favors institutional development not only in terms of overall socio-political stability but also human rights compliant socio-political stability. The results are robust to a range of specifications and alternative identification strategies, as well as to a series of sensitivity tests. Overall, this study highlights the promotion of political stability as another channel through which FDI can contribute to development.

Keywords : Greenfield · FDI · institutions political stability · developing countries

3.1 Introduction

Social and political stability, viewed as the absence of conflict and various forms of social unrest, is key to economic development. However, the world is still prone to political violence of different forms and manifestations. A quarter of the world's countries witnessed a dramatic surge in civil unrest in 2019 and that figure was projected to rise to 40 % in 2020, as reported by Maplecroft (2020), which also predicted the 2020s as a decade of rage, unrest, and shifting geopolitical sands[1]. Politically motivated violence has been common in many places in the world in recent years. The Center for Systemic Peace's 2017 global report indicated an increase in the global magnitude of societal warfare[2] since 2011, after a declining trend from 1991. Similarly, Pettersson et al. (2019) document that the years from 2013 to 2018 have all recorded higher levels of non-state violence than any other year since 1989. Whether in the form of inter-rebel or state vs. rebel conflicts in Syria, communal confrontation in Ethiopia, political protests in Lebanon, cartel-related violence in Mexico, or terrorist attacks in Nigeria, socio-political instability remains pervasive in the developing world.

A growing body of research has investigated the causes of political instability and conflicts (Collier et al., 2009; Collier and Hoeffler, 1998, 2004; Elbadawi and Sambanis, 2002; Fearon and Laitin, 2003). Overall, the determinants of political violence and instability are grouped into two main factors: political grievances and economic conditions – or the "greed" argument. Political grievances refer to unfair, oppressive, or discriminatory treatment of groups of people, susceptible to lead them to revolt. From the standpoint of economic conditions and in line with the "greed" argument, poverty and bad economic prospects have been found to spark protests and conflict. As pointed out by Acemoglu and Robinson (2012), the roots of discontent in countries shaken by the Arab Spring lie in poverty. Likewise, the ideology of terrorism is thought to thrive in environments of despair and misery due to a lack of economic opportunities. In this regard, factors with the potential to improve economic opportunities are expected to favor socio-political stability by eliminating reasons for grievance and alleviating greed among people.

Foreign Direct Investment (FDI) is considered to be an important driver of growth for developing economies through channels including technology transfer and

---

[1]See https://www.maplecroft.com/insights/analysis/download-the-political-risk-outlook-2020-executive-summary/.

[2]Societal warfare includes civil, ethnic, and communal conflicts.

productivity spillovers. It also generates social development opportunities through job creation and poverty reduction. Three main types of FDI can be distinguished, namely cross-border mergers and acquisitions (M&A), the creation of a firm from scratch by a foreign investor and the extension of existing capacity by a non-resident investor. The first type is often referred to as brownfield FDI, while the last two types are referred to as greenfield FDI[3]. More practically, brownfield FDI encompasses not only M&A, but also privatization and alliances. Therefore, it does not imply an immediate increase in capital stock. On the contrary, greenfield FDI implies an expansion of the capital stock, directly generating new activities and jobs, and therefore greater socio-economic opportunities. In this respect, greenfield FDI deserves particular attention given its higher socio-economic externalities and their influences on political stability. From the population side, greenfield FDI can thus support socio-political stability, by improving economic conditions. From the government side, strengthening competitiveness to attract FDI has become a policy of great interest in many countries. In some cases, Investment Promotion Agencies (IPAs) are dedicated to this objective. As a result, there has been a rush in many countries to promote a more favorable environment for foreign investors. For example, in 2016, 108 countries, including 106 developing countries, adopted a total of 111 investment laws that promote investment (UNCTAD, 2017). Socio-political stability is key to the success of FDI-driven institutional reforms because a turbulent environment renders investment risky and uncertain for investors. In consequence, by triggering institutional reforms, greenfield FDI can increase governments' willingness to promote a stable socio-political environment and reduce political risk for foreign investors.

This close relationship between FDI and political stability is evidenced by Figure 3.2 (section 3.3.3) which shows a close association between greenfield FDI inflows as a percent of GDP and the socio-political institutional environment as measured by the *political stability and absence of violence index* of the Worldwide Governance Indicators (WGI) database over the period 2003-2017 for the full set of the chapter's sample of developing countries. The overall steady deterioration in political stability was accompanied by a corresponding decrease in FDI over the period. In line with the above arguments, it appears relevant to investigate whether this positive relationship between FDI and political stability can receive a causal interpretation.

This chapter examines the impact of FDI on socio-political stability in developing

---

[3]This classification is in line with the definition of the data source pertaining to this chapter.

countries with a focus on FDI's socio-economic influences on greed and grievance. Literature on the institutional impact of FDI is relatively new and weakly explored. Some studies like Demir (2016) approached institutions from a global perspective using aggregate institutional measures such as the International Country Risk Guide (ICRG) composite index of political risk. Others focused on specific aspects of institutions including corruption, political institutions, and market institutions (e.g., Ali et al., 2011; Dang, 2013; Kwok and Tadesse, 2006; Larraín B and Tavares, 2004; Long et al., 2015). The political stability aspect per se has not been explored. Following the literature on the effects of globalization on conflict, in which the focus has been on trade, a few studies, such as Bussmann (2010) and Mihalache-O'Keef (2018), have investigated the particular role of FDI along with various measures of conflict (onset, occurrence, intensity, etc.) This chapter rather examines how FDI can shape the institutional environment of destination countries in terms of its capacity to promote socio-political stability conditions and absence of violence (hereafter political stability). This includes not only a low risk of armed conflicts, but also government instability, terrorist threat, protests and riots, violent demonstrations, and social unrest. These factors also pose serious threats to development by preventing the economy from working effectively as they are associated with greater uncertainty, disruption of economic activity, loss of human life, infrastructure damage, and destruction of human capital, to name a few. In addition, these factors are also subject to the political agency of Multinational Corporations (MNCs) and FDI socio-economic influences on greed and grievance. Accounting for them gives a more complete sense of the institutional change potential of FDI with regard to political stability.

The present study adds to the literature on the institutional impact of FDI in a number of aspects. First, it extends existing work by exploring the political stability aspect of institutions in the developing world, thereby emphasizing the stability-related political institutional environment required to promote socio-economic development. Second, while previous studies in this literature use total FDI, I depart from them by looking at greenfield FDI to better test my hypotheses. Not all types of FDI are equal in their capacity to generate economic opportunities and therefore to temper greed and grievance. I am interested in greenfield FDI for its more direct impact on economic growth and job creation (e.g., Financial-Times, 2019; Harms and Méon, 2018; Wang and Wong, 2009). As regards methodology, addressing the endogeneity issue of FDI with respect to political stability is crucial for achieving the goal of this chapter. Taking advantage of the bilateral structure of

the greenfield FDI data used in this study, I develop a gravity-based instrumental variable approach a la Frankel and Romer (1999) and Feyrer (2019), never used before in this literature. I supplement this approach with the System Generalized Method of Moments (SYS-GMM) for comparison purposes and also to account for the potential inertia nature of political stability through a dynamic model. The results clearly evidence that greenfield FDI favors political stability, and are robust to various specifications and estimations methods, as well as a series of sensitivity tests.

The rest of the chapter is organized as follows: the next section revisits the links between FDI and institutions with a focus on political stability. Section 3.3 introduces the empirical methodology and describes the data. In section 3.4, I present and discuss the empirical results followed by robustness tests in section 3.5. The final section concludes.

3.2 Literature review

The link between institutions and FDI has been extensively investigated in literature. As FDI was becoming an important source of capital formation, scholars have explored factors that strengthen countries' attractiveness. Attention was initially given to economic factors such as infrastructure, market size, exchange rates, and labor costs (Bailey, 2018). Institutions have progressively been considered an equally important source of comparative advantage in FDI attractiveness since the work of North (1990) explaining how influential institutions and institutional change are on economic performance. This new consideration of FDI determinants has led to a series of papers exploring the effects of institutional variables on FDI inflows. Factors like democracy, rule of law, property rights, low levels of corruption, and political stability have been identified as being positively associated with FDI.

With the growing influence of foreign direct investors in developing countries, research interest has emerged in new aspects of FDI impact, including the institutional dimension. As a matter of fact, exploring the reverse direction of causality (i.e., the influence of foreign investment on the institutional environment), brings useful additional insights into the linkage between FDI and institutions as (i) MNCs do not always adapt to the local environment, given their potential for political agency according to the profit-maximizing environment they need, in particular in developing countries where they are known to have high bargaining power, (ii) FDI has induced institutional reforms in countries competing to attract foreign

investment, (iii) FDI socio-economic effects can trigger institutional change.

In this context, some studies, albeit comparatively few, have explored the reverse link by investigating how FDI affects institutions in destination countries (See section 2.2 of Chapter 2 for a review of these studies for other dimensions of institutions.) Research on the effect of FDI on political instability has been limited to a specific aspect of instability: internal or inter-state conflicts. This research follows the broader literature on globalization and conflicts with the prominence given to trade. According to proponents of globalization, – whose view I refer to as the liberal position, economic integration reduces the likelihood of international conflict as countries would avoid militarized disputes to maintain their mutually beneficial economic exchanges. Economically integrated countries will then tend to give preference to peaceful solutions to disputes given the extensive exchange of goods, services and capital between their private economic agents (Russett and Oneal, 2001). With the exception of studies such as Magee and Massoud (2011), Sorens and Ruger (2014), and Olzak (2011) who find either the opposite or no significant effect, the liberal proposition has found massive empirical support. Many of these studies have either focused on the trade component of globalization or resorted to a composite measure of globalization, (e.g., Barbieri and Reuveny, 2005; Blanton and Apodaca, 2007; Reed, 2003; Russett and Oneal, 2001). Only a few have examined the effect of FDI, either along with various indicators of globalization (Gartzke et al., 2001; Gartzke and Li, 2003), or as focus point (Bussmann, 2010), and they tend to find a tempering effect of FDI on inter-state conflicts. For instance, Bussmann (2010) found that inflows and stocks of FDI reduce the risk of an outbreak of a militarized conflict between countries.

The effect of globalization on civil conflicts has been analyzed in light of its socio-economic externalities and the political agency potential of foreign investors. From the socio-economic externalities perspective, globalization affects civil strife through its socio-economic influence on greed and grievance, the two main determinants of internal conflict (Collier et al., 2009; Collier and Hoeffler, 2004; Miguel et al., 2004). Depending on its effects on economic opportunities, inequalities, and welfare, globalization can either exacerbate or temper greed and grievance and thus feed or counter civil conflicts. From the liberal position, globalization is argued to favor economic growth, improve the efficiency of redistribution, and generate welfare for the entire population. Accordingly, it is expected to be a boon to domestic peace by eliminating reasons for grievance and alleviating greed (Mihalache-O'Keef, 2018). On the other hand, globalization critics, in particular the structuralist

position, are skeptical about this effect as they point out that globalization-driven opportunities are associated with a discriminative redistributive process, paving the way to discontent (e.g., Koubi and Böhmelt, 2014; Olzak, 2011). The empirical investigation of these two contradictory claims through the lens of FDI is very sparse. While Barbieri and Reuveny (2005) and Blanton and Apodaca (2007) found results consistent with the liberal position, Sorens and Ruger (2014) concluded that FDI has no effect on civil conflict. Accounting for the sectoral distribution of FDI, Mihalache-O'Keef (2018) argued that the effect of FDI on intra-state conflict depends on the sector of investment. She found that primary sector FDI exacerbates the risk of civil conflict, supporting the structuralist position, while service sector FDI alleviates that risk, in line with the liberal position.

The political agency perspective relates to the lobbying and pressure activities discussed earlier. FDI implies establishing a lasting interest by the direct investor in the host country through the control or a significant degree of influence over the management of the direct investment enterprise[4] (IMF, 2009). This characteristic of FDI makes it particularly sensitive to the political environment of investment destinations. Cognizant of foreign investors' need for a stable political climate, governments are pushed towards providing such an environment in order to attract and maintain foreign capital. The investigations following the Watergate scandal which reported American corporations paying bribes to foreign officials also revealed foreign investors to be strategic players with direct actions in the political sphere of host countries. This political agency potential was evidenced in studies including Dang (2013), Long et al. (2015), and Malesky (2009), following prior political strategy analyses contending that investors may individually or collectively interact with government officials to reduce the risks they face (Hahn, 1999; Hillman and Hitt, 1999). However, the stabilizing role of FDI is sometimes questioned through allegations against MNCs that they contribute to undermining local institutions in order to ensure control over local resources. An example of this is the financial and logistical support provided by the mining company AngloGold Ashanti in 2003-2004 to a rebel group operating in the gold-rich district of Ituri in The Democratic Republic of Congo (Berman et al., 2017).

---

[4]As defined by the Balance of Payments and International Investment Position Manual: Sixth Edition IMF (2009), FDI arises when a unit resident in one economy makes an investment that gives control or a significant degree of influence over the management of a company that is resident in another economy. This concept is operationalized where a direct investor owns equity that entitles it to 10% percent or more of the voting power (if it is incorporated, or the equivalent for an unincorporated company) in the direct investment enterprise.

Following dimensions of institutions such as corruption (Kwok and Tadesse, 2006; Larraín B and Tavares, 2004; Webster and Piesse, 2018), tax burden and rule of law (Long et al., 2015), market conditions (Ali et al., 2011; Malesky, 2009), this chapter complements research on the institutional impact of FDI by examining the political stability dimension of institutions. In the body of work on FDI and its institutional effects, there is a quasi-systematic resort to total FDI, comprising greenfield FDI, and mergers and acquisitions. The framework of analysis in this paper aims to emphasize the socio-economic externalities of FDI as the dominant mechanism relating FDI to political (in)stability of recent decades. Consequently, it focuses on greenfield FDI for its more direct impact on economic conditions through growth and job creation (e.g., Financial-Times, 2019; Harms and Méon, 2018; Wang and Wong, 2009).

3.3   Empirical methodology

This section presents the econometric approach guiding the empirical analysis of the effect of FDI on political stability. Section 3.3.1 introduces the model, followed by the identification strategy in section 3.3.2, and section 3.3.3 describes the data.

3.3.1   The model

To investigate the effect of FDI on developing countries' institutions in terms of political stability, the following linear specification is used, relating political stability to its determinants:

$$Polstab_{it} = \alpha + \beta_1 FDI_{it} + \sum_{k=2} \beta_k X_{it} + \varepsilon_{it} \tag{3.1}$$

where i and t refer to countries and time period respectively, $Polstab_{it}$ is a measure of political stability, FDI_{it} is greenfield FDI inflows as a percent of GDP, α a constant, ε_{it} represents the error term capturing omitted factors and noise, and X_{it} a vector of control variables reflecting the main time-varying determinants of political stability. These include:

The (log) real per capita GDP ($LogGDPPC$) to control for income. Low per capita GDP has been found to be positively associated with civil conflicts as reduced income opportunities make people more likely to take up arms (Collier and Hoeffler, 1998, 2004; Miguel et al., 2004). In addition, some degree of political centralization is needed for law and order to prevail (Acemoglu and Robinson,

2012), an important prerequisite for political stability. And poor countries may face resource constraints in building such states.

The real per capita GDP growth rate (*Growth*) controls for the effects of income variations. Declining growth perceived as a negative income shock is disruptive to political stability as it makes it easier to recruit fighters from a growing pool of unemployed people. It also may increase income inequality and generate tensions across social classes or with the state Miguel et al. (2004).

The (log) commodity exports as a percent of GDP (*LogCommod*): this variable relates to the resource curse literature, which highlights how detrimental natural resources can be to institutions and development. Moreover, it is considered a common source of rebellion financing, matching the greed motive of conflicts (Collier and Hoeffler, 2004).

Unemployment (*Unemp*) captures in part economic opportunities. Jobless people constitute a potential pool for recruitment in armed groups and growing unemployment rates have traditionally been at the core of social protests[5].

Democracy (*Polity*2) is considered an inclusive political institution (Acemoglu and Robinson, 2012), and has the potential to prevent political exclusion and repression of certain groups of the society, therefore limiting grievance-driven political instability.

Ethnic and religious cleavages have been given attention as potential sources of instability (e.g., Collier and Hoeffler, 1998, 2004; Fearon and Laitin, 2003), and they are controlled for, using variables which capture ethnic tensions (*Ethnicity*) and religious tensions (*Religion*), respectively. These tensions are likely to result from the size of the population as larger population countries are more likely to have higher religious and ethnic fragmentations, which may cause religious and ethnic tensions (Alesina and Ferrara, 2005). Accordingly, I also include the (log) total population (*LogPop*) as an additional control in some estimations.

Education, proxied with the (log) secondary school enrolment (*LogEduc*), may affect the risk of social unrest and conflict through changing attitudes. Collier and Hoeffler (2004) noted that some conflict episodes started from lower school enrollment.

---

[5]As robustness check, I also consider measures of poverty and inequality in some estimations (see section 3.4.2 and Table 3.14 in Appendix).

3.3.2 Identification strategy

Eq. 3.1 will be first estimated using OLS regressions. As it is not straightforward to interpret OLS estimates of β_1 as a causal effect, addressing the endogeneity issue of FDI with respect to political stability is crucial for achieving the goal of this study. Institutional quality is found to be a strong predictor of FDI location in the literature on FDI determinants. Countries with a better political environment in terms of political stability appear to be more attractive to investors and tend to be the top destinations of FDI. This means that the coefficient of FDI – β_1 – can be driven by reverse causality. Another source of identification issue is omitted factors that could jointly affect the socio-political environment and FDI inflows but are not captured by the control variables. The challenge is then to formulate a strategy suitable for identifying the causal effect of FDI on political stability. I rely on two alternative identification strategies: the Instrumental Variable method (IV) and the System Generalized Method of Moments (SYS-GMM) in a dynamic specification. The SYS-GMM will also serve for comparison, following, among others, Murtin and Wacziarg (2014) and Docquier et al. (2016).

The gravity-based instrumental variable approach

Finding good instruments in a panel setting is a daunting task, given that these instruments must vary over time. Pinto and Zhu (2016), in their analysis of the effect of FDI on corruption, constructed an instrument for FDI using the sum of the bilateral geographic distance between the host countries and the 20 wealthiest economies, weighted by their average real GDP per capita. They explain the logic of the instrument with these words: "on the one hand, investors are more likely to invest in those destinations that are close to their home country; and on the other hand, wealthier countries (those with higher GDP per capita) are more likely to be better endowed with capital and hence more likely to invest abroad". They drew on Larraín B and Tavares (2004) who had developed the same instrument, adding cultural proximity in the construction of the variable. Taking note of these attempts to provide a reliable instrument for FDI and also taking advantage of the bilateral structure of the greenfield FDI data used in this study, I follow Frankel and Romer (1999) and Feyrer (2019)'s approach to construct a gravity-based instrumental variable for FDI.

The instrument is obtained in two steps. First, I construct gravity-based predicted bilateral FDI flows by regressing actual bilateral FDI on exogenous variables which are unlikely to directly affect political stability (see Eq. 3.2 below). Second,

the fitted bilateral FDI, $\widehat{FDI_{ijt}}$, are aggregated over source countries for each destination country and time period, $\widehat{FDI_{it}} = \sum_j \widehat{FDI_{ijt}}$, to obtain the exogenous component of destination countries' total FDI for every time period. The instrument for aggregate actual FDI as a percent of GDP in Eq. 3.1 is the aggregate predicted FDI inflows expressed as a percent of destination countries' GDP: $(\widehat{FDI_{it}}/GDP_{it}) \times 100$. Following Frankel and Romer (1999), the gravity-based instrumental variable method has been extended in numerous studies, especially in the trade and migration literature, among which Alesina et al. (2016) and Ortega and Peri (2014). To my knowledge, this is the first time this approach has been used to study the effects of FDI. The "pseudo" gravity equation from which the predicted FDI are computed is given by:

$$Log(FDI_{ijt}) = \alpha_0 + \alpha_j + \alpha_t + \beta_1 Lang_{ij} + \beta_2 Log(GDP_{jt}) + \beta_3 \alpha_t Log(Dist_{ij}) + \varepsilon_{ijt} \tag{3.2}$$

where $Log(FDI_{ijt})$ is the natural logarithm of greenfield FDI received from country j by host country i at time t; $Lang_{ij}$ measures language links between both countries: a common language shared by two countries is expected to ease their transborder investments; $Log(GDP_{jt})$ represents the natural logarithm of GDP[6] of the investing country as richer countries are more likely to invest abroad; $Log(Dist_{ij})$ is the natural logarithm of the geographical distance between the partner countries which I interact with time period dummies (α_t): beyond the logic behind Pinto and Zhu (2016) and Larraín B and Tavares (2004)'s instrument that outflows from a country are negatively related to distance to partner countries, the interaction of distance with time dummies accounts for common shocks in communication and technologies which have alleviated physical distance barriers to transborder investment over time, or transaction costs. Like the dependent, the resulting variable has a three-dimension variability (destination country, origin country, and time.) While all these independent variables have been commonly used in research on FDI determinants based on a gravity model, including Bergstrand and Egger (2013), Di Giovanni (2005), Head and Ries (2008), and Stein and Daude (2007), they are unlikely to affect (at least directly) political stability. They may not represent a perfect exogenous source of variation in FDI to make the gravity model-based predicted FDI reduce the actual FDI bias to zero, however they are exogenous enough to at least allow the instrument to mitigate the endogeneity bias.

---

[6]FDI and GDP values are expressed in nominal terms. They are effectively deflated by the multilateral resistance terms. Deflating them by some factor such as the CPI or the GDP deflator to express them in real terms could produce misleading results.

α_0 is a constant, and α_j an origin country fixed effect (FE). Following Docquier et al. (2016), I do not include destination country fixed effect because it could capture the influence of host countries' institutions on foreign investors' investment decisions.

The System Generalized Method of Moments (SYS-GMM)

For comparison purposes and also to account for the potential persistence in institutional factors, I supplement the gravity-based instrumental variable approach with the SYS-GMM proposed by Blundell and Bond (1998) using a dynamic specification (i.e., adding the lagged dependent to the set of regressors in Eq. 3.1). The SYS-GMM estimator has the property to address the so-called Nickell bias (Nickell, 1981) which arises from including the lagged dependent variable as a regressor in a fixed effects regression, and also to account for potential endogeneity of the controls. The SYS-GMM technique combines the equation in first differences with the equation in levels in a system. Under the assumption that lagged variables are not reacting to current changes, it instruments for the equation in levels with first differences of variables and for the equation in first differences with lagged levels of variables.

It is worth noting that the effect of FDI on political stability to be obtained from the different estimations (OLS, IV, and SYS-GMM) might be underestimated. FDI affects some of the covariates in the same direction as it is expected to influence political stability. Based on the main argument that by generating economic opportunities greenfield FDI can promote political stability, it appears that FDI is expected to affect both political stability and some of the covariates, including real per capita GDP and (un)employment, in the same direction. Consequently, the coefficient of FDI might be underestimated, as some of the effect is also likely to be captured by the covariates. As a result, the coefficient of FDI might reflect a lower-bound estimate of FDI impact on political stability[7].

3.3.3   Data and sample

The determination of FDI impact on political stability is based on a sample of 116 developing economies. The gravity model is estimated on these 116 countries (host countries) and 158 home countries (developing and developed countries)[8].

---

[7]I thank an anonymous Referee for having pointed this out.

[8]The sample is based on data availability. The paper follows UNCTAD's classification of countries to distinguish between developed and developing countries (including transi-

The data span the period between 2003 – the first year for which greenfield FDI data are provided – and 2017. Given the relatively little variation over time of the institutional quality variable, I use three-year averages of the data, resulting in 5 time periods. The selected countries as well as the time period depend on data availability. The full sample of countries is provided in Appendix, Tables 3.11 and 3.12.

Data for the gravity model (Eq. 3.2)

The bilateral FDI data are obtained from the fDi markets database of the Financial Times. The database provides information on greenfield FDI worldwide, including the source market, the destination market, and the capital investment. The values are in current US dollars. The sample dataset consists of 4,204 country pairs from 116 destination developing countries and 158 source countries. Data on language and geographical distance are taken from the CEPII database. Language is a dummy variable equal to 1 if a language is spoken by at least 9% of the population in both investing and recipient countries. Geographical distance measures the simple distance between the most populated cities of the country pairs, in kilometers. The source country's GDP data are from the World Development Indicators (WDI) of the World Bank, in current USD.

Data for the baseline model (Eq. 3.1)

Political stability is measured with the political stability and absence of violence index of the Worldwide Governance Indicators (WGI). This is one of the 6 dimensions of governance reported by the WGI and captures the institutional environment in terms of perceptions of the likelihood of political instability and/or politically motivated violence. The dimensions of (in)stability captured by the index include, among others, armed conflicts, government stability, terrorism, international tensions, protests and riots, violent demonstrations, and social unrest[9]. The index is generated in such a way that it approximately ranges from -2.5 to +2.5, with higher values corresponding to better institutions. For the econometric

---

tion economies.) Developed countries are Australia, Austria, Belgium, Canada, Switzerland, Cyprus, Germany, Denmark, Spain, Finland, France, Greece, Hong Kong, Ireland, Iceland, Israel, Italy, Japan, Luxemburg, Netherlands, Norway, New Zealand, Portugal, Sweden, United Kingdom, and the USA. Developing economies include all other countries. See https://unctadstat.unctad.org/EN/Classifications.html.

[9]For the methodology and list of the individual variables as well as data sources used to construct the index, see https://info.worldbank.org/governance/wgi/Home/Documents.

estimations, I rescale the index so that it lies between 0 and 1, with 1 reflecting the highest political stability for the purposes of this study. The sample within and between standard deviations of the rescaled index are about 0.07 and 0.20, respectively. The WGIs are now widely used by academics (recent papers include Alquist et al. (2019); Batista and Vicente (2011); Deng et al. (2018)) and policymakers (for example, the Millennium Challenge Corporation relies on 4 of the WGI measures for determining country eligibility[10], and the WGI's index of political stability appears to closely match the goal of this study. As a robustness check, I construct another index of political stability from 3 indicators of the International Country Risk Guide (ICRG)[11], namely government stability, internal conflict, and external conflict, each with a minimum score of 0 and a maximum score of 12. Following the ICRG methodology, the index is computed as the sum of the 3 indicators. As previously, I transform the scores so that they range between 0 and 1 for the econometric estimations.

FDI inflows as a percent of GDP: for a given year and from the bilateral FDI flows presented above, I compute total FDI received by a country from all source countries to obtain the aggregate FDI inflows for that country and year. The aggregate FDI is then expressed as a percent of the host country's current GDP using WDI data. In order to explore possible heterogeneity regarding the type of source country, I also distinguish between flows from developed countries and flows from developing countries.

Real per capita GDP, real per capita GDP growth, commodity exports as a percent of GDP, unemployment (rate), population size, and ***education*** (measured by the gross enrolment rate in secondary education) data are all obtained from the WDI. ***Democracy*** is measured with the Polity2 variable of the POLITY IV dataset. Widely used in literature, it ranges between -10 and +10, with +10 equating to very democratic institutions. ***Religious tensions*** and ***ethnic tensions*** are taken from the ICRG database. They range from 0 to 6, higher ratings are given to countries where tensions are minimal. For ease of interpretation, I rename them religious cohesion, and ethnic cohesion, respectively.

---

[10]See https://www.mcc.gov/resources/doc/report-selection-criteria-methodology-fy19 for details.

[11]For details on the variables, see https://www.prsgroup.com/wp-content/uploads/2012/11/icrgmethodology.pdf.

Some descriptive statistics

During the period of analysis, total greenfield FDI flows to the sample of developing countries averaged about $527 billion, with a peak of over $895 billion in 2008. Apart from the 2008 peak, FDI inflows fluctuated around $500 billion over the period, alternating phases of rise and fall, with 2012 registering the lowest amount of $410 billion. The surge observed in 2008 demonstrates the importance of the developing region as host for FDI during the 2007-2008 global financial crisis UNCTAD (2010). Developed economies have remained the largest source of FDI to developing countries, but with a declining share as South-South FDI has been growing over time (Figure 3.1). For example, while the share of greenfield FDI from developing economies in total FDI was 24% over the first 3 years, it almost doubled over the last 3 three years (44.2 %), virtually equally important as flows from developed economies. This growing role of developing countries as new sources of investment within the developing world is driven by outflows from Asia; with China[12], Republic of Korea, Singapore, India, and Malaysia accounting for over 50% of greenfield FDI outflows over the period[13].

Greenfield FDI inflows within developing countries are unevenly distributed. The top 10 largest recipients accounted for more than half of the total inflows during the period, with China taking the lead. Most of them are emerging or high-income economies[14]. In particular, all BRIC countries are among the top 5 FDI destinations. In contrast, the bottom countries are generally low-income economies, most of them from Sub-Saharan Africa. However, the picture is different for inflows as a percent of GDP. Greenfield FDI represented a big share of GDP for small economies, with countries such as Mozambique, Liberia and Mongolia where average FDI over the period was more than 20% of GDP, outperforming China with an average FDI of less than 3% of GDP. While Sub-Saharan Africa was the smallest recipient of FDI in absolute terms, the region turned to be the second-largest host for FDI as a percent of GDP (almost 6%). Like flows in current USD, the average share of greenfield FDI in host countries' GDP fluctuated over the period, but with an overall downwards trend, from a high of 10.3% in 2003 to a low of 2.2% in 2017 (Figure 3.1).

---

[12]Including Taiwan.

[13]Other countries such as the United Arab Emirates, Russia, and South Africa are also major investors.

[14]Based on the World Bank income group classification.
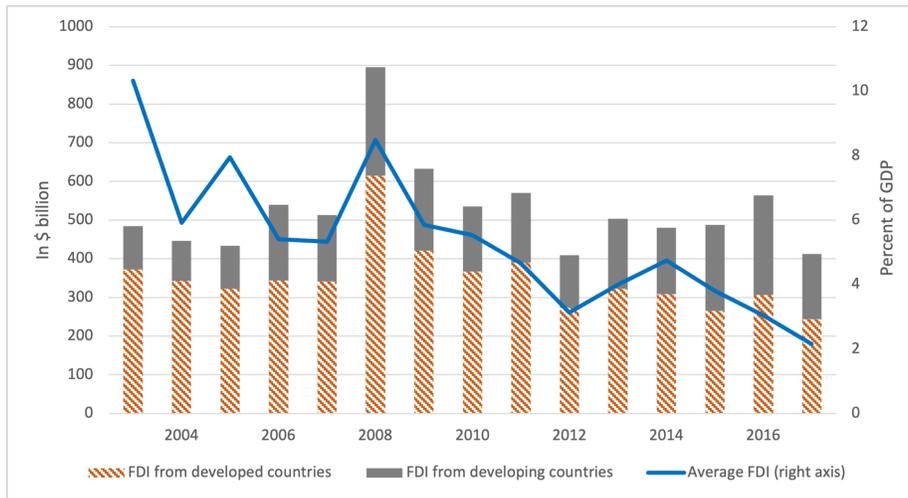
Source: Author's calculations, based on data from fDi Markets.

Figure 3.1: FDI inflows dynamics

Turning to the developing countries' institutions, the data indicate that political stability went deteriorating over the period with 2014 registering the lowest average score of -0.4 on a worldwide approximate scale from -2.5 to 2.5 (Figure 3.2). In spite of some improvements in years such as 2006 and 2015, the developing countries sample have never witnessed a political environment more stable than that of the beginning of the period. While the highest level of institutional quality in terms of political stability was in Europe & Central Asia, the most unstable environment was observed in South Asia, with a score of -1.7, far below the sample average of -0.37. The data highlight the scope for substantial improvement in developing countries' institutions in terms of political stability. As a first step towards exploring the possible contribution of FDI to achieving this, Figure 3.3 shows that greenfield FDI is positively correlated with political stability. Table 3.1 provides summary statistics on the variables used in the regression analysis.
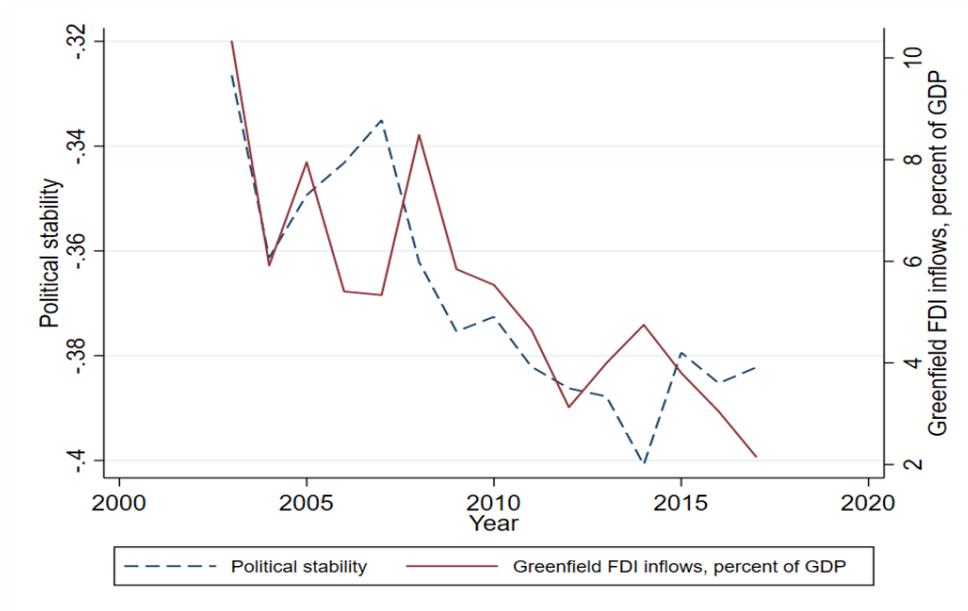
Figure 3.2: Political stability and Greenfield FDI inflows (as a percent of GDP) dynamics.
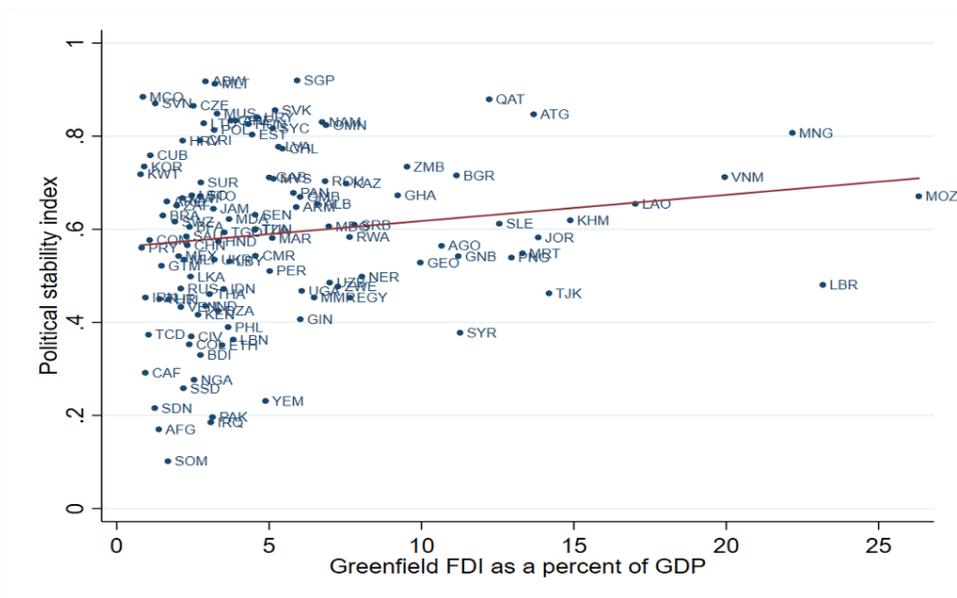
Note: The political stability index is rescaled between 0 and 1. One point represents a country's average over the period.

Figure 3.3: Correlation between political stability and FDI

Table 3.1: Summary statistics

Variable	Obs.	Mean	Std. Dev.	Min	Max
Polstab	588	0.605	0.206	0	1
FDI (total)	577	5.321	7.368	0	59.189
FDI (from the North)	577	3.071	5.035	0	45.329
FDI (from the South)	577	2.25	4.422	0	54.349
LogGDPPC	571	8.094	1.36	5.364	11.879
Growth	584	2.748	3.748	-20.148	27.736
LogCommod	487	1.135	2.056	-10.673	4.232
Unemp	570	7.734	5.707	0.147	32.989
Polity2	558	3.025	6.092	-10	10
Religion	485	4.348	1.327	1	6
Ethnicity	485	3.864	1.236	1	6
LogPop	595	16.105	1.803	10.415	21.044
LogEduc	472	4.154	0.548	1.786	4.825

3.4 Estimations results

The results are organized in two main sections. I first estimate the gravity model of Eq. 3.2 which will serve to derive the instrumental variable for FDI inflows. Second, I investigate the link between FDI and political stability using the OLS method and the two identification methods, namely the IV-2SLS and the SYS-GMM.

3.4.1 PPML estimates of the gravity equation

Given the large number of zeros in the bilateral FDI data, OLS estimates of the gravity equation parameters are likely to be inconsistent. The Poisson regression by pseudo maximum likelihood appears to be the most appropriate method to estimate the above gravity model. More precisely, I rely on the Stata PPML command based on the method of Silva and Tenreyro (2011) to identify and drop

regressors that may cause the nonexistence of the (pseudo) maximum likelihood estimates. The results are given in Table 3.2 with robust standard errors (clustered by country pairs). Overall, the regressors are strong predictors of bilateral FDI flows as all coefficients are highly significant. In addition, the coefficients have the expected signs: language links favor greenfield projects, countries tend to receive more investments from richer economies, and countries invest less in more remote destinations, everything else being equal. These results are consistent with the findings of previous studies including Bergstrand and Egger (2013), Di Giovanni (2005), Head and Ries (2008), and Stein and Daude (2007). Table 3.13 (in Appendix) reports the first-stage regression results of the IV-2SLS estimation of political stability using the baseline specifications. The results show that the predicted FDI obtained from the PPML estimation of the gravity model is a strong predictor of actual FDI as the coefficients are all positive and highly significant. In addition, Figure 3.4 (in Appendix) displays a strong positive correlation between the FDI variable and its instrument with a correlation coefficient of 0.34.

Table 3.2: PPML estimates of the pseudo-gravity equation

Dependent:	Bilateral Greenfield FDI flows
Language	0.3599**
	(0.1830)
LogGDP_Origin	0.8032***
	(0.1350)
LogDist $\times Period1$	-0.3338***
	(0.1179)
LogDist $\times Period2$	-0.5290***
	(0.0794)
LogDist $\times Period3$	-0.3609***
	(0.0933)
LogDist $\times Period4$	-0.3425***
	(0.0883)
LogDist $\times Period5$	-0.4132***
	(0.0856)
Constant	-1.4549
	(3.1974)
Observations	20,839
Destination FE	Yes
Time FE	Yes

Notes: *** p<0.01, ** p<0.05, * p<0.1. The sample includes 116 destination countries and 158 developing and developed source countries. Robust standard errors clustered by country pairs are in parentheses.

3.4.2 Investigating the effect of FDI on political stability

The panel structure of the data allows exploring the effect of greenfield FDI on
political stability using only its time-varying determinants as time-invariant factors
are captured by country fixed effects (FE). The model is first estimated with
OLS regressions. 2SLS and SYS-GMM are then employed to address possible
endogeneity of FDI in specific ways discussed earlier.

OLS estimations

Table 3.3 reports the OLS estimates of the political stability model. I start by
relating political stability only to economic variables, in columns (1) and (2), as
they have proved to be more important determinants of socio-political instability
than measures of political grievance (Collier and Hoeffler, 1998, 2004; Fearon and
Laitin, 2003; Miguel et al., 2004) The results indicate that FDI is positively and
significantly related to political stability. On average, a 100-point increase in FDI
inflows as a percent of GDP is associated with an improvement in institutions
of about 0.2. Higher income as well as a positive shock to income favor stability
as per capita GDP and its growth rate have the expected signs and are highly
significant, except growth in column (2). The negative coefficient of commodity
exports is consistent with the "resource curse" hypothesis and the greed motive of
instability, however, it is not statistically significant. Unemployment is significant
with the expected sign: higher rates of unemployment breed political instability.

From column (3) to column (12), I gradually add the non-economic determinants
of political stability. FDI remains positively associated with institutional quality.
The coefficient is not significant only in columns (9), (10), and (11) after adding
the population and education variable as final additional controls. Overall, the link
between the economic variables and political stability is robust to the inclusion
of non-economic variables. The economic variables tend to keep their sign and
statistical significance of columns (1) and (2). Turning to the non-economic
variables, democracy has a positive association with political stability, although
not significant. Religious cohesion and ethnic cohesion have the expected signs
with statistical significance at conventional levels. Population has a negative
coefficient and is significant in specifications without time FE, suggesting that
larger populations increase the risk of political instability. Education is negatively
and significantly related to institutional quality: educated people might be more
demanding of the government and resort to protest to get things changed.

Table 3.3: OLS estimates of the political stability model

Dependent:	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
							Political stability					
FDI	0.0024***	0.0019**	0.0025***	0.0019**	0.0023***	0.0016*	0.0023***	0.0016*	0.0013	0.0014	0.0016	0.0016*
	(0.0008)	(0.0008)	(0.0008)	(0.0008)	(0.0008)	(0.0009)	(0.0009)	(0.0009)	(0.0009)	(0.0009)	(0.0010)	(0.0010)
LogGDPPC	0.0798***	0.1770***	0.0764***	0.1753***	0.0680***	0.1762***	0.0703***	0.1794***	0.0891***	0.1668***	0.1115***	0.1697***
	(0.0270)	(0.0389)	(0.0271)	(0.0395)	(0.0257)	(0.0396)	(0.0256)	(0.0379)	(0.0248)	(0.0419)	(0.0340)	(0.0401)
Growth	0.0026***	0.0012	0.0026**	0.0009	0.0022**	0.0004	0.0021**	0.0003	0.0018*	0.0006	0.0006	-0.0008
	(0.0009)	(0.0012)	(0.0010)	(0.0013)	(0.0011)	(0.0013)	(0.0010)	(0.0013)	(0.0011)	(0.0012)	(0.0012)	(0.0016)
LogCommod	-0.0036	-0.0055	-0.0026	-0.0046	-0.0050	-0.0070	-0.0059	-0.0079	-0.0078*	-0.0079	-0.0041	-0.0037
	(0.0045)	(0.0041)	(0.0048)	(0.0045)	(0.0055)	(0.0053)	(0.0056)	(0.0053)	(0.0046)	(0.0051)	(0.0033)	(0.0040)
Unemp	-0.0044**	-0.0055**	-0.0046**	-0.0059***	-0.0046**	-0.0059***	-0.0042**	-0.0055**	-0.0048**	-0.0056***	-0.0042**	-0.0052**
	(0.0020)	(0.0021)	(0.0019)	(0.0021)	(0.0019)	(0.0021)	(0.0019)	(0.0021)	(0.0019)	(0.0020)	(0.0021)	(0.0023)
Polity2			0.0016	0.0033	0.0012	0.0030	0.0015	0.0033	0.0027	0.0033	0.0017	0.0021
			(0.0049)	(0.0049)	(0.0047)	(0.0048)	(0.0044)	(0.0046)	(0.0045)	(0.0046)	(0.0048)	(0.0049)
Religion					0.0488***	0.0543***	0.0398**	0.0451***	0.0432**	0.0457***	0.0363*	0.0399**
					(0.0150)	(0.0141)	(0.0166)	(0.0159)	(0.0165)	(0.0160)	(0.0194)	(0.0188)
Ethnicity							0.0287	0.0297*	0.0284	0.0294*	0.0289*	0.0271*
							(0.0176)	(0.0155)	(0.0167)	(0.0155)	(0.0157)	(0.0147)
LogPop									-0.1253**	-0.0413	-0.1132*	-0.0655
									(0.0534)	(0.0604)	(0.0628)	(0.0623)
LogEduc											-0.1122**	-0.0963*
											(0.0502)	(0.0496)
Observations	472	472	465	465	415	415	415	415	415	415	346	346
R-squared	0.096	0.151	0.098	0.156	0.121	0.189	0.140	0.209	0.179	0.212	0.238	0.263
Countries	106	106	105	105	92	92	92	92	92	92	87	87
Country FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Time FE	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes

Notes: *** p<0.01, ** p<0.05, * p<0.1. All standard errors (in parenthesis) are heteroskedasticity robust. Political stability is measured with the "political stability and absence of violence index" index of the WGI rescaled between 0 and 1. FDI represents greenfield FDI inflows as a percent of GDP. All regressions include a constant.

The previous regressions excluded two major factors of resentment, poverty and inequality, because of too many missing observations (using WDI data on the poverty headcount ratio at $1.90 and the Gini index, respectively). In Table 3.14 in Appendix, I disregard this concern and extend the last two specifications by adding them. Including these two variables almost halves the number of observations. This extension does not affect the relationship between FDI and political stability as the coefficient remains positive, albeit not significant. In the following estimations, I then use models from columns (7) and (8) of Table 3.3 as the preferred specifications, including both economic and political grievance-related predictors of political stability.

2SLS estimations

In Table 3.4, I re-estimate the preferred specification by 2SLS using the gravity-based instrument. The Kleibergen-Paap Wald F statistic (KP) for weak identification is always very large in the baseline model from columns (1) and (2), at least 22.7, far above the most demanding Stock-Yogo critical value of 16.38. The KP in columns (3) and (4) is above the critical value of 8.96 for 15% maximum IV size. Overall, the KP statistics suggest that the instrument is strong and performs well in the second stage.

Previous results from the OLS estimations are confirmed by the IV-2SLS estimations regarding the effect of greenfield FDI on institutional quality in terms of political stability. In all columns, except column (2), FDI exerts a significant and positive effect on political stability. The effect is about a 0.8-point increase in the score of the institutional quality index for a 100 percentage-point increase in FDI inflows. This coefficient is much larger compared to that of table 3, suggesting that the OLS coefficients were downwards biased. With the exception of per capita GDP growth and population which become non-significant, the other predictors follow their patterns of earlier results: GDP per capita, religious cohesion, and ethnic cohesion have a positive and significant association with the institutional index; the link is negative and significant for unemployment and education; commodity exports and democracy are not significant with expected signs (negative for the former and positive for the latter). These results highlight a causal and strong impact of greenfield FDI on political stability.

Table 3.4: 2SLS estimates of the political stability model

	(1)	(2)	(3)	(4)
Dependent:		Political stability		
FDI	0.0077***	0.0046	0.0083*	0.0080*
	(0.0028)	(0.0030)	(0.0047)	(0.0048)
LogGDPPC	0.0987***	0.1731***	0.1354***	0.1770***
	(0.0288)	(0.0313)	(0.0412)	(0.0447)
Growth	0.0002	-0.0002	-0.0016	-0.0021
	(0.0014)	(0.0013)	(0.0018)	(0.0017)
LogCommod	-0.0068	-0.0076	-0.0018	-0.0012
	(0.0052)	(0.0051)	(0.0055)	(0.0060)
Unemp	-0.0054***	-0.0063***	-0.0050**	-0.0064***
	(0.0020)	(0.0020)	(0.0022)	(0.0023)
Polity2	0.0017	0.0030	0.0010	0.0012
	(0.0031)	(0.0030)	(0.0032)	(0.0033)
Religion	0.0391***	0.0446***	0.0286*	0.0338**
	(0.0127)	(0.0126)	(0.0164)	(0.0165)
Ethnicity	0.0270*	0.0288**	0.0311**	0.0292**
	(0.0162)	(0.0138)	(0.0146)	(0.0134)
LogPop			0.0011	0.0227
			(0.1436)	(0.1429)
LogEduc			-0.1507**	-0.1427**
			(0.0706)	(0.0718)
Observations	414	414	340	340
KP	23.45	22.73	10.60	11.19
Countries	91	91	81	81
Country FE	Yes	Yes	Yes	Yes
Time FE	No	Yes	No	Yes

Notes: *** $p<0.01$, ** $p<0.05$, * $p<0.1$. Standard errors (in parenthesis) are heteroskedasticity robust. The excluded instrument is the fitted FDI as a percent of GDP. The Kleibergen-Paap statistics to be compared with the Stock-Yogo critical values to test the instrument's strength.

SYS-GMM estimations

Table 3.5 reports the SYS-GMM estimates for comparison purposes and also to account for the potential persistence in political stability through a dynamic specification by adding the lagged institutional index to the set of regressors in Eq. 3.1. The results are based on the preferred specification. Columns (1) and (2) rely on internal instruments only. Columns (3) and (4) use the gravity-based instrument for FDI. Before discussing the estimates, it is noteworthy that the usual diagnostic tests support the quality of the fitting: the AR (2) p-values of the Arellano-Bond test for serial correlation indicate absence of first-order serial correlation in levels (second-order correlation in differences), and the Hansen J test does not reject the null hypothesis that the instruments are valid. Overall, the diagnostic tests at the bottom of the table suggest that the SYS-GMM is correctly specified in all estimations.

The SYS-GMM estimates confirm the results obtained with the 2SLS method. FDI keeps having a positive impact on political stability with statistical significance at usual levels, except for column (1). The magnitudes, varying between 0.3 and 0.6 for a 100-point increase in FDI as a percent of GDP are smaller than the 2SLS estimates but remain larger than OLS estimates, thereby confirming the downwards bias of the OLS estimates. Regarding the control variables, the positive and significant coefficient of the lagged dependent suggests inertia in political stability in the developing world. Per capita GDP, per capita GDP growth rate, unemployment, democracy, and ethnic cohesion have the expected signs, although they lose significance in some specifications. Religious cohesion and commodity exports fail to significantly affect political stability.

Table 3.5: One-step SYS-GMM estimates of the dynamic political stability model

	(1)	(2)	(3)	(4)
Dependent:	Political stability (Polstab)			
	Internal instruments		Gravity instrument	
FDI	0.0029	0.0052**	0.0034*	0.0058**
	(0.0019)	(0.0024)	(0.0020)	(0.0026)
LogGDPPC	0.0102	0.0113	0.0054	0.0079
	(0.0079)	(0.0088)	(0.0082)	(0.0094)
Growth	0.0037	0.0046*	0.0032	0.0042
	(0.0023)	(0.0027)	(0.0024)	(0.0028)
LogCommod	0.0082	0.0078	0.0066	0.0072
	(0.0075)	(0.0074)	(0.0072)	(0.0072)
Unemp	-0.0019	-0.0018	-0.0011	-0.0013
	(0.0027)	(0.0029)	(0.0026)	(0.0029)
Polity2	0.0060***	0.0060**	0.0052**	0.0054**
	(0.0022)	(0.0023)	(0.0022)	(0.0023)
Religion	-0.0135	-0.0172	-0.0103	-0.0146
	(0.0132)	(0.0147)	(0.0126)	(0.0147)
Ethnicity	0.0161	0.0218**	0.0140	0.0202*
	(0.0100)	(0.0110)	(0.0091)	(0.0105)
$Polstab_{t-1}$	0.8910***	0.9043***	0.9182***	0.9226***
	(0.0844)	(0.0917)	(0.0859)	(0.0950)
Observations	331	331	331	331
AR (1)	0.0254	0.0283	0.0227	0.0268
AR (2)	0.156	0.178	0.217	0.238
Hansen J	0.391	0.589	0.302	0.602
Instruments/Countries	56/91	59/91	57/91	60/91
Country FE	Yes	Yes	Yes	Yes
Time FE	No	Yes	No	Yes

*** $p<0.01$, ** $p<0.05$, * $p<0.1$. Standard errors (in parenthesis) are robust to heteroskedasticity and autocorrelation within countries. AR(1) and AR(2): p-values of Arellano-Bond test for serial correlations. Hansen J reports the corresponding test p-value. All regressions include a constant.

Political stability and political repression

The link between violations of basic human rights and political stability can be twofold. On the one hand, human rights abuse is likely to exacerbate grievance and feed protest against governments, negatively affecting political stability. On the other hand, political repression has proved to be a strong instrument in authoritarian countries to instill fear and quell protests. In other words, political terror can be used to enforce political stability, harming individuals' well-being through denial of their civil liberties and political rights. The case of Libya offers an interesting example of this. Under Mouammar Kadhafi, the country enjoyed a quite stable political climate, with positive scores on the stability index, ranging from 0.03 to 0.83 between 2003 and 2010. While a couple of factors contributed to this, including good socio-economic records, many observers noted that the country was ruled by an authoritarian regime with the same president in office since 1969. Libya was considered by many a country with an oppressive regime with the potential to dissuade any attempts at political protest. These included hangings and mutilations of opponents, often broadcast on television, and the repression of those deemed "enemies of the revolution" (academics, journalists, etc.)[15]. The relative political stability witnessed by Libya prior to the 2011 civil war, in the wake of the Arab Spring, might have been obtained in part by political terror.

In the analysis of the effect of FDI on political stability, the role of political repression deserves particular attention. If political terror can be used as a dissuasive tool to prevent instability, then it can also serve states' interest in attracting FDI. Because MNCs would be reluctant to invest in an unstable environment, FDI can trigger the use of terror by states to impose stability and favor a competitive environment in terms of political stability. In this way, FDI can promote stability at the expense of individuals' well-being. In line with the dependency school of thought, some authors have argued that the nature of ties between external actors and elites in developing countries gives the elites incentives to repress in order to provide the kind of stable political environment necessary to attract and maintain FDI (e.g., Maxfield, 1998).

Following this interplay between FDI, political terror, and political stability, it therefore appears important to rule out the influence of political repression from the positive effect of FDI on political stability. To this end, I complement the preferred

---

[15]See for example: https://www.lefigaro.fr/international/2011/08/22/01003-20110822ARTFIG00596-libye-quatre-decennies-d-exactions-et-de-repression.php.

specification by controlling for human rights conditions using the Political Terror Scale (PTS). In addition, in the sensitivity section, I estimate the preferred models on the subsample of countries with greater respect for human rights (those below the sample median). Housed by the Political Science Department at the University of North California, the PTS project measures violations of physical integrity rights by states or their agents. The violations of personal integrity or security captured by the PTS include torture, excessive use of force, political assassinations and murder, political imprisonment, arbitrary arrest, and detention[16]. Three separate indicators of political terror are provided by the PTS project, each based on yearly reports published by Amnesty International, the U.S. State Department, and recently, Human Rights Watch. The three PTS indicators are highly related and scaled from 1 to 5, with higher scores indicating higher levels of abuse. Following previous work (Blanton and Blanton, 2007; Poe et al., 1999), this study's measure of political terror is the average of the PTS's Amnesty International and US State Department indicators[17] (the Human Rights Watch-based score is excluded because of its limited time coverage, starting from 2013.)

The estimations results are provided in Table 3.6. Columns (1) and (2) report 2SLS estimates using the gravity instrument. Columns (3) and (4) show SYS-GMM estimates based on internal instruments only, and columns (5) and (6) provide SYS-GMM estimates relying on the gravity instrument as an external instrumental variable for FDI. The results stress a negative link between political terror and political stability. In all columns, the PTS coefficient is negative and significant at conventional levels. This result aligns with the grievance motive for instability. Increased offenses against physical integrity rights might stimulate opposition to governments and provoke unrest, posing a threat to political stability.

---

[16]The PTS is not limited to politically motivated violence and intimidation, but captures any repression by state agents, regardless of the motivation. Not only does politically motivated violence have the potential to intimidate people and muzzle protests, other forms of violence, such as the assassination of a random bystander, also do. As such, the PTS is advantageous as it captures a more comprehensive scope of the use of intimidation as a tool to provide a stable political climate.

[17]Polity2, the democracy variable used in the specification, is based on coding of legal documents and can be interpreted as an indicator of *de jure* political institutions. It can, therefore, be associated with PTS which refers to de facto human rights conditions. The Freedom House civil liberties indicator captures facets of human rights such as freedom of speech and assembly, commonly incorporated into measures of democracy indicators such as Polity2, while this section focuses on repression-driven political stability. Moreover, the correlation coefficient between PTS and Polity2, -0.3, suggest using PTS, as it is smaller (in absolute value) than the correlation coefficient between Polity2 and the civil liberties indicator (-0.8)

Table 3.6: FDI and political stability, accounting for political terror

	(1)	(2)	(3)	(4)	(5)	(6)
Dependent:			Political stability (Polstab)			
Method:	IV-2SLS		One-step SYS-GMM			
			Internal instruments		Gravity instrument	
FDI	0.0069***	0.0043*	0.0047**	0.0062***	0.0050**	0.0063***
	(0.0022)	(0.0024)	(0.0019)	(0.0022)	(0.0019)	(0.0021)
LogGDPPC	0.0670***	0.1237***	0.0137**	0.0128*	0.0120*	0.0126
	(0.0232)	(0.0271)	(0.0070)	(0.0072)	(0.0072)	(0.0077)
Growth	-0.0002	-0.0005	0.0022	0.0037*	0.0020	0.0037*
	(0.0011)	(0.0011)	(0.0017)	(0.0021)	(0.0017)	(0.0021)
LogCommod	-0.0082*	-0.0095**	0.0065	0.0052	0.0057	0.0051
	(0.0045)	(0.0045)	(0.0062)	(0.0063)	(0.0059)	(0.0062)
Unemp	-0.0042**	-0.0044**	-0.0026	-0.0023	-0.0023	-0.0022
	(0.0020)	(0.0020)	(0.0020)	(0.0023)	(0.0020)	(0.0022)
Polity2	-0.0010	0.0001	0.0038	0.0034	0.0032	0.0033
	(0.0025)	(0.0024)	(0.0025)	(0.0027)	(0.0023)	(0.0024)
Religion	0.0301**	0.0335***	-0.0034	-0.0056	-0.0013	-0.0053
	(0.0129)	(0.0116)	(0.0109)	(0.0109)	(0.0103)	(0.0107)
Ethnicity	0.0103	0.0121	0.0058	0.0094	0.0041	0.0091
	(0.0139)	(0.0123)	(0.0090)	(0.0086)	(0.0082)	(0.0080)
PTS	-0.0839***	-0.0810***	-0.0280*	-0.0325*	-0.0321**	-0.0332*
	(0.0119)	(0.0113)	(0.0167)	(0.0194)	(0.0155)	(0.0176)
Polstab$_{t-1}$			0.7566***	0.7610***	0.7526***	0.7603***
			(0.0831)	(0.0853)	(0.0822)	(0.0844)
Observations	412	412	331	331	331	331
KP	22.56	21.53	.	.	.	.
AR(1)	.	.	0.0662	0.0598	0.0683	0.0573
AR(2)	.	.	0.192	0.186	0.221	0.193
Hansen J	.	.	0.301	0.601	0.260	0.545
Instruments	.	.	62	65	63	66
Countries	90	90	91	91	91	91
Country FE	Yes	Yes	Yes	Yes	Yes	Yes
Time FE	No	Yes	No	Yes	No	Yes

*** $p<0.01$, ** $p<0.05$, * $p<0.1$. Standard errors are heteroscedasticity robust. KP (Kleibergen-Paap Wald F) to be compared with the Stock-Yogo critical values to test the instrument's strength. AR(1) and AR(2): p-values of Arellano-Bond test for correlation. Hansen J reports the corresponding test p-value. All regressions include a constant.

Turning to the coefficients of FDI, they are positive as in previous findings and very significant, confirming that greenfield FDI has a positive impact on political stability. Moreover, they show that greenfield FDI promotes human rights compliant political stability. The magnitudes range from about 0.4 to 0.7 increase in the political stability index for a 100 percentage points increase in greenfield FDI as a percent of GDP. Put differently, the findings reveal that for the same level of FDI/GDP ratio, countries with greater political repression suffer more instability than others. This means that overall, FDI does not inhibit instability when repression is used by governments as an instrument to bring about a stable political climate. Political stability can be obtained without resort to intimidation as long as people are provided with good economic opportunities – one of the main potentials of greenfield FDI – and foreign investors require a stable socio-political climate as part of their decision to invest abroad. This makes FDI a strong determinant of political stability in general, and human rights compliant political stability in particular, contributing to individuals' well-being. Greater religious cohesion translates into a more stable socio-political climate. Unemployment and commodity exports are negatively related to the institutional quality index.

3.5 Sensitivity checks

This section conducts a series of robustness tests to explore the sensitivity of the main results. First, the results discussed above are based on the measure of institutional quality as provided by the WGI political stability and absence of violence index. As I noted earlier, this measure is a composite index of a range of indicators of socio-political stability from various sources. In Table 3.7, I repeat the 2SLS and SYS-GMM estimations of the baseline specification using an alternative measure of political stability obtained from three indicators of the International Country Risk Guide (ICRG)[18], namely government stability, internal conflict and external conflict, in the way discussed in section 3.3.3. The results support the previous findings. While the 2SLS estimation in column (2) fails to detect a statistically significant effect of FDI on political stability, column (1) shows that FDI contributes to institutional development in terms of political stability. The results from the SYS-GMM estimations are more compelling. The effect is positive and highly significant in all specifications, whether based on internal instruments

---

[18]For details on the variables, see https://www.prsgroup.com/wp-content/uploads/2012/11/icrgmethodology.pdf .

Table 3.7: 2SLS and SYS-GMM estimates using an alternative measure of political stability

	(1)	(2)	(3)	(4)	(5)	(6)
Dependent:			Political stability (Polstab)			
Method:	IV-2SLS		SYS-GMM			
			Internal instruments		Gravity instrument	
FDI	0.0091**	-0.0065	0.0056***	0.0030*	0.0059***	0.0033*
	(0.0042)	(0.0042)	(0.0019)	(0.0018)	(0.0020)	(0.0019)
LogGDPPC	-0.1370***	0.1378***	0.0096	0.0041	0.0031	-0.0029
	(0.0415)	(0.0467)	(0.0093)	(0.0083)	(0.0092)	(0.0082)
Growth	0.0062***	0.0053***	0.0040**	0.0047**	0.0035*	0.0041**
	(0.0023)	(0.0017)	(0.0019)	(0.0020)	(0.0020)	(0.0020)
LogCommod	0.0152**	0.0081	0.0127*	0.0144***	0.0124*	0.0140**
	(0.0074)	(0.0060)	(0.0067)	(0.0053)	(0.0072)	(0.0057)
Unemp	-0.0053*	-0.0033	-0.0009	-0.0009	0.0001	0.0001
	(0.0028)	(0.0026)	(0.0021)	(0.0019)	(0.0021)	(0.0019)
Polity2	-0.0066**	-0.0005	0.0021	0.0026*	0.0018	0.0023
	(0.0031)	(0.0030)	(0.0014)	(0.0014)	(0.0015)	(0.0014)
Religion	0.0429*	0.0510***	0.0047	0.0034	0.0092	0.0088
	(0.0236)	(0.0181)	(0.0083)	(0.0079)	(0.0090)	(0.0088)
Ethnicity	0.0284*	0.0343**	0.0106	0.0121	0.0116	0.0131
	(0.0166)	(0.0133)	(0.0108)	(0.0107)	(0.0117)	(0.0115)
$Polstab_{t-1}$			0.6807***	0.7246***	0.6664***	0.7095***
			(0.0630)	(0.0680)	(0.0647)	(0.0693)
Observations	414	414	331	331	331	331
KP	23.45	22.73	.	.	.	.
AR(1)	.	.	0.000137	6.75e-05	0.000208	0.000120
AR(2)	.	.	0.732	0.947	0.709	0.864
Hansen J	.	.	0.273	0.381	0.306	0.355
Instruments	0	0	78	81	79	82
Countries	91	91	91	91	91	91
Country FE	Yes	Yes	Yes	Yes	Yes	Yes
Time FE	No	Yes	No	Yes	No	Yes

*** $p<0.01$, ** $p<0.05$, * $p<0.1$. Standard errors (in parenthesis) are heteroscedasticity robust. IV-2SLS in columns (1) and (2). KP (Kleibergen-Paap Wald F statistic) to be compared with the Stock-Yogo critical values to test the instrument's strength. One-step SYS-GMM estimator in columns (3)-(6). AR(1) and AR(2): p-values of Arellano-Bond test for serial correlations. Hansen J report the corresponding test p-value.

only or using the gravity instrument as an external instrument for FDI. Here again, the KP statistics in the IV estimations indicate that the instrument is strong enough, and the AR(1), AR(2), and Hansen statistics suggest that the SYS-GMM model is well specified.

Second, following Demir (2016), I explore whether there is any differential impact of FDI on institutions depending on the origin of investments: developed countries (North) vs. developing countries (South), given allegations against South investors of undermining North investors' achievements in improving institutional quality in the developing world. In Table 3.8, I replicate the 2SLS and SYS-GMM estimations after splitting the source countries into North and South to distinguish between greenfield FDI from the North and greenfield FDI from the South[19]. Columns (1) through (4) report the 2SLS estimates; columns (5) to (12) show the SYS-GMM estimates with internal instruments only (the first four columns) and gravity-based instrument for FDI (the last four columns). The results do not suggest any particular differential effect according to the provenance of FDI flows, thereby resonating with previous findings by Demir (2016). Like the main results, the coefficient of FDI is positive no matter where FDI originates from. FDI from the North significantly affects political stability in column (1), while FDI from the South is significant in columns (7) and (11).

---

[19]The gravity-based instruments for each source are obtained from the estimation of the gravity model for each subsample (FDI flows from the North and FDI flows from the South). The results are available upon request.

Table 3.8: Effects of FDI on political stability: flows from the North *vs.* flows from the South

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Dependent:	Political stability (Polstab)											
Method:	IV-2SLS				One-step SYS-GMM							
					Internal instruments				Gravity instrument			
FDInorth	0.0125***	0.0079			0.0006	0.0034	0.0018	0.0049				
	(0.0043)	(0.0050)			(0.0029)	(0.0040)	(0.0029)	(0.0040)				
FDIsouth			0.0059	0.0041					0.0064*	0.0057	0.0066*	0.0058
			(0.0057)	(0.0061)					(0.0036)	(0.0036)	(0.0039)	(0.0038)
LogGDPPC	0.1224***	0.1749***	0.0589**	0.1782***	0.0052	0.0054	-0.0009	-0.0001	0.0108	0.0089	0.0099	0.0087
	(0.0321)	(0.0327)	(0.0230)	(0.0317)	(0.0079)	(0.0086)	(0.0079)	(0.0090)	(0.0084)	(0.0083)	(0.0084)	(0.0082)
Growth	0.0002	0.0000	0.0021*	0.0002	0.0055**	0.0063**	0.0046**	0.0056**	0.0033	0.0047*	0.0032	0.0047*
	(0.0014)	(0.0013)	(0.0012)	(0.0012)	(0.0021)	(0.0025)	(0.0022)	(0.0025)	(0.0022)	(0.0025)	(0.0022)	(0.0025)
LogCommod	-0.0065	-0.0074	-0.0060	-0.0080	0.0095	0.0085	0.0074	0.0069	0.0082	0.0070	0.0080	0.0070
	(0.0053)	(0.0052)	(0.0054)	(0.0049)	(0.0077)	(0.0075)	(0.0075)	(0.0071)	(0.0074)	(0.0073)	(0.0073)	(0.0073)
Unemp	-0.0050**	-0.0059***	-0.0044**	-0.0057***	-0.0014	-0.0012	-0.0005	-0.0005	-0.0022	-0.0019	-0.0021	-0.0019
	(0.0021)	(0.0020)	(0.0018)	(0.0020)	(0.0027)	(0.0029)	(0.0026)	(0.0028)	(0.0028)	(0.0029)	(0.0027)	(0.0028)
Polity2	0.0022	0.0030	0.0012	0.0032	0.0053**	0.0053**	0.0042**	0.0043**	0.0066***	0.0060**	0.0065***	0.0060**
	(0.0032)	(0.0031)	(0.0031)	(0.0030)	(0.0021)	(0.0022)	(0.0020)	(0.0021)	(0.0025)	(0.0026)	(0.0024)	(0.0025)
Religion	0.0373***	0.0424***	0.0407***	0.0462***	-0.0138	-0.0175	-0.0078	-0.0115	-0.0044	-0.0081	-0.0043	-0.0081
	(0.0133)	(0.0134)	(0.0127)	(0.0125)	(0.0129)	(0.0138)	(0.0123)	(0.0135)	(0.0121)	(0.0117)	(0.0120)	(0.0117)
Ethnicity	0.0337**	0.0329**	0.0256	0.0275**	0.0190*	0.0232**	0.0154*	0.0199**	0.0172*	0.0242***	0.0171**	0.0241***
	(0.0160)	(0.0143)	(0.0159)	(0.0136)	(0.0101)	(0.0104)	(0.0091)	(0.0097)	(0.0089)	(0.0087)	(0.0087)	(0.0086)
Polstab$_{t-1}$					0.9248***	0.9322***	0.9485***	0.9505***	0.8482***	0.8803***	0.8538***	0.8813***

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
					(0.0834)	(0.0864)	(0.0827)	(0.0878)	(0.0909)	(0.0933)	(0.0900)	(0.0925)
Observations	414	414	414	414	331	331	331	331	331	331	331	331
KP	26.62	13.62	4.895	3.633	.	.	.	.	.	.	.	.
AR(1)	.	.	.	.	0.0147	0.0198	0.0145	0.0224	0.0272	0.0178	0.0214	0.0152
AR(2)	.	.	.	.	0.0762	0.0739	0.116	0.113	0.268	0.140	0.284	0.141
Hansen J	.	.	.	.	0.402	0.621	0.305	0.605	0.346	0.385	0.314	0.386
Countries	91	91	91	91	91	91	91	91	91	91	91	91
Instruments	.	.	.	.	56	59	57	60	56	59	57	60
Country FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Time FE	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes

*** p<0.01, ** p<0.05, * p<0.1. Standard errors (in parenthesis) are heteroscedasticity robust. IV-2SLS in columns (1)-(4). KP (Kleibergen-Paap Wald F statistic) to be compared with the Stock-Yogo critical values to test the instrument's strength. One-step SYS-GMM estimator in columns (5)-(12). AR(1) and AR(2): p-values of Arellano-Bond test for for serial correlations. Hansen J reports the corresponding test p-value.

Third, I investigate whether the positive effect of FDI could be driven by non-oil exporting countries as oil exports are argued to generate institutional gaps (see Ross, 2001; Tsui, 2011). Likewise, Mihalache-O'Keef (2018) found that FDI in the primary sector exacerbates the risk of civil conflict as opposed to service sector FDI. To this end, I repeat the main previous regressions on the sample of oil-exporting countries[20]. It is worth noting that oil-exporting countries exhibit an average institutional index of -0.64, far below the mean for the non-oil-exporting countries sample (-0.31), and the full sample mean of -0.37[21]. The estimation results – available upon request – signal issues with the diagnostics tests when the sample is restricted to non-oil-exporters. The KP statistics from the IV-2SLS estimations are very low. And the number of instruments from the SYS-GMM estimations is slightly above the number of countries even after reducing the lags used in GMM-style instruments to the minimum and collapsing the instruments (see Roodman, 2009). Even if the results are not very compelling, they show that FDI remains positively related to political stability.

Then, I examine whether the results are conditional on income level by excluding upper-middle and high-income countries, based on the World Bank classification. While they witnessed the weakest institutional development, low-income and low-middle income countries registered the largest greenfield FDI inflows as a percent of GDP during the period of study[22]. The 2SLS estimates given in Table 3.9 show that the results are robust to the exclusion of upper-middle and high-income countries. The effect is positive in both specifications (1) and (2) and statistically significant in specification (1). I do not show the SYS-GMM-based results because the AR(2) tests and the coefficients on the lagged dependent above 1 suggest that the data for the subsample of low and low-middle income countries do not fit the SYS-GMM estimations, though the coefficients remain positive[23].

Next, to investigate again the finding that greenfield FDI promotes human rights compliant institutional quality, I re-estimate the models using the sub-sample

---

[20]The distinction between oil-exporting and non-oil-exporting countries is based on the IMF (2018) countries classification. Economies are categorized oil-exporting when fuel was their main source of export earnings and exceeded 50% of total exports on average between 2012 and 2016 (IMF, 2018).

[21]The values are based on the initial index values (before rescaling).

[22]Average FDI: 6.7% for low income, 6.6% for low-middle income, 4.1% for upper-middle income, and 4.2% for high income. Average political stability index: -1.02 for low income, -0.64 for low-middle income, -0.42 for upper-middle income, and 0.71 for high income.

[23]The results are available upon request.

Table 3.9: Effect of FDI on political stability: subsample of low-income countries

	(1)	(2)
Dependent:	Political stabilty (Polstab)	
Method:	IV-2SLS	
FDI	0.0109**	0.0024
	(0.0045)	(0.0039)
LogGDPPC	0.0630	0.2592***
	(0.0461)	(0.0627)
Growth	0.0028	0.0023
	(0.0029)	(0.0024)
LogCommod	-0.0099	-0.0199***
	(0.0080)	(0.0070)
Unemp	-0.0154**	-0.0122**
	(0.0066)	(0.0059)
Polity2	0.0024	0.0083*
	(0.0046)	(0.0046)
Religion	0.0470*	0.0544**
	(0.0273)	(0.0237)
Ethnicity	0.0164	0.0217
	(0.0334)	(0.0255)
Observations	167	167
KP	20.66	16.66
Countries	38	38
Country FE	Yes	Yes
Time FE	No	Yes

*** $p<0.01$, ** $p<0.05$, * $p<0.1$. Standard errors (in parenthesis) are heteroscedasticity robust. KP (Kleibergen-Paap Wald F statistic) to be compared with the Stock-Yogo critical values to test the instrument's strength. All regressions include a constant.

of countries with greater respect for people's physical integrity rights, that is, countries below the full sample median of the political terror scale. The results are given in Table 3.10 and confirm the previous results. Columns (1) and (2), which report the 2SLS estimates, show that greenfield FDI positively and significantly affects political stability in countries where protests are not under heightened threat of political terror. Therefore, they confirm that greenfield FDI does not favor a stable socio-political climate at the expense of human physical integrity rights. The SYS-GMM results from columns (3) and (4) also display a positive coefficient of FDI but are not statistically significant.

Lastly, given that the instrument used throughout the paper is obtained from predicted values, I question the robustness of the FDI coefficients significance by testing their sensitivity to bootstrap wherever the instrumental variable was used in the baseline specification. The results, which are available upon request, support the robustness of the statistical significance of the FDI coefficients.

Table 3.10: Effect of FDI on political stability: subsample of countries with lower political terror

	(1)	(2)	(3)	(4)
Dependent:		Political stability (Polstab)		
Method:		IV-2SLS		SYS-GMM
			Internal	Gravity
FDI	0.0098**	0.0096*	0.0002	0.0001
	(0.0042)	(0.0050)	(0.0030)	(0.0028)
LogGDPPC	0.1301**	0.1649***	0.0157	0.0158
	(0.0582)	(0.0583)	(0.0160)	(0.0159)
Growth	-0.0014	-0.0017	-0.0015	-0.0015
	(0.0018)	(0.0020)	(0.0022)	(0.0023)
LogCommod	-0.0139*	-0.0142	0.0039	0.0040
	(0.0079)	(0.0086)	(0.0113)	(0.0117)
Unemp	-0.0013	-0.0024	0.0000	-0.0001
	(0.0025)	(0.0028)	(0.0025)	(0.0021)
Polity2	0.0080	0.0091	-0.0022	-0.0021
	(0.0083)	(0.0083)	(0.0034)	(0.0034)
Religion	0.0291	0.0386	0.0659*	0.0658*
	(0.0292)	(0.0301)	(0.0366)	(0.0364)
Ethnicity	0.0364**	0.0372**	0.0062	0.0067
	(0.0178)	(0.0175)	(0.0241)	(0.0230)
$Polstab_{t-1}$			0.7357***	0.7351***
			(0.1027)	(0.1033)
Observations	208	208	166	166
KP	13.95	14.47	.	.
AR(1)	.	.	0.0565	0.0568
AR(2)	.	.	0.105	0.104
Hansen J	.	.	0.499	0.441

Instruments	.	.	43	44
Countries	45	45	45	45
Country FE	Yes	Yes	Yes	Yes
Time FE	Yes	Yes	Yes	Yes

*** p<0.01, ** p<0.05, * p<0.1. Standard errors (in parenthesis) are heteroscedasticity robust. IV-2SLS in columns (1)-(2). KP (Kleibergen -Paap Wald F statistic) to be compared with the Stock-Yogo critical values to test the instrument's strength. One-step SYS-GMM estimator in columns (3)-(4). AR(1) and AR(2): p-values of Arellano-Bond test for serial correlations. Hansen J reports the corresponding test p-value.

3.6   Conclusion

Following the strong emphasis on institutional quality in comparative development, its determinants have received growing attention in recent research. This paper contributes to this research by examining the potential of FDI to favor socio-political stability in developing countries. The developing world has been prone to socio-political instability of different forms and manifestations over recent decades, and identifying factors susceptible to improve their institutional environment in terms of political stability is key to development. Drawing on research on the causes of political instability which has identified economic conditions as a strong determinant of conflicts, this paper focuses on greenfield FDI for its more direct impact on growth and job creation. To convincingly establish a causal relationship, the study basically relies on a gravity-based instrumental variable to determine the impact of FDI on political stability using a large sample of developing countries.

The results clearly evidence that FDI favors political stability as measured by the political stability and absence of violence index of the WGI. Greenfield FDI flows appear to be positively and significantly related to institutional quality in most of the estimations. As for political-terror-driven stability, the results also indicate that greenfield FDI tends to promote political stability compliant with governments' respect for human rights, therefore preserving individuals' well-being. Overall, the results are robust to various specifications and estimations methods, as well as a series of robustness tests including the use of an alternative measure of political stability, the source of FDI flows (North vs. South), the use of different sub-samples according to dependence on oil resources, income level, and level of

political terror.

Beyond FDI direct economic effects, these findings highlight another channel through which FDI can contribute to development: the promotion of political stability. The empirical framework underpinning the results focuses on FDI's socio-economic influences on greed and grievance as the main channel through which greenfield FDI affects political stability. Further research could be useful in investigating more indirect mechanisms such as the political agency potential of foreign direct investors, and investment promotion policies by host countries' policymakers to attract FDI.

3.7 Appendices of Chapter 3

Table 3.11: List of host developing countries and number of observations for bilateral greenfield FDI flows

Afghanistan	80	Hungary	261	Poland	290
Albania	125	India	406	Qatar	250
Algeria	239	Indonesia	281	Romania	304
Andorra	55	Iran	249	Russia	373
Angola	179	Iraq	244	Rwanda	175
Antigua	25	Jamaica	70	Saudi Arabia	279
Argentina	269	Jordan	190	Senegal	160
Armenia	160	Kazakhstan	260	Seychelles	49
Aruba	25	Kenya	294	Sierra Leone	75
Brazil	313	Kuwait	180	Singapore	369
Bulgaria	255	Laos	100	Slovakia	249
Burkina Faso	60	Latvia	175	Slovenia	165
Burundi	70	Lebanon	185	Somalia	65
Cambodia	176	Lesotho	25	South Africa	330
Cameroon	155	Liberia	80	South Korea	255
Cape Verde	45	Libya	215	Sri Lanka	190
Central African Republic	35	Lithuania	200	Sudan	105
Chad	70	Madagascar	65	Suriname	30
Chile	238	Malawi	65	Syria	185
China	473	Malaysia	320	Tajikistan	110
Colombia	253	Mali	84	Tanzania	195
Comoros	15	Malta	184	Thailand	276
Costa Rica	214	Mauritania	90	Togo	70
Cote d Ivoire	205	Mauritius	114	Trinidad & Tobago	86
Croatia	195	Mexico	279	Tunisia	210
Cuba	134	Moldova	141	Turkey	296
Czech Republic	274	Mongolia	135	UAE	412
Egypt	293	Morocco	244	Uganda	190
Estonia	174	Mozambique	235	Ukraine	246

Eswantini	50	Myanmar	195	Uruguay	159
Ethiopia	220	Namibia	134	Uzbekistan	190
Gabon	105	Niger	45	Venezuela	176
Gambia	50	Nigeria	295	Vietnam	304
Georgia	215	Oman	214	Yemen	125
Ghana	266	Pakistan	210	Zambia	180
Guatemala	143	Panama	244	Zimbabwe	125
Guinea	100	Papua New Guinea	100	Total	20,839
Guinea Bissau	45	Paraguay	119		
Haiti	54	Peru	234		
Honduras	129	Philippines	249		

Table 3.12: List of origin countries and number of observations for bilateral greenfield FDI flows

Country	N	Country	N	Country	N	Country	N
Afghanistan	15	Czech Republic	240	Kuwait	265	Russia	375
Albania	5	Democratic Republic of Congo	15	Kyrgyzstan	20	Rwanda	10
Algeria	40	Denmark	370	Laos	15	Samoa	10
Andorra	15	Djibouti	15	Latvia	130	Saudi Arabia	260
Angola	55	Dominican Republic	15	Lebanon	140	Senegal	30
Antigua	5	Ecuador	40	Libya	30	Seychelles	5
Argentina	135	Egypt	210	Lithuania	110	Sierra Leone	5
Armenia	15	El Salvador	30	Luxembourg	335	Singapore	305
Australia	385	Equatorial Guinea	10	Macau	30	Slovakia	85
Austria	295	Estonia	95	Malawi	5	Slovenia	100
Azerbaijan	65	Ethiopia	15	Malaysia	270	South Africa	370
Bahamas	45	Fiji	10	Mali	20	South Korea	400
Bahrain	170	Finland	310	Malta	110	Spain	435
Bangladesh	65	France	515	Mauritius	125	Sri Lanka	70
Barbados	15	Gabon	10	Mexico	170	Sudan	15
Belarus	140	Gambia	5	Moldova	5	Sweden	385
Belgium	315	Georgia	40	Mongolia	10	Switzerland	455
Belize	25	Germany	485	Morocco	150	Syria	10
Bermuda	152	Ghana	50	Mozambique	5	Tajikistan	15
Bhutan	5	Greece	200	Myanmar	25	Tanzania	75

Bolivia	10	Greenland	10	Namibia	15	Thailand	195
Bosnia-Herzegovina	35	Guatemala	40	Nepal	45	Togo	115
Botswana	50	Guyana	5	Netherlands	420	Trinidad & Tobago	5
Brazil	270	Haiti	5	New Zealand	150	Tunisia	110
Brunei	25	Honduras	15	Nicaragua	30	Turkey	305
Bulgaria	100	Hong Kong	340	Nigeria	170	Turkmenistan	5
Burkina Faso	35	Hungary	155	North Macedonia	40	UAE	400
Burundi	20	Iceland	105	Norway	305	Uganda	20
Cambodia	30	India	480	Oman	105	Ukraine	165
Cameroon	10	Indonesia	120	Pakistan	110	United Kingdom	530
Canada	470	Iran	150	Panama	85	United States	538
Cayman Islands	26	Iraq	30	Papua New Guinea	5	Uruguay	35
Chile	130	Ireland	310	Paraguay	10	Vanuatu	15
China	485	Israel	235	Peru	60	Venezuela	88
Colombia	65	Italy	400	Philippines	150	Vietnam	165
Costa Rica	45	Jamaica	40	Poland	195	Yemen	45
Cote d Ivoire	90	Japan	435	Portugal	225	Zambia	15
Croatia	100	Jordan	125	Qatar	245	Zimbabwe	40
Cuba	20	Kazakhstan	90	Republic of the Congo	20		
Cyprus	245	Kenya	145	Romania	140	Total	20,839

Table 3.13: First-stage regression results of the 2SLS estimations of Table 3.4

	(1)	(2)	(3)	(4)
Dependent:	Greenfield FDI as a percent of GDP			
Instrument	0.1269***	0.0936***	0.0834***	0.0767***
	(0.0290)	(0.0201)	(0.0260)	(0.0230)
LogGDPPC	-0.2323	3.6544	-1.0350	0.6128
	(2.0369)	(2.6969)	(2.4828)	(3.6075)
Growth	0.3294***	0.2163***	0.2889**	0.1848*
	(0.0623)	(0.0720)	(0.1132)	(0.1041)
Commodity	0.1595	-0.0927	-0.2960	-0.3558
	(0.3182)	(0.3762)	(0.3771)	(0.4335)
Unemp	0.3094**	0.3326***	0.1809	0.2442*
	(0.1263)	(0.1168)	(0.1197)	(0.1311)
Polity2	0.0542	0.1446	0.1250	0.1540
	(0.1210)	(0.1200)	(0.1466)	(0.1414)
Religion	0.5212	0.3796	1.2301	1.0413
	(0.8196)	(0.7312)	(1.1485)	(1.0799)
Ethnicity	0.4668	0.4005	-0.1565	-0.1633
	(0.4901)	(0.4999)	(0.7320)	(0.7696)
LogPop			-14.7608*	-12.4670
			(8.3765)	(9.9893)
LogEduc			6.1680	7.5243
			(5.0925)	(5.2067)
Observations	415	415	346	346
R-squared	0.189	0.234	0.248	0.273
Country FE	Yes	Yes	Yes	Yes
Time FE	No	Yes	No	Yes

*** $p<0.01$, ** $p<0.05$, * $p<0.1$. Standard errors (in parenthesis) are heteroskedasticity robust. The instrument is the predicted FDI (in percent of GDP) from the gravity model. All regressions include a constant

Table 3.14: OLS estimations of the political stability model, including poverty and inequality as additional controls

	(1)	(2)
Dependent:	Political stability (Polstab)	
FDI	0.0022	0.0022
	(0.0016)	(0.0016)
LogGDPPC	0.0824	0.1545*
	(0.0614)	(0.0777)
Growth	-0.0011	-0.0018
	(0.0017)	(0.0019)
LogCommod	-0.0105**	-0.0050
	(0.0044)	(0.0074)
Unemp	-0.0064**	-0.0070***
	(0.0025)	(0.0025)
Polity2	-0.0005	-0.0001
	(0.0050)	(0.0051)
Religion	0.0595**	0.0615*
	(0.0297)	(0.0312)
Ethnicity	0.0358**	0.0326**
	(0.0149)	(0.0147)
LogPop	-0.2561**	-0.1867
	(0.1127)	(0.1251)
LogEduc	-0.0830	-0.0802
	(0.0590)	(0.0623)
Poverty	-0.0050*	-0.0041
	(0.0030)	(0.0032)
Gini index	0.0037	0.0026
	(0.0033)	(0.0036)
Observations	233	233
R-squared	0.342	0.358

Countries	72	72
Country FE	Yes	Yes
Time FE	No	Yes

*** p<0.01, ** p<0.05, * p<0.1. Standard errors
(in parenthesis) are heteroskedasticity robust. All
regressions include a constant.

Figure 3.4: Correlation between Greenfield FDI inflows as a percent of GDP and
its fitted values

CHAPTER 4

Natural Resource Rents and Corruption in Africa: Does Foreign Capital matter?

This chapter is joint work with Patrick PLANE (CERDI-UCA)

Corruption is argued to be one of the channels of the resource curse with the idea that natural resource rents breed corruption, which, in turn, hinders economic performance. We show this link between natural resource rents and corruption to be nonlinear in Africa and dependent on the level of FDI in the resource sector. Using a panel threshold model for a sample of African countries over the period 2003-2017, we find that natural resource rents are more corruption-breeding in countries with higher FDI in the resource sector, compared to lower FDI countries where the relation between rents and corruption is mixed. Our findings highlight that the origin of the capital in rents production matters in the rent-corruption relationship. Investigating the transmission channels, we find that the stronger positive link between rents and corruption for higher FDI countries is weakened and can be negative in countries with sounder democratic institutions. Overall, the results are robust to various tests, including the use of alternative measures of corruption and resource rents, alternative specifications, and income level groups.

4.1 Introduction

Since the seminal work of Sachs and Warner (1995), which evidenced the resource curse phenomenon, the seeming paradox that resource-rich countries experience slower growth compared to their resource-poor counterparts, a substantial number of papers have demonstrated how natural resources can be a curse rather than a blessing for economic development. Several economic and political factors have been identified as channels of the resource curse. Economic factors include mechanisms such as the Dutch disease (e.g., Gylfason, 2001; Papyrakis and Gerlagh, 2004; Sachs and Warner, 1995) and the volatility in commodity prices (e.g., Davis and Tilton, 2005; Frankel, 2010; Humphreys et al., 2007; Van der Ploeg and Poelhekke, 2009).

The role of institutions in determining how the curse operates has also been pointed out in literature through the detrimental effects of resource windfalls on the quality of institutions. Acemoglu et al. (2005a) argue that some institutions are the result of choices made by the different groups of society for their economic consequences associated with the groups' interests. The groups with strong political power tend to set up extractive institutions if their interest lies in the control over the society's economic resources for their private benefits. The windfall that represent natural resources can, in this way, weaken institutional quality by fueling corruption, for example. Literature broadly supports the curse thesis of natural resources for institutions by arguing and providing evidence on the negative effect of natural resources-related variables on various aspects of institutions[1], including corruption (e.g., Ades and Di Tella, 1999; Arezki and Brückner, 2011; Bhattacharyya and Hodler, 2010; Sala-i Martin and Subramanian, 2013; Treisman, 2007), political institutions (e.g., Arezki and Brückner, 2011; Barro, 2000; Collier et al., 2009; Jensen and Wantchekon, 2004; Ross, 2001; Smith, 2004; Tsui, 2011), socio-political instability (e.g., Collier and Hoeffler, 2004; Fearon and Laitin, 2003;

---

[1]See Treisman (2007), Frankel (2010), Vahabi (2018), and Badeeb et al. (2017) for reviews.

Humphreys, 2005), economic institutions (e.g., Isham et al., 2005; Sala-i Martin and Subramanian, 2013).

The causal mechanisms of natural resources to institutions suggest that the higher the rents the state can capture, the more detrimental the effect of rents on institutions. Natural resource rents are generally captured by states via export taxes, corporate taxes, and state-owned enterprises (SOEs) revenue in the resource industry. Deep control of the state over the resource industry including the ownership of rents producing companies, therefore gives to the state strong anti-institutional power. Implicitly, the scope for institution damaging can be limited if the control is reduced through the participation of diverse actors, including foreign companies. In the same vein, Ades and Di Tella (1999) find that sheltering domestic firms from foreign competition increases corruption. They show that market competition curbs corruption by reducing the monopoly power of domestic producers and generating smaller profits available for corrupt officials to extort. Exploring the Nigerian institutions, Sala-i Martin and Subramanian (2013) argued that one way to address the detrimental effect of oil on the country's institutions is to prevent the government from a direct appropriation of the oil resources. In line with these arguments, mechanisms with the potential to reduce the rents available for the states can therefore dampen the curse of resources on institutions, or at best, turn it into a blessing. I refer to such mechanisms as rent-shrinking mechanisms.

Foreign investors are a key player in the resource industry in African countries, known to rely on foreign technology and capital through FDI to have their natural resources extracted. In line with the above, the participation of foreign investors in rents production can matter a great deal in the rents-corruption relationship. The openness of the extractive industry to foreign companies can counteract the corruption-breeding effect of rents by contributing to the rent-shrinking mechanism

discussed above. Moreover, some governments have introduced legal constraints to prevent their investors from corruption practices in FDI host countries. Examples include the US Foreign Corrupt Practices Act (FCPA), the US Kleptocracy Asset Recovery Initiative, the UK Bribery Act, and the OECD's Convention on Combating Bribery of Foreign Public Officials in International Business Transactions. As argued by Demir (2016), these types of legislation push pressure on governments where they were enacted to synchronize host countries' institutions with higher standards, including the control of corruption. At the same time, these legal constraints can lead FDI host countries to promote a business environment free of corruption if they wish to engage in intense cross-border investment relations with countries where those constraints exist.

However, the influence of foreign investors in the rents-institutions relationship is not that straightforward. The presence of MNCs raises a number of political issues regarding their potential to prevent institutional development or worsen the situation of already fragile institutions. Reported scandals around corruption, conflicts, and other institutional gaps involving MNCs in the extractive sector abound. As an example, Vincent Bolloré, the French head of a conglomerate dealing in transport, energy and logistics, recently pleaded guilty to bribery for rights over Lomé and Conakry's ports management[2]. Another example is an alleged secret payment in 2014 for exploration rights for two offshore oil and gas fields involving a brother of Senegal's president and a foreign gas company[3]. In spite of legal barriers like the FCPA, investors may be just as clever at finding a way to circumvent the law through covert substitutes for prohibited actions (Wei, 2000). Foreign companies may also take advantage of the lack of transparency surrounding contracts in the resource industry to entrench corruption and prop

---

[2]See for example https://goodwordnews.com/corruption-in-togo-justice-refuses-the-plea-guilty-of-vincent- bollore-international-news/.

[3]See https://www.bbc.com/news/world-africa-48753099.

up brutal regimes in exchange for assured access to the resources. Even with initial good intentions, MNCs can face the reality of having to operate according to local practices if they want to be competitive and can thus contribute to feeding corruption. Therefore, whether greater participation of foreign capital in rents generation results in less or more detrimental effect of rents on corruption in Africa appears to be an empirical question.

We investigate whether the relationship between rents and corruption in Africa is conditional on FDI inflows in the resource sector. This question is of great importance for African economies, given the welfare costs of corruption due to resource misallocation and their high reliance on foreign technology and capital in the extractive sector. The present study contributes to two main strands of literature. First, we complement the resource curse literature by providing evidence on how the rents-institutions relationship is conditional on FDI in the resource sector. This chapter also contributes to the relatively new and weakly explored literature on the institutional impacts of FDI. Following Kwok and Tadesse (2006) Larraín B and Tavares (2004), and Webster and Piesse (2018), who examine the direct effect of FDI on corruption, we focus on the resource sector and explore non-linearities between rents and corruption regarding the importance of foreign capital in this sector. Using a Panel Smooth Transition Regression (PSTR) model for a sample of 40 African countries over the period 2003-2017, we find that resource rents are more corruption-breeding in countries with higher FDI in the resource sector, compared to lower FDI countries where the relation between rents and corruption is mixed. We also show that the stronger positive link between rents and corruption for higher FDI countries is weakened and can be negative in countries with sounder democratic institutions.

The remainder of the chapter is organized as follows. Section 4.2 lays out the methodology and estimation strategy. Section 4.3 describes the data and presents

some stylized facts on FDI, rents, and corruption in Africa. In section 4.4, we present and discuss the empirical results followed by some robustness tests in section 4.5. And section 4.6 concludes.

4.2 Methodology

In this section, we present the econometric approach guiding the empirical analysis of the response of corruption to natural resource rents conditional on resource sector FDI. Section 4.2.1 provides a brief presentation of the PSTR model and shows how it contributes to better accounting for the role of resource sector FDI in the rents-corruption relationship in African countries. Section 4.2.2 presents the estimation procedure.

4.2.1 The model

This study investigates whether greater participation of foreign investors in the resource industry makes a difference in the rents-corruption relationship in Africa. More precisely, we investigate whether the effect of rents on corruption is dependent on the level of FDI in the resource sector. We consider that the effect of resource rents on corruption varies across countries and over the years, depending on the level of foreign capital used to produce these rents. Capturing this kind of heterogeneity in a panel setting requires a model that allows regression coefficients to vary over time and across countries. Various models of this kind have been developed[4], including the panel threshold regression (PTR) model by Hansen (1999) where the coefficients can vary within a small range of values, depending on the value of another observable variable called threshold or transition variable. The coefficients are associated with different homogenous groups or "regimes" based on

---

[4]see Hsiao (2014), Chapter 6 for a review.

the threshold variable. More interestingly, individuals are allowed to move from one regime to another if the transition variable is time-varying.

In this chapter, we rely on the Panel Smooth Transition Regression (PSTR) model with fixed individual effects developed by González et al. (2005) to examine how FDI affects the link between resource rents and corruption in Africa. The PSTR shares the same features as the PTR and allows the regression coefficients to change gradually when moving from one regime to another, unlike the PTR, which assumes a brutal transition between regimes. As such, the PSTR can be viewed as a generalization of the PTR. The model allows obtaining estimated coefficients of rents that are continuous functions of FDI through a bounded function of FDI, called the transition function, and that fluctuate between a limited number (often two) of extreme regimes. As a non-linear panel model, the PSTR allows testing whether there exists a threshold of FDI in the resource sector beyond which resource rents affect more or less corruption. The PSTR provides interesting features in comparison to classical non-linear models using simple interactions of variables or different subsamples. First, it allows the rents coefficient to vary across countries and over time depending on the values of FDI. Second, the composition of countries (subsamples) in the regimes according to the value of their FDI inflows is determined endogenously, not based on an arbitrary threshold level. Third, countries can switch groups over time, so that the composition of the groups is not restricted to remain fixed for the complete period of study. For these reasons, the PSTR method is well suited for the question we focus on.

The basic PSTR model with two extreme regimes and a single transition function is defined as:

$$Cor_{it} = \mu_i + \beta\prime_0 x_{it} g(FDI_{i,t-1}; \gamma; c) + u_{it} \tag{4.1}$$

Where $i = 1, ..., N$ represent countries and $t = 1, ..., T$ years; μ_i denotes countries fixed effects and captures time-invariant determinants of corruption such as geographical and cultural factors, u_{it} denotes the errors, assumed to be i.i.d. Cor_{it} is a measure of corruption. The vector x_{it} includes natural resource rents and other determinants of corruption including:

Per capita GDP: institutional theories argue that corruption, like other institutional dimensions, is shaped by economic factors, stressing that institutions develop in response to a country's income level (Svensson, 2005). Also, high-income countries are expected to witness lower corruption as developing a corruption-curbing environment requires resources. A negative association between economic development and corruption is well established in literature (e.g., Ades and Di Tella, 1999; La Porta et al., 1999; Treisman, 2000).

Trade openness: barriers to competition stimulate corruption by creating conditions for public officials to demand and extract bribes (Ades and Di Tella, 1999). Moreover, integration into the global economy can promote good institutions through the diffusion of good practices.

Education: there are several reasons why variations in human capital can explain cross-country differences in corruption levels. For example, a well-functioning court system with the ability to conduct corruption-related lawsuits efficiently requires good education. And educated citizens are more likely to detect and report corruption cases and request greater accountability from their governments. Moreover, the human capital view of institutions argues that growth in human capital favors institutional development (Glaeser et al., 2004; Svensson, 2005).

Free press: In comparison to a government-controlled press system, a free press system provides better information on the government's various forms of abuse, including corruption(Besley and Burgess, 2002; Brunetti and Weder, 2003;

Svensson, 2005). Countries with more press freedom offer better possibilities for citizens to question politicians' accountability for misconduct on the exercise of the executive power.

$FDI_{i,t-1}$ is FDI inflows in the resource sector in recipient country i at time $t-1$. FDI is lagged to account for delayed effects between the investment and rents generation. We consider one year to be a reasonable approximation as the greenfield FDI data include the extension of existing capacity. The robustness checks also consider a two-year lag. Lagging FDI also allows reducing the risk of reverse causality as institutional quality is generally a strong predictor of cross-border investments, although this relation matters more for FDI in manufacturing activities than in the resource sector.

The transition function, $g(FDI_{i,t-1}; \gamma; c)$, is a continuous function of the threshold variable, $FDI_{i,t-1}$. It is normalized to be bounded between 0 and 1, defining the two extreme regimes. From Eq. 4.1, the effect of x on corruption is given by:

$$\frac{\partial Cor_{it}}{\partial x_{it}} = \beta_0 + \beta_1 g(FDI_{i,t-1}; \gamma; c) \tag{4.2}$$

This effect depends on the value of FDI inflows as $FDI_{i,t-1}$ determines the value of $g(FDI_{i,t-1}; \gamma; c)$. In particular, when the transition function value equals 0 (the lower extreme regime), the effect is β_0 and when it equals 1 (the upper extreme regime), the effect is $\beta_0 + \beta_1$. González et al. (2005) specify g using the following logistic function:

$$g(FDI_{i,t-1}; \gamma; c) = \left[1 + exp\left(-\gamma \prod_{j=1}^{m}(FDI_{i,t-1} - c_j)\right)\right]^{-1} \tag{4.3}$$

Where $c = (c_1, ..., c_m)\prime$ is an m-dimensional vector of location (threshold) parameters and the smoothness of the transitions is determined by γ, the slope of the

function. Depending on the values of the slope parameter and the number of location parameters, several cases can be distinguished. With $\gamma \longrightarrow 0$, the transition function reduces to a constant and the model is the standard linear fixed effects model. When $\gamma \longrightarrow \infty$ and $m = 1$, the PSTR model in Eq. 4.1 corresponds to the two-regime PTR model of Hansen (1999). For $\gamma \longrightarrow \infty$ and $m > 1$, the number of extreme regimes remains 2 and the function switches between 0 and 1 at $c_1, ..., c_m$. A generalization of the PSTR model to $r + 1$ extreme regimes is given by:

$$Cor_{it} = \mu_i + \beta\prime_0 x_{it} + \sum_{j=1}^{r} \beta\prime_j x_{it} g_j(FDI_{i,t-1}^{(j)}; \gamma_j; c_j) + u_{it} \qquad (4.4)$$

4.2.2 Estimation procedure

González et al. (2005) propose an estimation procedure that starts with a specification test of homogeneity (or linearity) in the model against the PSTR alternative. This is done by testing $H_0 : \gamma = 0$ or $\beta_1 = 0$. Under the null hypothesis, the PSTR model contains unidentified nuisance parameters and the tests are non-standard. This is circumvented by resorting to the first-order Taylor expansion around $\gamma = 0$ of $g(FDI_{i,t-1}; \gamma; c)$ allowing to test the hypothesis based on an auxiliary regression:

$$Cor_{it} = \mu_i + \beta^*\prime_0 x_{it} + \beta^*\prime_1 x_{it} FDI_{i,t-1} + ... + \beta^*\prime_m x_{it} FDI_{i,t-1}^m + u_{it}^* \qquad (4.5)$$

Where the parameter vectors $\beta_1^*, ..., \beta_m^*$ are multiples of γ and $u_{it}^* = u_{it} + R_m \beta_1' x_{it}$, with R_m representing the Taylor expansion remainder. Testing the linearity hypothesis in the corruption-rents relationship is therefore equivalent to testing $H_0^* : \beta_1^* = ... = \beta_m^* = 0$. This null hypothesis may be tested by an LM test, an F test (LM_F) and a pseudo LR test.

$$LM_F = \frac{NT(SSR_0 - SSR_1)/mK}{SSR_0} \sim \chi^2(mk)$$

$$LM = \frac{NT(SSR_0 - SSR_1)}{SSR_0/NT - N - mK} \sim F(mk, NT - N - m(k + 1))$$

$$LR = Log(SSR_0) - Log(SSR_1) \sim \chi^2(mk)$$

Where SSR_0 and SSR_1 are the sum of squared residuals under H_0 (linearity) and H_1 (PSTR model), respectively, and k the number of explanatory variables. The test of homogeneity is also used for determining the number of transitions in a sequential way. If the null hypothesis that the model is linear at a predetermined significance level α is rejected, a two-regime PSTR model is estimated and the hypothesis of no remaining heterogeneity for this model is tested. If the two-regime is in turn rejected, a three-regime model is estimated. The testing sequence continues until the first acceptance of the null hypothesis of no remaining heterogeneity. In order to avoid excessively large models, the significance level must be reduced by a constant factor, $0 < \tau < 1$, starting from the two-regime PSTR model step.

The estimation of the PSTR model (Eq. 4.1) combines the fixed effects estimator and nonlinear least squares (NLS). It consists of eliminating the individual effects μ_i using a within transformation (country-specific time-demeaned data) and applying non-linear least squares to the transformed data.

4.3 Data and some stylized facts

The empirical investigation of the FDI-rents-corruption nexus is based on a sample of 40 African countries with available data over the period 2003-2017. The list of countries is provided in Appendix Table 4.13. We start by describing how the variables entering the regression analysis are measured, and then we present some stylized facts on corruption, rents, and FDI in Africa. Summary statistics of all

variables used in the study are provided in Appendix Table 4.8.

4.3.1 Variables measurement and data sources

Corruption

We resort to two common measures of corruption used in literature: the Control of Corruption Estimates (CCE) from the World Wide Governance Indicators (WGI) of the World Bank, and the Corruption Perception Index (CPI) from Transparency International (TI) as robustness check[5]. The Control of Corruption indicator from the WGI captures perceptions of the extent to which public power serves for private gain by means of corruption. The values range between -2.5 and 2.5. The CPI index from the TI captures perceptions of people on how corrupt their public sectors are within a range from 0 to 100. For each measure, the higher the score, the lower the level of corruption. To ensure consistency and for ease of interpretation, we transform the values so that high scores indicate high levels of corruption. In addition, we rescale the CCE using the min-max formula so that it lies between 0 and 100. Although both sources use different methodologies to compute the corruption indices, they are closely related in the outcome as indicated by the simple correlation of 0.87 between the two indicators.

Natural resource rents

Data on natural resource rents are taken from the World Development Indicators (WDI) of the World Bank. The rents are calculated as the difference between the monetary value, at world price, of the physical quantities of a natural resource extracted or harvested by countries and the total cost of extracting or harvesting those quantities. The WDI computes these data as a share of gross domestic

---

[5]A third common measure, the corruption component of the political risk rating of the International Country Risk Guide (ICRG), is not used because of its limited coverage of African countries, compared to the other two measures.

product (GDP). Our study relies on this measure of rents for a number of reasons: (i) it represents a good proxy for revenues from natural resources that can be easily captured by states via export taxes, corporate taxes, and State-Owned Enterprises, (ii) the use of international commodity prices for its calculation represents an exogenous source of variation which mitigates endogeneity issues, (iii) the data cover most resource-producing African countries over the period of study. Moreover, this measure is commonly used in literature with studies including Ross (2006), Collier and Hoeffler (2009), and Bhattacharyya and Hodler (2010). The rents are computed across different types of natural resources (oil, minerals, natural gas, coal, and forest).

In the econometric analysis, we first consider total rents, the sum of rents of all listed resources. Then, we focus on oil and gas rents and mineral rents separately as literature has also shown the importance of not treating all commodities alike because different natural resources could have different economic and institutional impacts. Some natural resources such as oil and minerals generate massive rents, and so are more likely to fuel corruption, relatively to other resources such as livestock and agricultural commodities which produce little rents, which revenues in most cases go directly to private actors. Isham et al. (2005) refer to the former as "point-source" natural resources as opposed to "diffuse-source". They empirically evidenced the heterogeneous institutional impacts of different types of resources, which other studies, including Sala-i Martin and Subramanian (2013) and Goujon and Mabali (2016), confirmed.

FDI in the resource sector

Foreign Direct Investment can be of three main forms: cross-border mergers and acquisitions (M&A), greenfield investments – the creation of a foreign firm from scratch – and the extension of existing foreign capacity through an increase in the

capital. We focus on the last two types and refers to them as greenfield FDI in line with the definition of the data source pertaining to the analysis. We, therefore, exclude Mergers and Acquisitions (M&A), privatization and alliances. Greenfield FDI appears to be more relevant than total or other types of FDI as it allows a better identification of the influence of foreign investors in corruption dynamics. In the case of M&A, it is uncertain which of the foreign or domestic participation mainly drives the behavior of the firm even though the foreign investor acquires 10% or more of the voting power of the domestic enterprise[6]. The foreign acquisition does not necessarily mark a break with the firm's conduct, quite the contrary, it may be that the behavioral dynamics of the firm after acquisition be highly conditioned by its actions before acquisition.

Data on greenfield FDI in the resource sector are taken from the fDi markets database of the Financial Times. The fDi markets dataset contains information on greenfield FDI worldwide from 2003 onwards, including the investment destinations, the capital investment and the sector of investment. We use the data on greenfield capital investment (in current USD) in the extractive industry in African destination countries. FDI in nominal terms is preferred to its share in GDP because rents are already measured in percent of GDP, and GDP does not influence the amount of rents that can result from FDI. Ceteris paribus, if technology is identical in all countries, a given volume of investment will yield the same value of rents no matter the differences in GDP.

Per capita GDP, Trade openness, Education, and Freedom of the press

Data on GDP per capita at PPP terms and on trade openness – measured as the sum of imports and exports as a percent of GDP – are sourced from the WDI.

---

[6]As defined by the Balance of Payments and International Investment Position Manual: Sixth Edition (IMF, 2009), an FDI relationship is established when a unit resident in one economy acquires 10% or more of the voting power in a company that is resident in another economy.

Education is measured with the human capital (hc) variable of the Penn World Table database. The hc is a human capital index based on data on average years of schooling[7]. Freedom of the press is captured by the World Press Freedom Index computed by Reporters without Borders (RSF). The index assesses the degree of freedom available to journalists in 180 countries based on a questionnaire sent to journalists covering aspects including pluralism in the media, media independence, environment and self-censorship, transparency, and abuses. The index ranges between 0 and 100, with higher values indicating less freedom.

4.3.2 Corruption, rents and FDI in natural resources in Africa

Corruption has been on high proportions in Africa for decades despite a number of anti-corruption commitments such as the African Union Convention on Preventing and Combatting Corruption (AUCPCC), adopted in 2003. The average levels of corruption for our sample of African countries have been persistently high over the period 2003-2017, with scores between 70.1 and 71.3 based on the CCE and between 68.7 and 77.8 based on the CPI, on a scale of 0-100. The heightened proportions of corruption in the continent are evidenced by the growing number of revelations over corruption cases involving African public officials reported by the media and non-governmental organizations. As we were writing this section, Vincent Bolloré, the French head of a conglomerate dealing in transport, energy and logistics, pleaded guilty to bribery for rights over Lomé and Conakry's ports management[8]. Another example is an alleged secret payment in 2014 for exploration rights for two offshore oil and gas fields involving a brother of Senegal's president and a foreign gas company.

---

[7]See https://www.rug.nl/ggdc/docs/human$_c$apital$_i$n$_p$wt$_9$0.pdf for details.

[8]See for example https://goodwordnews.com/corruption-in-togo-justice-refuses-the-plea-guilty-of-vincent-bollore-international-news/.

Although corruption has been considered pervasive in the continent, there is significant heterogeneity across countries and economic groupings. Corruption remains in some countries at very high levels, for example, in Congo DR, Sudan, Zimbabwe, Angola, Burundi, Central African Republic, Congo, Nigeria, and Cameroon, with average CCE and CPI scores above 80. Apart from Burundi, all these countries are oil and mineral exporters[9] making relevant the question of the link between resource rents and corruption in Africa. Five of these countries, namely Sudan, Congo DR, Angola, Congo and Burundi are among the twenty most corrupt economies in the world, based on the CCE[10]. At the other extreme, countries with the lowest corruption scores in Africa are Botswana, Mauritius and Namibia with average CCE scores below 50. The case of Botswana deserves particular attention. The country is often cited as an example, along with countries such as Norway and Malaysia, to show that there is nothing inevitable about the resource curse (Ross, 2001). Despite its mineral wealth, Botswana has experienced high growth performances and witnessed a high control of corruption.

Resource sector greenfield FDI inflows in (the sample of) African countries have been on an overall declining trend over the period of study, a 67 % decrease from a high of USD 743 million in 2003 on average. This declining trend coincided with a similar decrease in total rents as a percent of GDP, especially from 2010, thereby highlighting the role of foreign capital in rents production in Africa (Figure 4.1). Total rents represented a significant share of Africa's GDP, especially between 2007 and 2013, during the commodity supercycle. In 2008, rents averaged nearly 16% of GDP in Africa and some countries such as Angola and Congo were above 55%. The end of the commodity supercycle in 2014 is reflected in the sharp decline of Africa's

---

[9]Based on the African Development classification of African economies. See the African Economic Outlook report series available at https://www.afdb.org/en/documents/publications.

[10]It is worth noting that 4 African countries that are not part of our working sample are among the top 5 most corrupt countries in 2017. These are Equatorial Guinea, Somalia, South Sudan, and Libya.
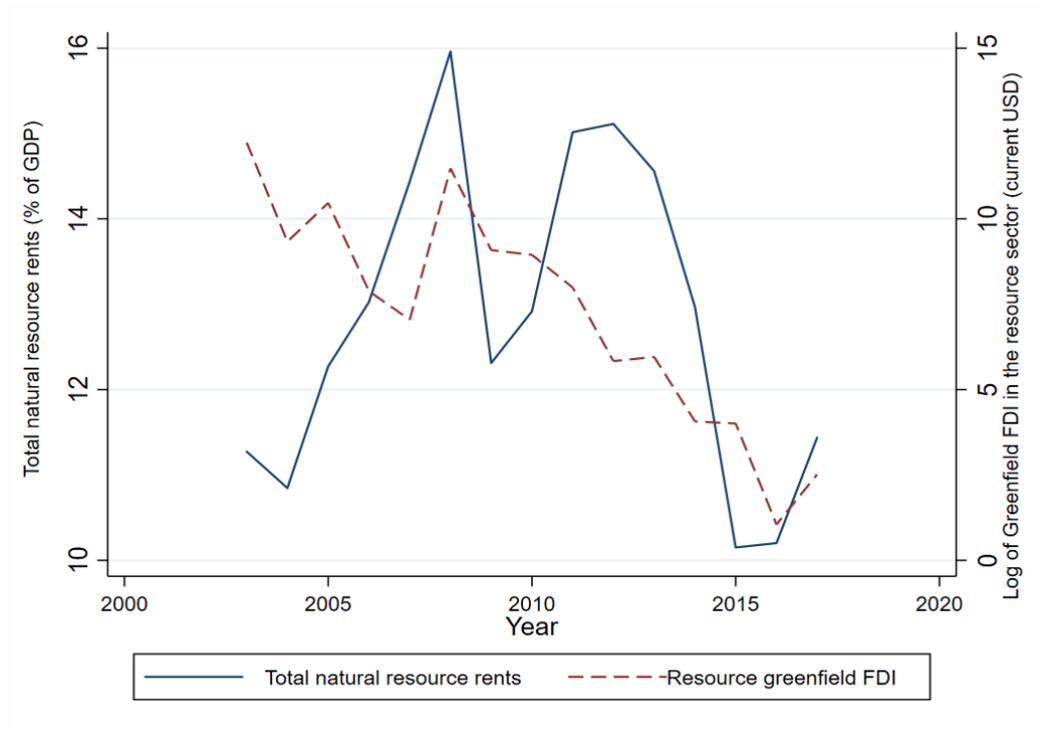
Figure 4.1: Dynamics in total natural resource rents and resource sector Greenfield
FDI

average natural resource rents in 2015 (Figure 4.1). As a first insight into the

FDI-rents-corruption nexus, Figure 4.2 shows a high positive correlation between

corruption (measured by CCE) and rents as a percent of GDP. The correlation

is stronger in the right-hand side panel (with a slope value of 0.61), which plots

the correlation for non-zero FDI observations compared with the left-hand side

panel (with a slope value of 0.46) for observations with zero-FDI, which is also the

sample median.
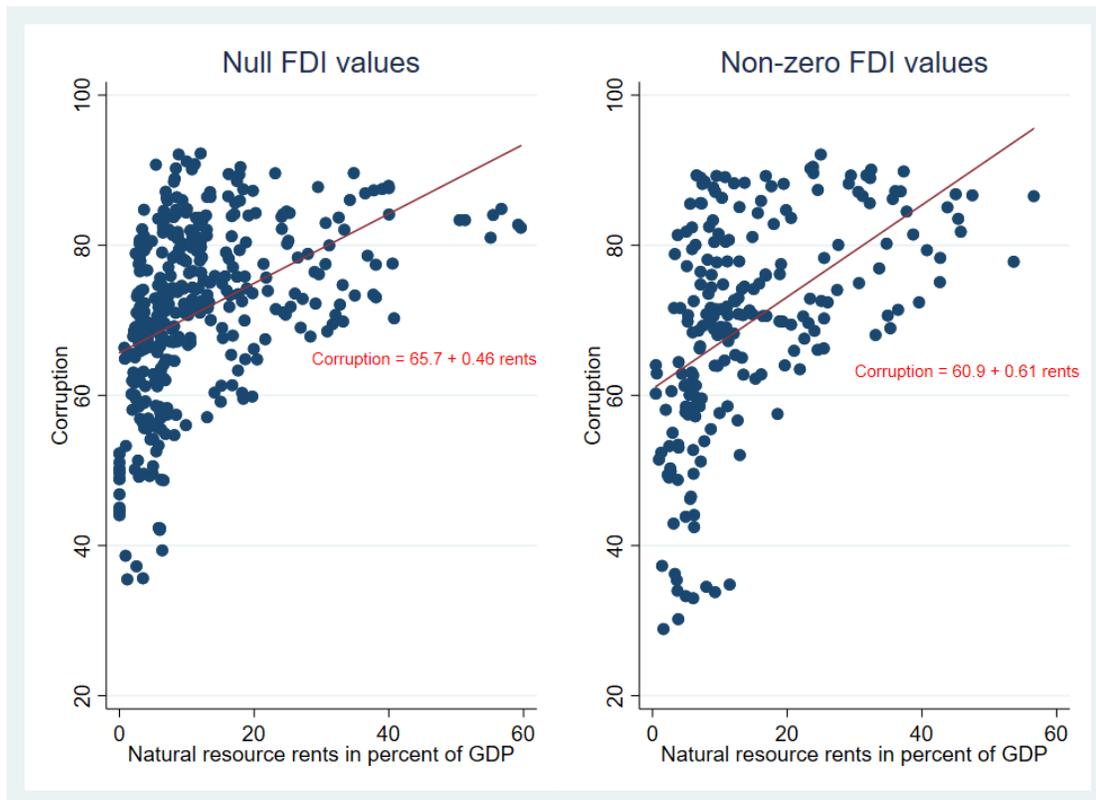
Figure 4.2: Dynamics in total natural resource rents and resource sector Greenfield
FDI

4.4 Estimations results

The results are organized in two main sections. For comparison purposes, we first
estimate standard non-linear panel model regressions. Second, we explore more
rigorously the FDI-rents-corruption nexus using PSTR estimations.

4.4.1 Standard non-linearity

As a first check and for comparison purposes we start exploring the FDI-rents-
corruption nexus using OLS regressions with a simple interactive term between
total natural resource rents and FDI as described by the following equation:

$$Cor_{it} = \alpha + \beta_0 Rents_{it} + \beta_1 FDI_{i,t-1} + \beta_2 Rents_{it} \times FDI_{i,t-1} + \sum_k \delta_k X_{it}^k + \varepsilon_{it} \quad (4.6)$$

Table 4.1 reports the estimations results. Column (1) includes the variables of interest and the Log of per capita GDP. In the following columns, we add the other controls one at a time. The negative coefficient of $Rents$ in each of the four regression results indicates that an increase in rents is associated with a decrease in corruption in the absence of FDI flows in the resource sector, which represents the sample median. This would seem to suggest that corruption is not a channel of the resource curse when the generation of rents is not driven by foreign capital. However, the coefficients should be interpreted with caution as they are not statistically significant. The coefficient of the interactive term between rents and FDI is positive and significant at the 10% level in all specifications. This suggests that rents tend to foster corruption in Africa as more foreign capital is involved in their production. As regard the control variables, GDP per capita correlates negatively with corruption with highly significant coefficients suggesting that corruption decreases with economic development. This is in line with the common wisdom and previous findings, for example in La Porta et al. (1999), Ades and Di Tella (1999), and Treisman (2000). Likewise, freedom of the press is found to be instrumental for curbing corruption as the positive and significant coefficient of the variable $Press$ in all specifications shows that corruption increases as freedom of the press is restricted (Besley and Burgess, 2002; Brunetti and Weder, 2003; Svensson, 2005). Regarding trade and education, they do not have the expected and are not significantly related to control of corruption.

Table 4.1: OLS regressions, interacting rents with FDI

	(1)	(2)	(3)	(4)
Dependent:	Control of corruption estimates (CCE)			
Rents	-0.0021	-0.0201	-0.0203	-0.0267
	(0.0345)	(0.0366)	(0.0379)	(0.0382)
L.logFDI	-0.0635**	-0.0645**	-0.0732**	-0.0765**
	(0.0300)	(0.0302)	(0.0316)	(0.0317)
Rents x L.logFDI	0.0026*	0.0026*	0.0029*	0.0029*
	(0.0015)	(0.0015)	(0.0016)	(0.0016)
LogGDPPC	-12.5994***	-11.9792***	-12.5169***	-12.4096***
	(2.1244)	(2.1701)	(2.2873)	(2.2873)
Logtrade		1.3448	1.2903	1.2925
		(0.9404)	(0.9750)	(0.9743)
Press			0.0002*	0.0002*
			(0.0001)	(0.0001)
Education				-3.3990
				(2.6588)
Obs.	560	557	508	508
R-squared	0.086	0.087	0.100	0.103
Countries	40	40	40	40
Country FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes

Notes: *** p<0.01, ** p<0.05, * p<0.1. Standard errors in parentheses are heteroscedasticity robust. Corruption is measured with the control of corruption estimates of the WGI. It is rescaled between 0 and 100 with higher values reflecting more corruption. All regressions include a constant.

4.4.2 Panel Smooth Transition Regression results

FDI in the resource sector and the total rents/corruption relationship

We start the PSTR estimation procedure by applying the linearity test discussed in section 4.2.2, using FDI as transition variable. Results based on the three tests, LM, LR, and Wald, are shown in Table 4.2. As with the previous standard fixed effects regressions, we consider four specifications corresponding to the inclusion of per capita GDP, openness, freedom of the press, and education as successive controls. The three tests reject the null hypothesis of homogeneity in the relation between rents and corruption conditional on FDI in the resource industry in the four specifications, except for specification (2) where the rejection is obtained with the LR test. Therefore, the PSTR model is well suited for our data. We continue the specification tests by identifying the number of regimes in the PSTR model. The tests of no remaining non-linearity, contained in the same Table 4.2, do not reject the null hypothesis of one regime. The estimations of the PSTR model will thus be based on one transition process between two extreme regimes.

The estimated regression coefficients for the four specifications are shown in Table 4.3, along with their associated estimated location parameters (LP) which tend to be stable across the regressions, between 14.6 and 16.5, i.e., about two-thirds of the maximum value of the transition variable. The PSTR results show that rents from natural resources are negatively associated with corruption in the lower regime (β_0), although not significant in column (1) and (4). However, the coefficient on rents is positive and highly significant in the higher regime ($\beta_0 + \beta_1$) in all columns, implying that rents are positively associated with corruption for higher FDI inflows in the resource sector. In the upper extreme regime, a ten-percent point increase in rents as a percent of GDP is associated with a rise in the corruption index of 0.7 in the specification including all controls. These results imply that the source of the capital in rents production matters in the rents/corruption relationship. They

suggest that rents do not foster corruption in low FDI recipient countries, but an increase in FDI creates a breeding ground for corruption from the lower to the higher regimes in African countries. The heightened proportions of corruption in African countries resulting from natural resource rents are therefore found to be favored by a sizeable participation of foreign capital in the resource industry.

Regarding the control variables, the coefficient of per capita GDP at the lower regime in column (1) shows that income has a direct, negative and highly significant association with corruption. This corroborates previous findings, among which La Porta et al. (1999), Ades and Di Tella (1999), and Treisman (2000), that institutions develop in response to a county's income level. However, the link is positive and also very significant for the group of higher FDI destination countries, highlighting that FDI has the potential to reverse the negative effect of economic development on corruption. These results hold across all specifications as we add more controls. The coefficients on *Press* in columns (3) and (4) show that the dampening influence of free press on corruption found previously with the standard fixed effects estimations actually holds only for the group of low FDI countries. The link between the two variables becomes negative for higher FDI destination countries. In other words, a free press may favor corruption as FDI increases. One plausible explanation would be that an environment of free press makes it easier for foreign investors to collude with some actors from a growing pool of media and improve their image through interested communication. As regard trade and education, they are found to have no significant link with corruption as in the previous standard linear interaction model.

Table 4.2: Tests of linearity and no-remaining non-linearity

Models:	1		2		3		4	
Tests:	Linearity	r=1 vs. r=2	Linearity	r=1 vs. r=2	Linearity	r=1 vs. r=2	Linearity	r=1 vs. r=2
Wald	7.361	1.456	7.410	3.797	13.914	4.773	15.338	6.362
p value	0.061	0.692	0.116	0.434	0.016	0.444	0.018	0.384
Fischer	2.296	0.444	1.729	0.866	2.608	0.859	2.397	0.951
p value	0.077	0.722	0.142	0.484	0.024	0.508	0.027	0.458
LR	7.410	1.458	7.460	3.810	14.108	4.795	15.574	6.402
p value	0.000	0.692	0.000	0.432	0.000	0.441	0.000	0.380

Notes: Linearity, Ho: Linear model, H1: At least one threshold variable (r=1)
r=1 vs. r=2: Ho: PSTR with r=1, H1: PSTR with at least r=2

Table 4.3: FDI in the resource sector and the total rents/corruption relationship, PSTR results

	Dependent: control of corruption index (CCE)							
	(1)		(2)		(3)		(4)	
LP (c)	14.659		14.673		16.450		16.454	
	β_0	$\beta_0 + \beta_1$	β_0	$\beta_0 + \beta_1$	β_0	$\beta_0 + \beta_1$	β_0	$\beta_0 + \beta_1$
Rents	-0.030	0.048**	-0.055*	0.052**	-0.054*	0.072***	-0.044	0.074***
	(0.024)	(0.024)	(0.029)	(0.024)	(0.030)	(0.026)	(0.030)	(0.027)
L.logFDI	-0.112	-0.318**	-0.095	-0.289*	-0.078	-0.148	-0.083	-0.120
	(0.081)	(0.143)	(0.078)	(0.154)	(0.076)	(0.161)	(0.076)	(0.168)
LogGDPPC	-6.067***	0.8771***	-5.581***	0.966***	-7.203***	1.187***	-9.040***	0.960**
	(1.854)	(0.298)	(1.936)	(0.367)	(2.091)	(0.409)	(2.292)	(0.482)
LogTrade			1.802	-0.410	2.009	-1.212	1.964	-1.348*
			(1.225)	(0.720)	(1.271)	(0.747)	(1.275)	(0.757)
Press					0.066***	-0.066***	0.064***	-0.064***
					(0.024)	(0.024)	(0.024)	(0.024)
Education							3.466*	1.110
							(1.798)	(0.977)

Notes: robust standard errors in parentheses. LP is the estimated location parameter. *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

The FDI, resource rents and corruption nexus: focusing on oil-gas and minerals

In line with the above argument about the importance of not treating all commodities alike, we replicate the PSTR estimations focusing on oil and gas rents, and mineral rents separately. Table 4.4 presents the results based on the total of oil and gas rents, and Table 4.5 deals with mineral rents. The tests of linearity and no-remaining non-linearity are shown in Tables 4.9, and 4.10, respectively in Appendix. Overall, they reject the linearity hypothesis and indicate that the two-extreme-regime model is adequate in both cases.

Turning to the estimated regression coefficients, Table 4.4 shows that the FDI/oil and gas rents/corruption relationship is similar to that based on total rents. The coefficients on oil and gas rents are negative and significant in the regime associated with $g(FDI_{i,t-1}; \gamma; c) = 0$, while they are positive and significant for the $g(FDI_{i,t-1}; \gamma; c) = 1$ regime. Like the total rents-based results, oil and gas rents directly reduce corruption, but for larger values of FDI inflows, they lead to higher corruption levels.

Regarding rents from mineral resources, Table 4.5 shows that the coefficients on rents are positive and significant for both groups of countries across all specifications, but they are considerably larger for high FDI recipient African countries. Unlike previous estimates, this corroborates previous findings on the institutional channel of the resource curse that natural resources directly favor corruption (e.g., Ades and Di Tella, 1999; Arezki and Brückner, 2011; Bhattacharyya and Hodler, 2010; Sala-i Martin and Subramanian, 2013; Treisman, 2007). However, the higher magnitude of the coefficients for high FDI countries stresses that FDI amplifies the corruption-raising effect of rents. Turning to the control variables in both Tables 4.4 and 4.5, they tend to align with the main PSTR results based on total natural resource rents in Table 4.3. Trade and education do not have a strong

statistically significant relationship with corruption. Per capita GDP correlates negatively with corruption for the group of low FDI countries, but the link turns positive for the group of high FDI countries. Free press, however presents mixed results. While the results based on oil and gas resonate with those based on total rents that corruption decreases as freedom of the press is restricted for high FDI countries, the results based on mineral rents suggest the opposite.

Table 4.4: PSTR results focusing on oil and gas rents

	Dependent: control of corruption index (CCE)							
	(1)		(2)		(3)		(4)	
LP (c)	14.676		14.676		14.433		14.719	
	β_0	$\beta_0 + \beta_1$	β_0	$\beta_0 + \beta_1$	β_0	$\beta_0 + \beta_1$	β_0	$\beta_0 + \beta_1$
Rents	-0.085***	0.049**	-0.112***	0.050**	-0.107***	0.061**	-0.093***	0.061**
	(0.026)	(0.024)	(0.030)	(0.024)	(0.031)	(0.027)	(0.032)	(0.030)
L.logFDI	-0.097	-0.284**	-0.077	-0.278*	-0.021	-0.193	-0.091	-0.145
	(0.079)	(0.140)	(0.074)	(0.154)	(0.064)	(0.157)	(0.076)	(0.177)
LogGDPPC	-6.420***	0.809***	-6.074***	0.751**	-7.461***	0.921**	-9.064***	0.688
	(1.873)	(0.308)	(1.926)	(0.368)	(2.069)	(0.434)	(2.224)	(0.561)
LogTrade			1.854*	-0.015	2.037*	-0.652	1.897	-0.540*
			(1.108)	(0.695)	(1.162)	(0.750)	(1.173)	(0.752)
Press					0.059**	-0.058**	0.055**	-0.055**
					-0.024	(0.024)	(0.024)	(0.024)
Education							3.101*	1.046
							(1.802)	(1.052)

Notes: robust standard errors in parentheses. LP is the estimated location parameter. *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

Table 4.5: PSTR results focusing on mineral rents

	Dependent: control of corruption index (CCE)							
	1		2		3		4	
LP (c)	20.804		20.810		20.755		20.762	
	β_0	$\beta_0 + \beta_1$	β_0	$\beta_0 + \beta_1$	β_0	$\beta_0 + \beta_1$	β_0	$\beta_0 + \beta_1$
Rents	0.070**	0.180**	0.053	0.199***	0.060	0.203**	0.073*	0.238**
	(0.033)	(0.071)	(0.039)	(0.077)	(0.040)	(0.080)	(0.039)	(0.097)
L.logFDI	-0.040*	-0.741***	-0.041*	-0.692**	-0.050**	-0.909***	-0.041*	-1.058***
	(0.022)	(0.234)	(0.022)	(0.318)	(0.022)	(0.300)	(0.022)	(0.307)
LogGDPPC	-6.548***	1.864***	-6.051***	1.854***	-6.647***	1.917***	-9.186***	2.409***
	(1.908)	(0.602)	(2.016)	(0.600)	(2.138)	(0.594)	(2.324)	(0.769)
LogTrade			1.332	-0.233	1.199	0.226	1.236	0.318
			(1.085)	(1.073)	(1.188)	(1.212)	(1.197)	(1.323)
Press					0.000	0.074**	0.000	0.075**
					(0.000)	(0.036)	(0.000)	(0.034)
Education							4.526**	-0.734
							(1.781)	(1.573)

Notes: robust standard errors in parentheses. LP is the estimated location parameter. *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

Does democracy matter in the FDI-rents-corruption relationship?

Political institutions are key to understanding how natural resource rents can foster corruption as FDI flows in the resource sector increase. Natural resources easily feed corruption in circumstances where politicians are to some extent free of social control and pressures. Such environments with poor democratic institutions limiting political rights make it easier for foreign investors to collude with government officials and engage in rent-seeking and corrupt activities. On the contrary, the potential of natural resource rents to breed corruption as FDI increases can be limited in countries with sound democratic institutions which promote voice and accountability. Citizens in these countries would tend to exert greater control over foreign investors' activities in association with government officials. Therefore, corrupt politicians face the risk of losing support and compromising their chances to remain in power if they are held accountable for corruption. In countries where such institutions are absent, politicians do not face the same risks as they can use resource rents to buy off political challengers (Acemoglu et al., 2004) or to buy elections through clientelism (Robinson et al., 2006). Also, there exists empirical evidence of non-linearity in the rents-corruption relationship with respect to the quality of democratic institutions. For example, Aslaksen (2007) found, after dividing her sample into countries with different levels of the quality of democracy, that oil and mineral increase corruption only in countries with lower levels of democracy as measured by the polity2 scores. By theoretical arguments and empirical evidence, Bhattacharyya and Hodler (2010) show that corruption increases in resource rents in countries with poor democratic institutions, but not otherwise.

In line with these arguments, we investigate whether the quality of the democratic institutions in African countries affects the positive relationship between rents and corruption found for higher FDI recipient countries. This is done by re-estimating

the baseline PSTR model on two different subsamples of countries with lower political expression scores and their higher political expression scores counterparts based on the sample median. We consider three measures of political expression: the *Polity*2 measure of the POLITY IV project, the *Political Rights* (PR) measure of the Freedom House dataset, from the Economic Freedom of the World Project and the *Voice and Accountability* estimate (VAE) of the WGI. The *Polity*2 measure of democracy assesses the general openness of political institutions based on coding of legal documents and combining aspects including procedures through which citizens can express preferences about alternative policies and leaders, and the presence of institutionalized constraints on the exercise of the executive power. The scores range between -10 and +10, with +10 equating to highly democratic institutions. The PR indicator measures perception of the political environment based on news reports, evaluations by organizations such as NGOs and think tanks, and answers to surveys by a large number of specialists. The indicator explores questions grouped into three sub-categories: electoral processes, political pluralism and participation, and functioning of the government. The PR index runs from 1 (best institutions) to 7. The VAE aggregates various measures from various sources of the perceptions of the political environment such as citizens' participation in selecting their government, freedom of expression, and freedom of association. The resulting aggregate estimates translate to a rating from -2.5 to +2.5 (representing the soundest institutions). For each democracy variable, countries are classified in the group of lower democratic institutions quality if their average democracy score over the period of study is below the sample median. Otherwise, their fall within the group of higher democratic institutions quality countries[11]. We expect the

---

[11]Of course, we could have considered more categories using more quintiles, for example the groups of very low, low, high, and very high institutional quality based on the first, second, third and fourth quintile, respectively. However, we could not do so given the high number of zeros in the FDI flows figures. We consider only two groups to allow for more variability in the transition variable. When we disregard this issue and run the regressions using more categories, we get estimates that are not consistent with the PSTR model. For example, in most cases, the

positive link between rents and corruption found in the previous baseline results to be lower in magnitude or, at best, to turn negative for the subsamples of higher institutional quality countries.

Table 4.6 provides the estimations results based on the specification including all controls, i.e., same as column (4) of Table 4.3. In columns (1) and (2), we divide the sample based on the Polity2 variable, columns (3) and (4) split the sample on the median value of the PR, and columns (5) and (6) resort to the VAE. The corresponding tests of linearity and no-remaining non-linearity are provided in Appendix Table 4.11. They tend to reject the linearity hypothesis and indicate that the two-extreme-regime model is adequate in each case. The estimated regression coefficients in Table 5 support our expectation that the quality of the democratic institutions affects the FDI-rents-corruption relationship in Africa. No matter the measure of democratic institutions considered, *Rents* is found to correlate positively with corruption for higher FDI countries in the groups of countries with lower democracy quality levels, although the coefficients are not significant. However, corruption is found to decline in the value of natural resource rents for higher FDI values in more democratic countries. In other words, democracy can help set the ground for counteracting the corruption-breeding effect of natural resources when FDI increases. This finding has an important implication for the contribution of the resource industry to development in Africa. On the one hand, it seems unrealistic that African countries do without foreign capital to have their resources extracted as in most cases they lack the required capital and technology. On the other hand, rents significantly increase corruption for higher values of FDI, which implies a substantial welfare loss due to the misallocation of resources and can also be conducive to a resource curse. One way to reconcile the need of African countries for FDI and an effective control of corruption appears to be through

estimated location parameter is outside the trimming for a PTR model.

Table 4.6: Non-linearity based on democracy

Dependent: control of corruption index (CCE)

	Polity2 lower Med (1)		Polity2 upper Med (2)		PR lower Med (3)		PR upper Med (4)		VAE lower Med (5)		VAE upper Med (6)	
	β_0	$\beta_0+\beta_1$	β_0	$\beta_0+\beta_1$	β_0	$\beta_0+\beta_1$	β_0	$\beta_0+\beta_1$	β_0	$\beta_0+\beta_1$	β_0	$\beta_0+\beta_1$
LP (c)	8.338		8.834		7.691		8.873		7.117		8.764	
Rents	-0.292**	0.095	0.124	-0.472*	-0.621**	0.511	0.115	-0.692**	-0.440	0.235	0.096	-0.437*
	(0.147)	(0.266)	(0.091)	(0.277)	(0.258)	(0.329)	(0.076)	(0.281)	(0.281)	(0.354)	(0.097)	(0.256)
L.LogFDI	-45.670	-30.364	-21.446	12.393	51.887	-53.193	-24.035	25.544	88.448*	-71.522	-12.325	2.358
	(27.844)	(59.693)	(20.537)	(26.591)	(32.218)	(54.705)	(19.132)	(26.559)	(50.654)	(69.245)	(20.835)	(25.936)
LogGDPPC	-38.620	92.745	-14.489	-1.881	-51.620	86.527	-11.702	-16.338	-66.535	99.474	-16.866	1.042
	(23.796)	(58.779)	(20.991)	(27.146)	(32.032)	(55.694)	(18.685)	(26.796)	(49.012)	(70.243)	(21.152)	(26.222)
LogTrade	2.832	-11.025	1.375	-16.054	11.890**	-22.660***	0.235	8.527	10.345	-14.306	-0.907	-12.715
	(4.713)	-(9.372)	(1.979)	(10.084)	(5.046)	(6.616)	(1.952)	(10.950)	(7.116)	(9.126)	(2.100)	(9.471)
Press	0.569***	-0.935***	0.001	-0.220	0.438*	-0.518	-0.001	0.043	0.585**	-0.685**	0.001	-0.338
	(0.157)	(0.273)	(0.001)	(0.238)	(0.239)	(0.340)	(0.002)	(0.094)	(0.260)	(0.339)	(0.001)	(0.216)
Education	59.495***	-123.087 ***	56.447***	-46.023***	85.234***	-135.538***	62.148***	-73.778***	140.663***	-193.080***	54.041***	-38.893***
	(9.965)	(14.323)	(11.611)	(14.564)	(13.656)	(15.454)	(11.359)	(11.929)	(19.445)	(22.285)	(12.634)	(15.245)

Notes: robust standard errors in parentheses. LP is the estimated location parameter. *** p<0.01, ** p<0.05, * p<0.1.

the promotion of democratic institutions. In the presence of such institutions African countries can escape the resource curse mediating through corruption as participation in foreign capital in the resource industry increases.

4.5 Robustness analysis

This section conducts a series of robustness checks to examine the sensitivity of the main results. First, the results discussed above are based on the control of corruption indicator from the WGI. In the first column of Table 4.7, we repeat the baseline PSTR estimation (including all variables) using the Corruption Perception Index (CPI) as an alternative measure of corruption. The results support the previous findings. Total natural resource rents have no direct and significant association with corruption. However, rents are positively and significantly related to corruption for the group of high FDI destination countries.

Next, we replicate the same estimation after replacing our measure of natural resource rents with less direct measures of rents, namely the total of ores and metals exports, and fuel exports, both as a percent of merchandise exports, from the WDI, following Sala-i Martin and Subramanian (2013), among others. Although resource exports are not a direct measure of rents, they are a reasonable proxy for natural resource rents as export taxes are one of the dominant channels through which natural resource rents are generally captured. The estimation results based on ores and metals exports – in column (2) – resonate with the previous main findings. We fail to detect a significant effect of minerals exports on corruption in the lower regime, while the link is positive and significant in the upper regime. Results based and on fuels exports – in column (3) – confirm that corruption increases in natural resources for the group of higher FDI destination countries. However, this relationship appears to be the same with the group of lower FDI countries as the coefficient is also significant with virtually the same magnitude for this group.

Third, for the reasons exposed before regarding time lapse between investment and rent production, we consider the second lag of FDI in the PSTR model. The results based on the WGI's control of corruption indicator (available upon request) show no significant link between rents and corruption in both lower and higher regimes. However, estimations based on the corruption perception index show that the previous findings on the FDI-rents-corruption nexus hold when we consider a two-year lag of FDI. They confirm that corruption in high FDI inflows African

countries responds more strongly and positively to natural resource rents than in low FDI countries.

Lastly, we investigate whether the response of corruption to changes in rents conditional on FDI is sensitive to income level by running the regressions on the subsamples of low-income countries (LICs) – column 5, and higher income countries (HICs) – column 6, based on the World Bank income group classification. The results are in line with our main findings. The coefficients on rents are positive for high FDI countries in all income groups, although not significant for LICs, while the coefficients for low FDI countries are either non-significant (LICs) or negative and significant (for HICs.)

Table 4.7: Robustness tests

	(1) Using CPI		(2) Using ores and metal exports		(3) Using fuel exports		(4) Using 2nd lag of FDI		(5) LICs		(6) HICs	
LP(c)	17.949		20.829		19.721		17.616		17.855		17.823	
	β_0	$\beta_0 + \beta_1$	β_0	$\beta_0 + \beta_1$	β_0	$\beta_0 + \beta_1$	β_0	$\beta_0 + \beta_1$	β_0	$\beta_0 + \beta_1$	β_0	$\beta_0 + \beta_1$
Rents	-0.057	0.065*	0.001	0.059***	0.048***	0.046***	-0.085*	0.070*	0.022	0.120	-0.074**	0.066**
	(0.041)	(0.039)	(0.019)	(0.019)	(0.017)	(0.012)	(0.048)	(0.039)	(0.072)	(0.083)	(0.031)	(0.030)
L.LogFDI	-0.090	0.100	-0.033	-0.921***	-0.023	-0.280	0.045	0.145	-0.270***	-0.503	0.061	-0.061
	(0.081)	(0.268)	(0.023)	(0.332)	(0.027)	(0.222)	(0.041)	(0.252)	(0.075)	(0.446)	(0.051)	(0.239)
LogGDPPC	-26.660***	1.215	-10.962***	1.774	-11.945***	-0.807	-26.816***	0.826	-16.540***	1.767**	-2.352	0.389
	(3.040)	(0.778)	(2.585)	(1.155)	(2.699)	(0.728)	(3.117)	(0.882)	(4.115)	(0.899)	(2.146)	(0.765)
LogTrade	-1.841	-1.974	3.219***	-0.374	1.645	1.358	-2.053	-1.492	0.363	0.084	4.344***	-2.081**
	(1.664)	(1.326)	(1.146)	(1.481)	(1.165)	(1.307)	(1.623)	(1.632)	(2.084)	(1.857)	(1.464)	(0.900)
Press	0.044	-0.043	0.0002***	0.088**	0.057**	-0.057**	0.0003***	-0.094***	0.123***	-0.084	-0.002	0.002
	(0.036)	(0.036)	(0.000)	(0.044)	(0.023)	(0.023)	(0.000)	(0.035)	(0.037)	(0.052)	(0.034)	(0.034)
Education	-10.292***	-0.961	8.106***	1.212	7.607***	3.635***	-12.451***	-1.757	5.358	0.901	1.524	2.201*
	(3.032)	(1.521)	(2.025)	(1.819)	(2.052)	(1.159)	(3.100)	(1.477)	(4.423)	(2.456)	(1.925)	(1.205)

Notes: robust standard errors in parentheses. LP is the estimated location parameter. *** p<0.01, ** p<0.05, * p<0.1.

4.6   Conclusion

In the literature on the resource curse, corruption is argued and found to be one of
the channels of the curse, with the idea that natural resource rents breed corruption,
which, in turn, hampers economic performance. Using threshold regressions on
a panel of African countries, we show this relationship between natural resource
rents and corruption to be non-linear and dependent on FDI inflows in the resource
industry. For lower values of FDI, our results show mixed "effects" of resource
rents on corruption. However, for higher FDI destination countries, the results
clearly indicate that natural resource rents breed corruption. This finding is very
robust to various tests, including the use of alternative measures of corruption and
resource rents, alternative specifications and income level groups.

Investigating the transmission channels of the positive association between rents
and corruption for high FDI countries, we have shown that the quality of demo-
cratic institutions determines whether countries can avoid the resource curse or
not. More precisely, we find this association to turn negative in more democratic
African countries where citizens' control and social pressure can push to greater
accountability. These findings highlight that legal measures in investors' origin
countries to ban corruption in investment countries are necessary but not sufficient
in preventing rents from fueling corruption as resource sector FDI increases. In ad-
dition, policymakers and development organizations should promote more political
rights in FDI destination countries. Finally, given that rents are found to favor
corruption when FDI flows are above certain thresholds, another implication of
the results for corruption curbing is the need to increase competition and reduce
the monopoly power of foreign producers by developing production with domestic
capital.

Appendices of Chapter 4

Table 4.8: Descriptive Statistics

Variable	Obs.	Mean	Std. Dev.	Min	Max
CCE	600	70.678	12.685	28.885	92.227
CPI	532	73.756	12.095	32.143	96.429
Total rents	600	12.833	11.397	0.001	59.604
Oil and gas rents	600	4.571	10.483	0	56.555
Mineral rents	600	2.752	5.584	0	46.625
Log of resource FDI (lagged)	560	7.528	9.74	0	23.496
Log of GDP per capita	600	8.057	0.876	6.597	9.972
Log of trade	596	4.174	0.436	2.95	5.741
Press	549	31.441	13.956	5	85.33
Education (hc)	600	1.817	0.424	1.098	2.885
Polity2	551	2.287	5.091	-9	10
VAE	600	-0.536	0.653	-1.837	0.941
PR	600	4.357	1.779	1	7

Table 4.9: Tests of linearity and no-remaining non-linearity: oil and gas rents

Models:	(1)		(2)		(3)		(4)	
Tests:	Linearity	r=1 vs. r=2	Linearity	r=1 vs. r=2	Linearity	r=1 vs. r=2	Linearity	r=1 vs. r=2
Wald	8.001	0.152	7.412	2.479	12.541	3.660	13.822	4.813
p value	0.046	0.985	0.116	0.648	0.028	0.599	0.032	0.568
Fischer	2.498	0.046	1.730	0.564	2.344	0.657	2.154	0.717
p value	0.059	0.987	0.142	0.689	0.041	0.656	0.046	0.636
LR	8.059	1.152	7.461	2.485	12.698	3.673	14.014	4.836
p value	0.000	0.985	0.000	0.647	0.000	0.597	0.000	0.565

Notes: Linearity, Ho: Linear model, H1: At least one threshold variable (r=1)
r=1 vs. r=2: Ho: PSTR with r=1, H1: PSTR with at least r=2

Table 4.10: Tests of linearity and no-remaining non-linearity: mineral rents

Models:	(1)		(2)		(3)		(4)	
Tests:	Linearity	r=1 vs. r=2	Linearity	r=1 vs. r=2	Linearity	r=1 vs. r=2	Linearity	r=1 vs. r=2
Wald	4.965	1.842	4.612	1.786	10.032	9.321	11.355	9.513
p value	0.174	0.606	0.329	0.775	0.074	0.097	0.078	0.147
Fischer	1.542	0.562	1.071	0.406	1.866	1.693	1.761	1.431
p value	0.203	0.640	0.370	0.804	0.099	0.135	0.105	0.201
LR	4.987	1.845	4.631	1.789	10.133	9.408	11.484	9.603
p value	0.002	0.605	0.001	0.775	0.000	0.094	0.000	0.142

Notes: Linearity, Ho: Linear model, H1: At least one threshold variable (r=1)
r=1 vs. r=2: Ho: PSTR with r=1, H1: PSTR with at least r=2

Table 4.11: Tests of linearity and no-remaining non-linearity: Low vs. high democracy countries

	(1)		(2)		(3)		(4)		(5)		(6)	
Models:	Polity2 lower Med.		Polity2 upper Med.		PR, lower Med.		PR, upper Med.		VAE, lower Med.		VAE, upper Med.	
Tests:	Linearity	r=1 vs. r=2	Linearity	r=1 vs. r=2	Linearity	r=1 vs. r=2	Linearity	r=1 vs. r=2	Linearity	r=1 vs. r=2	Linearity	r=1 vs. r=2
Wald	40.410	4.537	19.735	4.377	37.185	4.709	24.293	2.114	40.868	3.679	19.875	4.691
p value	0.000	0.604	0.003	0.626	0.000	0.582	0.000	0.909	0.000	0.720	0.003	0.584
Fischer	7.284	0.626	3.195	0.610	6.991	0.619	3.968	0.299	7.405	0.503	3.222	0.658
p value	0.000	0.709	0.005	0.722	0.000	0.715	0.001	0.937	0.000	0.806	0.005	0.684
LR	45.008	4.588	20.761	4.425	42.824	4.786	25.504	2.122	45.717	3.713	20.890	4.744
p value	0.000	0.598	0.000	0.619	0.000	0.572	0.000	0.908	0.000	0.715	0.000	0.577

Notes: Linearity, Ho: Linear model, H1: At least one threshold variable (r=1)
r=1 vs. r=2: Ho: PSTR with r=1, H1: PSTR with at least r=2

Table 4.12: Tests of linearity and no-remaining non-linearity for the robustness tests

Models:	(1) Using the CPI		(2) Using ores/metal exports		(3) Using fuel exports		(4) Using 2nd lag of FDI		(5) LICs		(6) HICs	
Tests:	Linearity	r=1 vs. r=2	Linearity	r=1 vs. r=2	Linearity	r=1 vs. r=2	Linearity	r=1 vs. r=2	Linearity	r=1 vs. r=2	Linearity	r=1 vs. r=2
Wald	3.778	3.669	8.000	5.466	9.961	2.460	8.089	0.904	2.585	2.057	6.741	6.136
p value	0.707	0.721	0.238	0.486	0.126	0.873	0.232	0.989	0.859	0.914	0.345	0.408
Fischer	0.571	0.538	1.215	0.800	1.516	0.356	1.226	0.130	0.389	0.288	1.036	0.900
p value	0.754	0.779	0.298	0.570	0.172	0.906	0.292	0.992	0.885	0.942	0.402	0.495
LR	3.794	3.684	8.074	5.501	10.080	2.468	8.166	0.905	2.602	2.067	6.816	6.198
p value	0.001	0.719	0.000	0.481	0.000	0.872	0.000	0.989	0.019	0.913	0.000	0.401

Notes: Linearity, Ho: Linear model, H1: At least one threshold variable (r=1)
r=1 vs. r=2: Ho: PSTR with r=1, H1: PSTR with at least r=2

Table 4.13: List of countries

Countries	Obs.	Countries	Obs.
Algeria	15	Mauritania	13
Angola	15	Mauritius	15
Benin	9	Morocco	15
Botswana	15	Mozambique	14
Burkina Faso	13	Namibia	15
Burundi	10	Niger	8
Cameroon	15	Nigeria	15
Central African Republic	6	Republic of the Congo	12
Congo (DRC)	15	Rwanda	12
Cote d'Ivoire	14	Senegal	15
Egypt	15	Sierra Leone	12
Gabon	12	South Africa	15
Gambia	11	Sudan	13
Ghana	15	Swaziland	8
Kenya	15	Tanzania	15
Lesotho	8	Togo	10
Liberia	10	Tunisia	15
Madagascar	13	Uganda	15
Malawi	10	Zambia	15
Mali	11	Zimbabwe	15

Table 4.14: List of variables

Variable	Measurement and description	Source
CCE	Control of corruption estimate: rescaled 0 to 100 (very corrupt)	WGI
CPI	Corruption Perception Index: rescaled 0 to 100 (very corrupt)	Transparency International
Total rents	Sum of oil, minerals, gas, coal, and forest rents (percent of GDP)	WDI
Oil and gas rents	Sum of oil and gas rents (percent of GDP)	WDI
Mineral rents	Mineral rents (percent of GDP)	WDI
FDI	Greenfield FDI flows, current USD	fDi Markets database
GDPPC	GDP per capita, PPP (constant 2017 international $)	WDI
Trade	Sum of exports and imports (percent of GDP)	WDI
Press	World press freedom index: from 0 to 100 (weakest freedom)	Reporters without Borders
Education	Human capital index	Penn World Table
Polity2	Polity2 measure of democracy: from -10 to 10 (very democratic)	Polity IV project
VAE	Voice and accountability: from -2.5 to 2.5 (best institutions)	WGI
PR	Political rights index: from 1 to 7 (weakest rights)	Freedom House

CHAPTER 5

General conclusion

This thesis contributes to the growing literature on the institutional impact of Foreign Direct Investment. Through its three empirical studies, it rigorously examines how the presence of Multinational Corporations (MNCs) shape the institutional environment of developing countries along three dimensions: economic institutions, political stability, and corruption.

5.1 Summary

The first study analyzes the link between FDI and economic institutions in 103 developing FDI host countries over the period 1990-2009. Economic institutions, viewed as the constraints on and the incentives of the key actors in the economic sphere, are approached with the rule of law index of the Worldwide Governance Indicators (WGI) which captures elements including the protection afforded to property rights, the quality of contract enforcement as well as the strength of the rule of law. Using bilateral FDI data, I examine possible heterogeneity in the relation according to the provenance of the flows: flows from developed origin countries vs. flows from developing origin countries; and flows from origin countries with developed institutions vs. flows from origin countries with weak institutions. The empirical results are based on a dynamic panel model estimated with the bootstrap-based bias corrected FE (BCFE) developed by Everaert and Pozzi (2007) and extended by De Vos et al. (2015).

The results show that economic institutions improve in countries with larger FDI flows and this effect is driven by FDI from developed economies while no significant link is detected for FDI from developing economies. Furthermore, they indicate that the positive institutional impact of total FDI is likely to be mitigated in countries where the natural resources sector represents a major driver of FDI. The

findings suggest that the quality of the institutions in FDI origin countries matters in the FDI/economic institutions nexus in the developing world.

The second study examines the potential of FDI to counter socio-political instability in a large sample of developing countries over the period 2003-2017. Drawing on the literature on the causes of political instability and conflicts, where bad economic prospects have been found to feed instability, this study hypothesizes that FDI can favor socio-political stability by improving economic opportunities. Therefore, while previous studies in this literature were interested in total FDI, the chapter focuses on greenfield FDI for its more direct impact on growth and jobs creation (e.g., Financial-Times, 2019; Harms and Méon, 2018; Wang and Wong, 2009) and thus its greater socio-economic externalities. Taking advantage of the bilateral structure of the FDI data, the identification strategy relies on a gravity-based instrumental variable approach a la Feyrer (2019) and Frankel and Romer (1999), never used before in this literature.

The results clearly evidence that greenfield FDI favors political stability, and are robust to various specifications and estimations methods, as well as a series of sensitivity tests. Accounting for the fact that governments competing to attract FDI can resort to political repression to prevent socio-political instability, this chapter also rules out the influence of political terror from the effect of FDI. The results indicate that greenfield FDI tends to promote a political stability compliant with governments' respect for human rights, therefore preserving individuals' wellbeing. Beyond FDI direct economic effects, the findings highlight another channel through which FDI can contribute to development, the promotion of political stability.

In the last study, we investigate whether the impact of resource rents on corruption is conditional on the origin of capital used to produce these rents, focusing on FDI in the natural resources sector in Africa. Using Panel Smooth Threshold Regressions (PSTR), the results show that natural resource rents are more corruption-breeding in countries with higher FDI in the resource sector, compared to lower FDI countries where the relation is mixed. Our findings, therefore, highlight that the origin of the capital used to produce rents matters in the effect of rents on corruption. Investigating the transmission channels of the positive association between rents and corruption for high FDI countries, we find that the quality of democratic institutions determines whether these countries can avoid the increase in their corruption resulting from higher resource FDI and higher rents. More precisely, we find the positive association between rents and corruption in high resource FDI

countries to turn negative in more democratic African countries where citizens' control and social pressures can push to greater accountability.

5.2   Key Takeaways

The findings from this thesis evidence that FDI is instrumental for institutional development in developing countries by promoting inclusive economic institutions and political stability. We are not claiming, based on the findings from this thesis, that MNCs always have a positive influence on the institutions in developing countries. There are several reported cases about MNCs having undesirable influences on the institutions in the developing world. However, the findings from this research show that the average effect in the areas of economic institutions and political stability is positive. Accordingly, if politics is the problem preventing institutional development in developing countries, external actors through foreign direct investment can be part of the solution if barriers to cross-border flows of FDI are lifted to support investments.

This would require the promotion of FDI from all source countries. Preferential investment agreements with a specific type of investing countries may have a limited impact on institutions in developing countries. Governments and Development Organizations concerned with institutions in developing countries should encourage more open and competitive investment policies for all types of origin countries (North and South as well). In addition, unleashing the full potential of FDI for institutional development would require making the existing legal constraints in the North more effective on the one hand, and the introduction of similar regulatory pressure on investors from the South on the other hand.

The findings also highlight that FDI can have indirect positive effects on institutions through its socio-economic externalities and their influences on greed and grievance. Accordingly, countries should pay more attention to such investments with the stronger impacts on growth and jobs creation as Greenfield FDI. This is all the more important as the results evidence that political stability can be obtained without resort to political terror as long as people are provided with good economic opportunities – one of the main potentials of greenfield FDI.

Another important lesson from this research is that the sector of investment matters in the FDI-institutions nexus. In particular, FDI in the resource sector is found to amplify the corruption-breeding effect of natural resource rents. While MNCs

in the resource industry are key players for the development of this sector in the developing world for the capital and technology they bring, it is however possible to counter their detrimental impacts on institutions through greater democracy that promote voice and accountability and therefore poses constraints on the exercise of the executive power. Legal measures in investors origin countries to ban corruption in FDI host countries are necessary but not sufficient in preventing rents from fueling corruption as resource sector FDI increases. In addition to such measures, policymakers and development organizations should promote more political rights in FDI destination countries. Also, given that rents are found to favor corruption when FDI flows are above certain thresholds, another implication of the results for corruption curbing is the need to increase competition and reduce the monopoly power of foreign producers by developing production with domestic capital.

5.3 Direction for future research

Despite our best effort to provide a rigorous and comprehensive analysis of the institutional impact of FDI in developing countries, some limits need to be underlined. These limits are mainly due to data availability, which further research can tackle when information becomes available. First, the institutional change potential of FDI throughout this thesis is based on FDI flows. However, FDI stocks can also appear to be relevant in the context of this research. By capturing the presence of MNCs over time, FDI stocks can be used to better test some hypotheses such as changes in the relative bargaining power of foreign investors. Data on FDI stocks are provided by Organizations such as the UNCTAD, the World Bank, and the IMF. However, they are not available for a large sample of developing countries at a bilateral level or by sector. Therefore, they could not allow us to test the different hypotheses explored in this thesis.

Second, the heterogeneity analyses according to the sector of investment focus on FDI in the resource industry. Other sectors including manufacturing activities and services are not specifically examined. We chose to put the emphasis on the resource sector to test whether FDI can resist the predictions from the resource curse literature. However, even though we may expect the manufacturing and service sectors to promote market-supporting institutions, it would be useful to empirically evidence their specific influences on institutions.

Third, some of the transmission channels highlighted in this thesis are not tested

empirically as we could not find reliable and precise measures for them. This is the case for changes in institutions resulting from the lobbying and bargaining power of foreign direct investors. A good proxy of this mechanism in future research would make it possible to empirically test its importance in the institutional change potential of FDI, and therefore bring additional useful insights into the relations under investigation.

Last but not least, future studies can mobilize more recent data, especially for chapter 2. We opted for the bilateral FDI data from Demir (2016) as they offer the most comprehensive information among all data sources we were able to explore, in terms of coverage of origin and host countries. Demir (2016) collected the information from three sources: OECD, UNCTAD and national statistics institutes databases. For consistency, he used one source for each country pair for the full period. We could not extend the data because we did not have the required resources, time, and network to reach out to a large number of national statistics institutes. Moreover, the UNCTAD has stopped publishing information on bilateral FDI, and the OECD provides the information only for its member countries.

CHAPTER 6

RÉSUMÉ EXTENSIF EN FRANÇAIS

À l'exception de certaines perturbations, comme la forte baisse enregistrée en 2008-2009 en raison de la crise financière mondiale, les flux d'investissements directs étrangers (IDE) n'ont cessé d'augmenter au fil des décennies, devenant une source indispensable de financement externe dans le monde. Aussi, la hausse des flux d'IDE vers les pays en développement[1], qui se sont avérés plus résilients aux cycles économiques mondiaux, a été plus soutenue. Entre 1990 et 2015, ces flux vers les économies en développement ont augmenté de plus de 2000 %, atteignant environ 730 milliards USD. Ces niveaux élevés d'IDE dans le monde en développement, bien qu'inférieurs aux niveaux observés dans les économies avancées, représentent une source importante de financement du développement pour ces pays. Depuis 1990, ces flux ont représenté en général une part plus importante du PIB que dans les économies développées, avec une moyenne de 2,4 % du PIB, contre 1,8%.

Dans un contexte de faibles dotations en capital, les IDE, comme d'autres capitaux étrangers tels que les investissements en portefeuille, contribuent au financement du développement en comblant le déficit épargne-investissement. Cependant, les IDE diffèrent des autres formes d'investissements étrangers car ils impliquent l'établissement d'un intérêt durable de l'investisseur direct dans le pays d'accueil par le biais du contrôle ou d'un degré significatif d'influence sur la gestion de l'entreprise d'investissement direct. Comme le définit le Manuel de la balance des paiements et de la position extérieure globale : Sixième édition (IMF, 2009), il y a IDE lorsqu'une unité résidant dans une économie fait un investissement qui donne le contrôle ou un degré d'influence significatif sur la gestion d'une entreprise résidant dans une autre économie. Ce concept est concrétisé lorsqu'un investisseur direct possède une participation qui lui donne droit à 10 % ou plus des droits de

---

[1]Sur la base de la classification de la CNUCED. Voir https://unctadstat.unctad.org/EN/Classifications.html pour plus de détails.

vote (s'il est constitué en société, ou l'équivalent pour une société non constituée en société) dans l'entreprise d'investissement direct. A cet égard, l'IDE présente plus de potentiels économiques que d'autres formes de flux de capitaux étrangers, notamment des retombées en termes de productivité, un transfert de technologies avancées, un accès plus facile aux marchés internationaux et une intégration aux chaînes de valeur mondiales, entre autres.

Cette caractéristique des IDE a également d'autres implications majeures au-delà de la sphère économique directe. La croissance rapide des flux d'IDE à partir des années 1990 ainsi que la concurrence accrue entre les économies pour devenir des destinations attrayantes pour les multinationales ont suscité un intérêt pour d'autres aspects de l'impact des IDE dans les pays d'accueil. Certaines voix et études ont mis en garde contre les effets négatifs de l'IDE résultant d'une plus grande concurrence conduisant les pays d'accueil à faire des concessions au détriment du bien-être social. Il s'agit notamment de fortes réductions des taux d'imposition, d'abus des droits des travailleurs et de non-respect des normes environnementales (Devereux et al., 2008; Garretsen and Peeters, 2007; Klemm and Van Parys, 2012; Oman, 2000). Ces effets négatifs, parfois qualifiés de "course vers le bas", de l'anglais "race to the bottom", soulignent le potentiel des IDE à entraîner des changements majeurs dans les pays hôtes, au-delà de leurs effets plus directs sur la croissance économique.

L'environnement institutionnel est sans doute l'un des aspects les plus soumis aux influences des multinationales dans les pays d'accueil. Le rôle des institutions dans la détermination du niveau d'attractivité d'un pays en matière d'IDE a suscité un intérêt à partir des années 1990, suite aux travaux influents de North (1990)[2] . D'un point de vue économique, les investisseurs étrangers choisissent une destination plutôt qu'une autre en fonction des coûts associés à chaque choix. Les pays dotés d'institutions soutenant le marché, telles que celles favorisant l'état de droit ou la protection des droits de propriété, sont susceptibles d'encourager les IDE en diminuant le coût des affaires. À l'inverse, les pays dont l'environnement institutionnel est peu fiable et imprévisible, en raison par exemple de l'instabilité politique ou d'une corruption élevée, sont susceptibles de décourager les IDE en augmentant les coûts et en diminuant la rentabilité.

Dans ce contexte, les investisseurs étrangers ne recherchent pas seulement des opportunités économiques telles que la taille du marché, de faibles compensations

---

[2]Cf. Bailey (2018) pour une revue.

des employés ou l'accès aux ressources, mais exigent également une meilleure qualité institutionnelle, que les gouvernements en concurrence pour attirer les IDE seront incités à mettre en place. De cette manière, les IDE peuvent contribuer à améliorer le terreau institutionnel du pays d'accueil. A cet effet, le Rapport sur l'investissement dans le monde 2017 a souligné que de nombreux pays se sont empressés de promouvoir un environnement plus favorable aux investisseurs étrangers en 2016, avec 108 pays, dont 106 en développement, ayant adopté un total de 111 lois favorisant l'investissement (UNCTAD, 2017). Dans de nombreux cas, les agences de promotion des investissements (API) sont dédiées à cet objectif de renforcement de l'attractivité de l'environnement des affaires par la promotion d'une meilleure qualité institutionnelle.

Dans leur quête d'environnements réduisant les coûts, les investisseurs directs étrangers s'engagent aussi activement auprès des gouvernements des pays hôtes des IDE et des groupes influents comme les organisations communautaires et les organisations non gouvernementales (voir par exemple Bouwen, 2002; Coen, 1997; Hahn, 1999; Hillman and Hitt, 1999) et mènent des actions directes ayant des conséquences sur les institutions locales. En d'autres termes, ils ont recours au lobbying et à la pression pour faire prévaloir des institutions qui leur réduisent les coûts (Dang, 2013; Malesky, 2009). Comme le suggère Hewko (2002), deux mécanismes permettent de prédire s'ils parviendront ou non à influencer les institutions en place : (i) la capacité à fournir aux décideurs locaux des informations sur les lois et règlements en vigueur dans d'autres pays ; (ii) et la capacité à les contraindre en les menaçant de partir vers des environnements d'investissement plus hospitaliers. Le potentiel des investisseurs étrangers en tant qu'acteurs de changement institutionnel est plus pertinent dans les pays d'accueil en développement, étant donné le pouvoir de négociation relativement faible de ces derniers.

Bien qu'il n'y ait pas de consensus sur les effets des IDE sur les performances économiques et sociales des pays hôtes, plusieurs études ont montré un impcat positif des IDE sur la croissance (voir Iamsiraroj and Ulubaşoğlu, 2015, pour une revue). En stimulant la croissance et en favorisant de bonnes conditions socio-économiques, les IDE peuvent améliorer les dimensions des institutions qui sont particulièrement sensibles aux conditions de vie des populations. Par exemple, la littérature sur les causes de l'instabilité sociopolitique soutient que les facteurs susceptibles d'améliorer les opportunités économiques devraient favoriser la stabilité sociopolitique en éliminant les motifs de grief et en atténuant la voracité des populations. À cet égard, l'IDE peut avoir des effets d'amélioration des

institutions grâce à ses externalités socio-économiques.

Toutefois, l'effet positif attendu des IDE sur les institutions des pays d'investissement, quel que soit le mécanisme en jeu, contraste avec un certain nombre de mauvaises pratiques par les investisseurs étrangers dans la sphère institutionnelle des pays d'accueil. La présence des multinationales dans les pays en développement a suscité des questions sur leur pouvoir de nuisance institutionnelle. La responsabilité des multinationales est souvent mise en cause dans plusieurs cas de conflits, de corruption, de maintien de régimes autoritaires, pour n'en citer que quelques-uns. A titre d'exemple, l'on peut évoquer le soutien financier et logistique apporté par la société minière AngloGold Ashanti en 2003-2004 à un groupe rebelle opérant dans le district aurifère d'Ituri en République Démocratique du Congo (Berman et al., 2017). Au moment où j'écrivais cette section, Vincent Bolloré, patron français d'un conglomérat exerçant dans le secteur des transports, de l'énergie et de la logistique, a plaidé coupable de corruption pour des droits sur la gestion des ports de Lomé et de Conakry[3]. Un autre exemple concerne un paiement secret présumé en 2014 pour des droits d'exploration sur deux champs pétroliers et gaziers offshore impliquant un frère du président sénégalais et une société gazière étrangère, révélé dans un rapport de la BBC[4].

L'instauration de contraintes juridiques dans certains pays développés pour empêcher leurs investisseurs de nuire aux institutions des pays d'investissement confirme la réalité de la question. Par exemple, le "Foreign Corrupt Practices Act (FCPA)" interdit aux entreprises américaines de corrompre les dirigeants des pays étrangers. Cet dispositif a été introduit en 1977 après que l'on ait découvert que des entreprises américaines versaient des pots-de-vin à des responsables politiques étrangers et finançaient des partis politiques locaux (Wei, 2000). D'autres initiatives telles que la "US Kleptocracy Asset Recovery Initiative", la "UK Bribery Act" et la Convention de l'OCDE sur la lutte contre la corruption d'agents publics étrangers dans les transactions commerciales internationales suivent des principes similaires. En outre, l'effet positif des IDE sur la croissance ne fait pas l'objet d'un consensus empirique et son potentiel de développement social est contesté par beaucoup, notamment par les détracteurs la mondialisation, en particulier la ligne structuraliste, qui souligne que les opportunités crées par la mondialisation

---

[3]Voir par exemple https://goodwordnews.com/corruption-in-togo-justice-refuses-the-plea-guilty-of-vincent- bollore-international-news/.

[4]Voir https://www.bbc.com/news/world-africa-48753099.

sont associées à un processus de redistribution discriminatoire, ouvrant la voie au mécontentement (par exemple Koubi and Böhmelt, 2014; Olzak, 2011). À cet égard, les effets des externalités socio-économiques des IDE discutés plus haut peuvent opérer dans la direction opposée, faisant des IDE un outil d'affaiblissement de la qualité des institutions.

En dépit du potentiel énorme de changement institutionnel de l'IDE, la littérature sur son impact institutionnel est relativement récente et peu explorée. La plupart des études sur le lien entre les IDE et les institutions se sont intéressées à la manière dont différents types d'institutions déterminent les destinations des IDE. Il est important d'analyser l'impact des IDE sur les institutions dans les pays en développement, non seulement en raison de l'importance toujours croissante des investisseurs directs étrangers dans les économies en développement, mais aussi et surtout en raison du rôle des institutions dans la croissance à long terme et le développement dans le contexte de faible qualité institutionnelle qui caractérise ces économies.

Les institutions peuvent être définies de différentes façons. Toutefois, la plupart des définitions présente les institutions comme les règles de jeu et s'inspirent de North (1990) qui définit les institutions comme les contraintes conçues par l'homme et qui façonnent l'interaction humaine. Selon la définition de North, les institutions structurent les incitations politiques, sociales ou économiques. Proche de cette définition, Acemoglu and Robinson (2012) conçoivent les institutions comme les règles influençant le fonctionnement de l'économie, et les incitations qui motivent les gens. Ils distinguent les institutions politiques et économiques. Les institutions politiques (économiques) déterminent les contraintes et les incitations des acteurs clés dans la sphère politique (économique). Les institutions économiques bonnes ou inclusives sont celles qui encouragent les gens à investir dans le capital physique et humain et dans la technologie, ce qui favorise les performances économiques[5]. Parmi les formes de ces institutions figurent celles qui promeuvent l'État de droit, garantissent les droits de propriété et permettent un accès relativement égal aux opportunités économiques et aux ressources. À l'inverse, les institutions économiques mauvaises ou extractives sont celles sous lesquelles ces caractéristiques

---

[5]Acemoglu and Robinson (2012) proposent une définition plus large : "pour être inclusives, les institutions économiques doivent favoriser une propriété privée sécurisée, un système de droit impartial et des services publics qui offrent un terrain de jeu équitable dans lequel les gens peuvent échanger et passer des contrats ; elles doivent également permettre l'entrée de nouvelles entreprises et permettre aux gens de choisir leur carrière."

sont absentes pour une grande partie de la société.

Les deux dimensions des institutions sont interdépendantes, car les institutions politiques jettent les bases des institutions économiques. Les bonnes institutions économiques sont façonnées par de bonnes institutions politiques, c'est-à-dire celles qui permettent une large distribution des droits politiques – la démocratie par opposition à la dictature ou à l'autocratie, qui imposent des contraintes à l'exercice du pouvoir par les politiques afin qu'ils soient responsables devant les citoyens et répondent à leurs attentes. Dans le cadre d'institutions politiques qui concentrent les droits et le pouvoir politiques chez une petite élite, il est difficile de maintenir de bonnes institutions économiques, car les individus qui détiennent le pouvoir politique ont tendance à l'utiliser pour leurs propres intérêts, au détriment de la grande majorité de la population. Une décomposition des institutions politique et économique en fonction des dimensions qui ont fait l'objet de grande attention dans la littérature permet de mieux comprendre les différentes facettes du concept.

La forme de gouvernement

La forme de gouvernement détermine le type de gouvernance d'un pays. Diverses formes de gouvernement caractérisent les institutions politiques des pays du monde. Conformément à la définition des institutions politiques présentée ci-dessus, elles diffèrent notamment dans l'étendue des droits politiques et des libertés civiles accordés aux citoyens et du pouvoir politique du gouvernement. Ces droits et pouvoir sont en général spécifiés dans la constitution et constituent des lois et des règles *de jure*. À cet égard, on peut distinguer deux grandes formes de gouvernement : la démocratie et l'autocratie ou la dictature[6]. La gouvernance démocratique permet une large distribution des droits aux citoyens, tels que le droit de choisir, de poser des contraintes aux gouvernements et de les sanctionner, la liberté d'expression et de presse. Dans le cadre d'une gouvernance autocratique, ces droits sont absents ou limités à un strict minimum et confèrent un pouvoir politique excessif à une petite élite. Une bonne approche de la forme de gouvernement doit aussi tenir compte de la gouvernance politique *de facto*, c'est-à-dire comment la législation (*de jure*) est appliquée dans les faits. Un pays peut avoir une forme de gouvernement démocratique *de jure* et connaître une gouvernance autocratique *de facto* lorsque les lois et les règles *de jure* ne sont pas ou le sont de façon approximative.

---

[6]Nous considérons les autres formes de gouvernement, telles que l'oligarchie, la social-démocratie et autres, comme des variantes de la démocratie ou de l'autocratie.

La (in)stabilité politique

La stabilité politique au sens large désigne non seulement la probabilité que le gouvernement soit déstabilisé ou renversé (Kaufmann et al., 2009), ou sa capacité à rester en place et à mettre en œuvre son ou ses programmes, mais aussi l'absence d'événements perturbateurs tels que des manifestations violentes, des troubles sociaux et des risques de conflits armés. L'instabilité politique ne permet pas ou n'encourage pas les populations à faire le meilleur usage de leurs compétences pour participer aux activités économiques de par le fait qu'elle crée un environnement économique incertain. L'incertitude associée aux environnements instables augmente le coût des affaires et les risques, ce qui décourage les investissements. En cas d'instabilité politique, il est donc difficile, voire impossible, de maintenir de bonnes institutions économiques.

(Le contrôle de la) corruption

La corruption peut être définie comme "la mesure dans laquelle le pouvoir public est exercé à des fins privées" (Kaufmann et al., 2009), ou "l'abus d'une fonction publique à des fins privées" (Svensson, 2005). Dans les faits, les pratiques de corruption englobent des activités telles que les pots-de-vin, le copinage, le favoritisme et le détournement de fonds publics. L'approche "sable dans la roue (de l'anglais sand-in-the-wheel)" de la corruption soutient que, compte tenu du degré de pouvoir discrétionnaire des fonctionnaires, la corruption peut conduire à la création de réglementations contre-productives pour obtenir davantage de pots-de-vin, réduisant ainsi l'efficacité des marchés et de l'allocation des ressources. La corruption limite les incitations à investir car elle rend difficile la conduite efficace des affaires en altérant l'environnement économique et en réduisant l'efficience du gouvernement. Elle distribue les opportunités aux acteurs économiques et aux entreprises par le biais du favoritisme plutôt que sur la base du mérite. De bonnes institutions exigent donc un contrôle efficace de la corruption.

L'État de droit et l'application des droits de propriété

Un système de droit non biaisé (efficace, impartial et transparent) avec un système juridique qui protège les droits de propriété et l'exécution des contrats est la pièce maîtresse des bonnes institutions économiques (Acemoglu et al., 2005a). Cette fonction est considérée comme la plus importante du gouvernement dans

l'évaluation de la liberté économique par l'Institut Fraser[7]. Sans la protection des personnes et de leurs biens légitimement acquis, y compris les fruits de leur travail, les individus ne seront pas incités à investir dans des actifs augmentant la productivité tels que le capital humain ou physique ou à adopter de meilleures technologies. Lorsque les agents économiques n'ont pas confiance dans l'exécution des contrats et dans la protection des fruits de leurs efforts de production, leur incitation à s'engager dans une activité productive est affaiblie. Un environnement juridique caractérisé par la sécurité de la propriété privée est également essentiel à l'allocation efficace des ressources. Les sociétés où les tribunaux sont partiaux, où la population défie la loi sans sanction efficace et où les droits de propriété privée sont bafoués ont peu de chances de prospérer.

Il est bien établi que les différences de qualité institutionnelle expliquent de manière significative les différences entre pays en termes de niveaux de développement économique. La position de certains spécialistes du développement qui considèrent les institutions comme la cause fondamentale de la croissance de long terme est sans équivoque. L'affirmation d'Acemoglu et al. (2005a) selon laquelle "la question de savoir pourquoi certaines sociétés sont beaucoup plus pauvres que d'autres est étroitement liée à la question de savoir pourquoi certaines sociétés ont des institutions économiques beaucoup plus mauvaises que d'autres" en est un exemple. L'évaluation de la qualité institutionnelle des pays, telle que proposée par des mesures couramment utilisées comme les indicateurs de gouvernance mondiale (WGI)[8] de la Banque mondiale, met en évidence de grands écarts de développement institutionnel importants entre les pays développés et les pays en développement. Dans chacune des quatre dimensions institutionnelles discutées plus haut, la qualité moyenne des institutions dans les pays en développement sur la période 1996-2019 est nettement plus faible (en deçà de 0 sur une échelle de -2,5 à 2,5) que celle des pays développés, avec des moyennes positives dans toutes les dimensions. Bien que les pays en développement soient en moyenne à la traîne en termes de développement institutionnel, il existe une hétérogénéité significative entre eux dans la dynamique de leurs institutions. Certains ont réussi à améliorer leur environnement au fil du temps. C'est le cas de la Géorgie, du Libéria, du Rwanda et de la Serbie, sur la base de la dimension État de droit. Ces pays doivent poursuivre leurs efforts pour améliorer encore leurs institutions, tandis que ceux qui présentent des lacunes importantes et persistantes doivent réformer leur paysage institutionnel.

---

[7]Voir https://www.fraserinstitute.org/economic-freedom/approach.

[8]Pour la méthodologie, voir https://info.worldbank.org/governance/wgi/Home/Documents.

Dans les modèles de croissance néoclassiques traditionnels, les institutions étaient traitées comme exogènes, car les différences de croissance ne s'expliquaient pas par des changements dans les institutions, comme le système de droits de propriété qui affecte la manière dont les biens et services sont échangés sur les marchés. A la suite de la conception de North and Thomas (1973) selon laquelle les institutions sont la cause fondamentale de la croissance à long terme, il y a eu un intérêt pour les facteurs qui façonnent les institutions. A cet effet, Acemoglu et al. (2005a) ont montré que les institutions sont endogènes et résultent de choix effectués par les différents groupes de la société pour leurs conséquences économiques associées aux intérêts des groupes. Sur la base de la discussion sur le potentiel de changement institutionnel des IDE et les flux croissants d'IDE vers les pays en développement, il apparaît important de se d'examiner comment les IDE ont affecté les institutions des pays en développement. Répondre à cette question est l'objet de cette thèse qui vise à déterminer si les IDE peuvent être ou non un facteur de développement institutionnel dans le monde en développement. Chaque chapitre explore un aspect spécifique des institutions, à savoir les institutions économiques (chapitre 2), la stabilité socio-politique (chapitre 3) et la corruption (chapitre 4).

La définition de référence de l'IDE, selon laquelle la participation d'une entreprise dans une filiale doit être d'au moins 10 %, regroupe différentes formes d'IDE. Cependant, toutes les formes d'IDE ne sont pas équivalentes en ce qui concerne leurs impacts institutionnels. Tout d'abord, le pays d'origine de l'IDE peut avoir de l'importance dans la relation IDE-institutions. Le transfert de capitaux s'accompagne du transfert de normes (Kwok and Tadesse, 2006). Les normes institutionnelles des pays investisseurs sont donc susceptibles de se répercuter sur les pays d'investissement. En raison des écarts de qualité institutionnelle entre les pays riches et les pays pauvres, il peut y avoir des différences entre les investisseurs des pays développés et ceux des pays en développement concernant leurs effets sur les institutions des pays de destination des IDE. En outre, les investisseurs des pays en développement sont souvent accusés de freiner les actions de promotion institutionnelle des pays développés dans le monde en développement en raison de leurs niveaux de conditionnalité plus faibles et de l'absence de contraintes juridiques du type FCPA par exemple (Demir, 2016). Deuxièmement, la forme de l'IDE (greenfield vs. fusions et acquisitions - M&A) peut se traduire en effets institutionnels différents. L'IDE greenfield – la création d'une nouvelle unité de production par un investisseur étranger – crée de nouvelles immobilisations et des capacités de production additionnelles, générant ainsi une nouvelle activité

économique et de nouveaux emplois. Contrairement aux fusions et acquisitions qui n'impliquent pas nécessairement une augmentation immédiate du stock de capital, les IDE greenfield ont plus d'externalités socio-économiques, et donc un potentiel indirect plus élevé de changement institutionnel. Troisièmement, le secteur d'investissement devrait également entraîner des impacts institutionnels différents de l'IDE. Les IDE dans le secteur primaire, en particulier dans le secteur des ressources naturelles, sont susceptibles de donner lieu à des institutions extractives, tandis que les IDE manufacturiers et dans le secteur tertiaire pourraient renforcer les institutions de marché. Cette thèse intègre tous ces aspects de l'hétérogénéité dans les IDE dans l'analyse des mécanismes par lesquels les institutions des pays en développement répondent aux variations des IDE pour une meilleure compréhension des mécanismes en jeu.

Les fondements théoriques de cette thèse sont multiples. Tout d'abord, elle est liée aux courants de la littérature qui étudie l'effet des IDE sur l'économie hôte. Un volet de cette littérature se concentre sur les aspects économiques à travers les effets de *spillover* de productivité sur les entreprises domestiques résultant des avantages associés multinationales, telles que des technologies supérieures, l'accès aux marchés internationaux, l'intégration aux chaînes de valeur mondiales et des techniques de gestion améliorées (Fosfuri et al., 2001; Liu, 2008; Markusen and Venables, 1999; Wang and Blomström, 1992). Cette thèse s'appuie sur les enseignements théoriques de cette littérature pour étudier l'effet des IDE sur les institutions des économies d'accueil.

La question de l'impact institutionnel des IDE dans les pays en développement est d'une grande importance étant donné le rôle des institutions pour le développement. A ce sujet, cette thèse s'appuie également sur les théories institutionnelles du développement qui démontrent que les différences dans les institutions sont les causes fondamentales des différences de richesse entre les pays (Acemoglu et al., 2005a; Jones, 2003; North, 1981, 1990; North and Thomas, 1973). Selon ces théories, les pays dotés de meilleures institutions structurent les incitations économiques de la société en faveur d'un investissement accru dans le capital physique et humain et de l'adoption de technologies plus efficaces. La qualité de leurs institutions leur permet d'utiliser les ressources d'une manière plus efficace pour atteindre une croissance économique plus élevée et soutenue. De par leur nature inclusive, les bonnes institutions permettent à l'ensemble de la société de participer au processus de création de richesses et de profiter des fruits de leurs investissements et de leur travail, faisant ainsi du développement une réalité pour tous.

Troisièmement, cette thèse s'appuie sur les théories sur les déterminants des institutions. A la suite de North and Thomas (1973) qui envisagent les institutions comme la cause fondamentale de la croissance à long terme, il y a eu in intérêt pour les facteurs qui façonnent les institutions. Par exemple, Acemoglu et al. (2005a) ont montré que les institutions sont endogènes et résultent de choix faits par les différents groupes de la société pour leurs conséquences économiques associées aux intérêts des groupes. Selon ces auteurs, les institutions économiques en vigueur sont fortement influencées par des individus ou des groupes disposant d'un pouvoir politique plus important, qui comprend le pouvoir politique *de jure* et *de facto*. Le pouvoir politique *de jure* est distribué par les institutions politiques, tandis que le pouvoir politique *de facto* est détenu par les groupes disposant davantage de puissance économique, même si le pouvoir politique de jure ne leur est pas distribué (Acemoglu et al., 2005a; Acemoglu and Robinson, 2012). Compte tenu des volumes importants de capitaux qu'ils apportent aux économies en développement et de leur pouvoir de négociation plus élevé par rapport aux gouvernements de ces pays, les investisseurs directs étrangers peuvent être considérés comme des groupes dotés d'un pouvoir politique et donc d'une grande influence sur les institutions des pays d'accueil. Ceci est d'autant plus attendu que leur rentabilité dépend largement de l'environnement des affaires. En conséquence, ils peuvent se comporter comme des acteurs stratégiques pour influencer les institutions locales en leur faveur (Hillman and Hitt, 1999).

Cette thèse contribue à la littérature relativement récente et peu explorée sur les impacts institutionnels des IDE de différentes manières. Dans le chapitre 2, j'analyse comment la qualité des institutions économiques dans les pays en développement répond aux variations des flux d'IDE. À ma connaissance, seuls Ali et al. (2011) ont analysé, pour un échantillon de pays, l'impact des flux d'IDE sur les institutions d'un point de vue économique proche de cette étude, en se focalisant sur les droits de propriété. Ce chapitre utilise une mesure plus complète des institutions économiques basée sur l'indice *rule of law* du WGI, un indicateur composite d'un certain nombre d'éléments dont la protection des droits de propriété, la qualité de l'exécution des contrats ainsi que le respect de l'état de droit. Il utilise également un échantillon plus complet de pays en développement et des données relativement plus récentes. En outre, le chapitre 2 décompose l'effet institutionnel de l'IDE en fonction du pays d'origine de l'investissement : pays développés vs. pays en développement. En la matière, je m'inspire de Demir (2016), qui contrairement à ce chapitre, s'est intéressé au risque politique général. Par ailleurs, le chapitre explore

l'hétérogénéité possible dans la relation IDE/institutions économiques en fonction du principal secteur d'investissement, en se focalisant sur le secteur des ressources naturelles. En conséquence, je teste si l'effet diffère entre les pays dépendants et non-dépendants des ressources naturelles pour l'attraction des IDE, en m'appuyant sur le modèle ANOVA à effets fixes dérivé de Hsiao (2014) pour distinguer les deux groupes de pays. Enfin, alors que les études empiriques dans cette littérature ont généralement utilisé des estimations MCO ou GMM pour les modèles de panel dynamiques, la méthode empirique de ce chapitre s'appuie sur l'estimateur BCFE (bootstrap-based Bias Corrected Fixed Effects) proposé par Everaert and Pozzi (2007). Comme les estimateurs GMM, le BCFE traite le "biais de Nickel" qui se produit lorsque l'estimateur standard à effets fixes (FE) est utilisé pour estimer des modèles dynamiques avec un grand nombre d'unités et une dimension temporelle faible (voir Nickell, 1981). Cependant, le BCFE s'avère plus stable et présente des propriétés supérieures sur petits échantillons. Les résultats montrent que les institutions économiques s'améliorent dans les pays où les flux d'IDE sont plus importants et que cet effet est tiré par les flux en provenance des économies développées, alors qu'aucun lien significatif n'est détecté pour les IDE en provenance des économies en développement. Les résultats indiquent par ailleurs que l'impact institutionnel positif des IDE est susceptible d'être atténué dans les pays où le secteur des ressources naturelles représente un secteur majeur d'investissement. En définitive, les résultats suggèrent que la qualité des institutions dans les pays d'origine des IDE importe dans la relation IDE/institutions économiques dans le monde en développement.

Le chapitre 3 analyse le potentiel des IDE à prevenir l'instabilité sociopolitique, l'un des défis les plus pressants auxquels sont confrontés les pays en développement. Certaines études telles que Bussmann (2010) et Mihalache-O'Keef (2018) ont examiné l'impact des IDE sur diverses mesures de conflit. Ce chapitre examine plutôt comment l'IDE peut façonner l'environnement institutionnel des pays de destination en termes de sa capacité à promouvoir les conditions de stabilité sociopolitique et l'absence de violence. S'inspirant de la littérature sur les causes de l'instabilité politique et des conflits, où la pauvreté et les mauvaises perspectives économiques ont été identifiées comme sources majeures d'instabilité, je fais l'hypothèse que les IDE peuvent favoriser la stabilité sociopolitique en améliorant les opportunités économiques. Par conséquent, alors que les études dans cette littérature se sont intéressées à l'IDE total, je m'en écarte en examinant l'IDE greenfield pour son impact plus direct sur la croissance et la création d'emplois (Financial-Times,

2019; Harms and Méon, 2018; Wang and Wong, 2009) et donc ses externalités socio-économiques plus fortes. Sur le plan méthodologique, en tirant parti de la structure bilatérale des données d'IDE utilisées dans ce chapitre, je développe une approche de variable instrumentale basée sur un modèle de gravité à la Frankel and Romer (1999) et Feyrer (2019), jamais utilisée auparavant dans cette littérature. Les résultats montrent clairement que les IDE greenfield favorisent la stabilité politique, et sont robustes à diverses spécifications et méthodes d'estimation, ainsi qu'à une série de tests de sensibilité. Ils indiquent également que les IDE greenfield tendent à promouvoir une stabilité politique respectueuse des droits de l'homme par les gouvernements, préservant ainsi le bien-être des individus. En conséquence, les pays devraient accorder plus d'attention à ces investissements qui ont un impact plus fort sur la croissance et la création d'emplois comme les IDE Greenfield.

Le chapitre 4 s'inspire de la littérature sur la malédiction des ressources naturelles qui montre que les rentes liées aux ressources naturelles favorisent la corruption, pour examiner si cet impact est conditionné par l'origine du capital utilisé pour produire ces rentes, en se focalisant sur les IDE dans le secteur des ressources en Afrique. A notre connaissance, ce chapitre est la première étude proposant une analyse empirique rigoureuse de la relation IDE/rentes/corruption. A partir de régressions à effets de seuil (Panel Smooth Threshold Regression : PSTR), nous montrons que les rentes liées aux ressources naturelles favorisent davantage la corruption dans les pays où les IDE dans le secteur des ressources sont plus importants, par rapport aux pays à faible IDE où la relation est mitigée. Nos résultats indiquent également que la qualité des institutions démocratiques détermine si ces pays peuvent éviter l'augmentation du niveau de corruption résultant d'IDE plus élevés dans le secteur extractif et de rentes plus importantes. Ces résultats soulignent qu'il est possible de contrer l'effet accélérateur des IDE dans l'industrie extractive sur la corruption par une démocratie plus participative qui contrôle et impose des contraintes à l'exercice du pouvoir exécutif.

References

Acemoglu, D. and Robinson, J. A. *Why Nations Fail: The Origins of Power, Prosperity and Poverty*. Crown, New York, 1st edition, 2012.

Acemoglu, D., Verdier, T., and Robinson, J. A. Kleptocracy and divide-and-rule: A model of personal rule. *Journal of the European Economic Association*, 2(2-3): 162–192, 2004.

Acemoglu, D., Johnson, S., and Robinson, J. A. Institutions as a fundamental cause of long-run growth. *Handbook of economic growth*, 1:385–472, 2005a.

Acemoglu, D., Johnson, S., Robinson, J. A., and Yared, P. From education to democracy? *American Economic Review*, 95(2):44–49, 2005b.

Ades, A. and Di Tella, R. Rents, competition, and corruption. *American economic review*, 89(4):982–993, 1999.

Aitken, B. J. and Harrison, A. E. Do domestic firms benefit from direct foreign investment? evidence from venezuela. *American economic review*, 89(3):605–618, 1999.

Alesina, A. and Ferrara, E. L. Ethnic diversity and economic performance. *Journal of economic literature*, 43(3):762–800, 2005.

Alesina, A., Harnoss, J., and Rapoport, H. Birthplace diversity and economic prosperity. *Journal of Economic Growth*, 21(2):101–138, 2016.

Ali, F., Fiess, N., and MacDonald, R. Climbing to the top? foreign direct investment and property rights. *Economic Inquiry*, 49(1):289–302, 2011.

Alquist, R., Berman, N., Mukherjee, R., and Tesar, L. L. Financial constraints, institutions, and foreign ownership. *Journal of International Economics*, 118: 63–83, 2019.

Arellano, M. and Bond, S. Some tests of specification for panel data: Monte carlo evidence and an application to employment equations. *The review of economic studies*, 58(2):277–297, 1991.

Arellano, M. and Bover, O. Another look at the instrumental variable estimation of error-components models. *Journal of econometrics*, 68(1):29–51, 1995.

Arezki, R. and Brückner, M. Oil rents, corruption, and state stability: Evidence from panel data regressions. *European Economic Review*, 55(7):955–963, 2011.

Aslaksen, S. Corruption and oil: Evidence from panel data. *Unpublished Manuscript*, 2007.

Badeeb, R. A., Lean, H. H., and Clark, J. The evolution of the natural resource curse thesis: A critical literature survey. *Resources Policy*, 51:123–134, 2017.

Bahar, D., Hausmann, R., and Hidalgo, C. A. Neighbors and the evolution of the comparative advantage of nations: Evidence of international knowledge diffusion? *Journal of International Economics*, 92(1):111–123, 2014.

Bailey, N. Exploring the relationship between institutional factors and fdi attractiveness: A meta-analytic review. *International Business Review*, 27(1):139–148, 2018.

Barbieri, K. and Reuveny, R. Economic globalization and civil war. *The Journal of Politics*, 67(4):1228–1247, 2005.

Barro, R. J. Government spending in a simple model of endogeneous growth. *Journal of political economy*, 98(5, Part 2):S103–S125, 1990.

Barro, R. J. Inequality and growth in a panel of countries. *Journal of economic growth*, 5(1):5–32, 2000.

Batista, C. and Vicente, P. C. Do migrants improve governance at home? evidence from a voting experiment. *The World Bank Economic Review*, 25(1):77–104, 2011.

Bengoa, M. and Sanchez-Robles, B. Foreign direct investment, economic freedom and growth: new evidence from latin america. *European journal of political economy*, 19(3):529–545, 2003.

Bergstrand, J. H. and Egger, P. What determines bits? *Journal of International Economics*, 90(1):107–122, 2013.

Berman, N., Couttenier, M., Rohner, D., and Thoenig, M. This mine is mine! how minerals fuel conflicts in africa. *American Economic Review*, 107(6):1564–1610, 2017.

Besley, T. and Burgess, R. The political economy of government responsiveness: Theory and evidence from india. *The quarterly journal of economics*, 117(4): 1415–1451, 2002.

Bhattacharyya, S. and Hodler, R. Natural resources, democracy and corruption. *European Economic Review*, 54(4):608–621, 2010.

Blanton, R. G. and Apodaca, C. Economic globalization and violent civil conflict: Is openness a pathway to peace? *The Social Science Journal*, 44(4):599–619, 2007.

Blanton, S. L. and Blanton, R. G. What attracts foreign investors? an examination of human rights and foreign direct investment. *The Journal of Politics*, 69(1): 143–155, 2007.

Blomström, M., Lipsey, R. E., and Zejan, M. Is fixed investment the key to economic growth? *The Quarterly Journal of Economics*, 111(1):269–276, 1996.

Blundell, R. and Bond, S. Initial conditions and moment restrictions in dynamic panel data models. *Journal of Econometrics*, 87(1):115–143, 1998.

Borensztein, E., De Gregorio, J., and Lee, J.-W. How does foreign direct investment affect economic growth? *Journal of international Economics*, 45(1):115–135, 1998.

Bouwen, P. Corporate lobbying in the european union: the logic of access. *Journal of European public policy*, 9(3):365–390, 2002.

Branstetter, L. Is foreign direct investment a channel of knowledge spillovers? evidence from japan's fdi in the united states. *Journal of International economics*, 68(2):325–344, 2006.

Brunetti, A. and Weder, B. A free press is bad news for corruption. *Journal of Public economics*, 87(7-8):1801–1824, 2003.

Bun, M. J. and Kiviet, J. F. The effects of dynamic feedbacks on ls and mm estimator accuracy in panel data models. *Journal of econometrics*, 132(2): 409–444, 2006.

Bun, M. J. and Windmeijer, F. The weak instrument problem of the system gmm estimator in dynamic panel data models. *The Econometrics Journal*, 13(1): 95–126, 2010.

Bussmann, M. Foreign direct investment and militarized international conflict. *Journal of Peace Research*, 47(2):143–153, 2010.

Cheong, J., Tang, K. K., et al. Heterogeneous effects of preferential trade agreements: How does partner similarity matter? *World Development*, 66:222–236, 2015.

Coen, D. The evolution of the large firm as a political actor in the european union. *Journal of European Public Policy*, 4(1):91–108, 1997.

Collier, P. and Hoeffler, A. On economic causes of civil war. *Oxford economic papers*, 50(4):563–573, 1998.

Collier, P. and Hoeffler, A. Greed and grievance in civil war. *Oxford economic papers*, 56(4):563–595, 2004.

Collier, P. and Hoeffler, A. Testing the neocon agenda: Democracy in resource-rich societies. *European Economic Review*, 53(3):293–308, 2009.

Collier, P., Hoeffler, A., and Rohner, D. Beyond greed and grievance: feasibility and civil war. *oxford Economic papers*, 61(1):1–27, 2009.

Combes, J.-L., Kinda, T., Ouedraogo, R., and Plane, P. Financial flows and economic growth in developing countries. *Economic Modelling*, 83:195–209, 2019.

Dang, D. A. How foreign direct investment promote institutional quality: Evidence from vietnam. *Journal of Comparative Economics*, 41(4):1054–1072, 2013.

Davis, G. A. and Tilton, J. E. The resource curse. In *Natural resources forum*, volume 29, pages 233–242. Wiley Online Library, 2005.

De Vos, I., Everaert, G., and Ruyssen, I. Bootstrap-based bias correction and inference for dynamic panels with fixed effects. *The Stata Journal*, 15(4):986–1018, 2015.

Demir, F. Effects of fdi flows on institutional development: Does it matter where the investors are from? *World Development*, 78:341–359, 2016.

Deng, Z., Sinkovics, R. R., et al. Rapid expansion of international new ventures across institutional distance. *Journal of International Business Studies*, 49(8):1010–1032, 2018.

Devereux, M. P., Lockwood, B., and Redoano, M. Do countries compete over corporate tax rates? *Journal of Public Economics*, 92(5-6):1210–1235, 2008.

Di Giovanni, J. What drives capital flows? the case of cross-border m&a activity and financial deepening. *Journal of international Economics*, 65(1):127–149, 2005.

Diallo, I. A. Xtfixedcoeftvcu: Stata module to estimate panel data models with coefficients that vary over time and cross-sectional units, statistical software components s458256. *Boston College Department of Economics*, 2016.

Djankov, S., Glaeser, E. L., Perotti, V., and Shleifer, A. Property rights and urban form. *Journal of Law and Economics*, Forthcoming.

Docquier, F., Lodigiani, E., Rapoport, H., and Schiff, M. Emigration and democracy. *Journal of Development Economics*, 120:209–223, 2016.

Durham, J. B. Absorptive capacity and the effects of foreign direct investment and equity foreign portfolio investment on economic growth. *European economic review*, 48(2):285–306, 2004.

Elbadawi, I. and Sambanis, N. How much war will we see? explaining the prevalence of civil war. *Journal of conflict resolution*, 46(3):307–334, 2002.

Everaert, G. and Pozzi, L. Bootstrap-based bias correction for dynamic panels. *Journal of Economic Dynamics and Control*, 31(4):1160–1184, 2007.

Fan, J. P., Morck, R., Xu, L. C., and Yeung, B. Institutions and foreign direct investment: China versus the rest of the world. *World development*, 37(4): 852–865, 2009.

Fearon, J. D. and Laitin, D. D. Ethnicity, insurgency, and civil war. *American political science review*, 97(1):75–90, 2003.

Feyrer, J. Trade and income—exploiting time series in geography. *American Economic Journal: Applied Economics*, 11(4):1–35, 2019.

Financial-Times. The fdi report 2019, global greenfield investment trends. *Financial Times*, 2019.

Fosfuri, A., Motta, M., and Rønde, T. Foreign direct investment and spillovers through workers' mobility. *Journal of international economics*, 53(1):205–222, 2001.

Frankel, J. A. The natural resource curse: A survey. Working Paper 15836, National Bureau of Economic Research, March 2010.

Frankel, J. A. and Romer, D. H. Does trade cause growth? *American economic review*, 89(3):379–399, 1999.

Garretsen, H. and Peeters, J. Capital mobility, agglomeration and corporate tax rates: is the race to the bottom for real? *CESifo Economic Studies*, 53(2): 263–293, 2007.

Gartzke, E. and Li, Q. War, peace, and the invisible hand: Positive political externalities of economic globalization. *International Studies Quarterly*, 47(4): 561–586, 2003.

Gartzke, E., Li, Q., and Boehmer, C. Investing in the peace: Economic interdependence and international conflict. *International organization*, 55(2):391–438, 2001.

Glaeser, E. L., La Porta, R., Lopez-de Silanes, F., and Shleifer, A. Do institutions cause growth? *Journal of economic Growth*, 9(3):271–303, 2004.

Globerman, S. and Shapiro, D. Governance infrastructure and us foreign direct investment. *Journal of International Business Studies*, 34(1):19–39, 2003.

González, A., Teräsvirta, T., and Dijk, D. v. Panel smooth transition regression models. Working Paper 604, SSE/EFI Working Paper Series in Economics and Finance, August 2005.

Goujon, M. and Mabali, A. The different impacts of different types of natural resources on political institutions in developing countries. *Journal of Economic Development*, 41(3):1, 2016.

Greenaway, D., Sousa, N., and Wakelin, K. Do domestic firms learn to export from multinationals? *European Journal of Political Economy*, 20(4):1027–1043, 2004.

Grosse, R. and Trevino, L. J. Foreign direct investment in the united states: An analysis by country of origin. *Journal of international business studies*, 27(1): 139–155, 1996.

Gylfason, T. Natural resources, education, and economic development. *European economic review*, 45(4-6):847–859, 2001.

Haddad, M. and Harrison, A. Are there positive spillovers from direct foreign investment?: Evidence from panel data for morocco. *Journal of development economics*, 42(1):51–74, 1993.

Hahn, C. H. The role of foreign direct investment in international capital flows. In *International capital flows*, pages 350–357. University of Chicago Press, 1999.

Hansen, B. E. Threshold effects in non-dynamic panels: Estimation, testing, and inference. *Journal of econometrics*, 93(2):345–368, 1999.

Harms, P. and Méon, P.-G. Good and useless fdi: The growth effects of greenfield investment and mergers and acquisitions. *Review of International Economics*, 26(1):37–59, 2018.

Haskel, J. E., Pereira, S. C., and Slaughter, M. J. Does inward foreign direct investment boost the productivity of domestic firms? *The review of economics and statistics*, 89(3):482–496, 2007.

Head, K. and Ries, J. Fdi as an outcome of the market for corporate control: Theory and evidence. *Journal of International Economics*, 74(1):2–20, 2008.

Hermes, N. and Lensink, R. Foreign direct investment, financial development and economic growth. *The journal of development studies*, 40(1):142–163, 2003.

Hewko, J. Foreign direct investment in transitional economies: Does the rule of law matter. *E. Eur. Const. Rev.*, 11:71, 2002.

Hillman, A. J. and Hitt, M. A. Corporate political strategy formulation: A model of approach, participation, and strategy decisions. *Academy of management review*, 24(4):825–842, 1999.

Hsiao, C. *Analysis of panel data*. Number 54. Cambridge university press, 2014.

Humphreys, M. Natural resources, conflict, and conflict resolution: Uncovering the mechanisms. *Journal of conflict resolution*, 49(4):508–537, 2005.

Humphreys, M., Sachs, J. D., Stiglitz, J. E., Humphreys, M., and Soros, G. *Escaping the resource curse*. Columbia university press, 2007.

Iamsiraroj, S. and Ulubaşoğlu, M. A. Foreign direct investment and economic growth: A real relationship or wishful thinking? *Economic modelling*, 51:200–213, 2015.

IMF. Balance of payments and international investment position manual 6th ed. *Washington, D.C.: International Monetary Fund*, 2009.

IMF. Cyclical upswing, structural change. *Washington, D.C.: International Monetary Fund*, 2018.

Isham, J., Woolcock, M., Pritchett, L., and Busby, G. The varieties of resource experience: natural resource export structures and the political economy of economic growth. *The World Bank Economic Review*, 19(2):141–174, 2005.

Jensen, N. and Wantchekon, L. Resource wealth and political regimes in africa. *Comparative political studies*, 37(7):816–841, 2004.

Jones, E. *The European miracle: environments, economies and geopolitics in the history of Europe and Asia*. Cambridge University Press, 2003.

Kaufmann, D., Kraay, A., and Zoido, P. Governance matters. *Available at SSRN 188568*, 1999.

Kaufmann, D., Kraay, A., and Mastruzzi, M. Governance matters viii: aggregate and individual governance indicators, 1996-2008. *World bank policy research working paper*, (4978), 2009.

Kiviet, J. F. On bias, inconsistency, and efficiency of various estimators in dynamic panel data models. *Journal of econometrics*, 68(1):53–78, 1995.

Klemm, A. and Van Parys, S. Empirical evidence on the effects of tax incentives. *International Tax and Public Finance*, 19(3):393–423, 2012.

Koubi, V. and Böhmelt, T. Grievances, economic wealth, and civil conflict. *Journal of Peace Research*, 51(1):19–33, 2014.

Kwok, C. C. and Tadesse, S. The mnc as an agent of change for host-country institutions: Fdi and corruption. *Journal of International Business Studies*, 37 (6):767–785, 2006.

La Porta, R., Lopez-de Silanes, F., Shleifer, A., and Vishny, R. The quality of government. *The Journal of Law, Economics, and Organization*, 15(1):222–279, 1999.

Larraín B, F. and Tavares, J. Does foreign direct investment decrease corruption? *Cuadernos de economía*, 41(123):199–215, 2004.

Levchenko, A. A. and Mauro, P. Do some forms of financial flows help protect against "sudden stops"? *The World Bank Economic Review*, 21(3):389–411, 2007.

Li, Q. and Resnick, A. Reversal of fortunes: Democratic institutions and foreign direct investment inflows to developing countries. *International organization*, 57 (1):175–211, 2003.

Li, X. and Liu, X. Foreign direct investment and economic growth: an increasingly endogenous relationship. *World development*, 33(3):393–407, 2005.

Liu, Z. Foreign direct investment and technology spillovers: Theory and evidence. *Journal of Development Economics*, 85(1-2):176–193, 2008.

Long, C., Yang, J., and Zhang, J. Institutional impact of foreign direct investment in china. *World Development*, 66:31–48, 2015.

Magee, C. S. and Massoud, T. G. Openness and internal conflict. *Journal of Peace Research*, 48(1):59–72, 2011.

Malesky, E. J. Foreign direct investors as agents of economic transition: An instrumental variables analysis. *Quarterly Journal of Political Science*, 4:59–85, 2009.

Maplecroft, V. Political risk outlook 2020. *Verisk Maplecroft*, 2020.

Markusen, J. R. and Venables, A. J. Foreign direct investment as a catalyst for industrial development. *European economic review*, 43(2):335–356, 1999.

Maxfield, S. Understanding the political implications of financial internationalization in emerging market countries. *World Development*, 26(7):1201–1219, 1998.

Meyer, K. E. and Nguyen, H. V. Foreign investment strategies and sub-national institutions in emerging markets: Evidence from vietnam. *Journal of management studies*, 42(1):63–93, 2005.

Miguel, E., Satyanath, S., and Sergenti, E. Economic shocks and civil conflict: An instrumental variables approach. *Journal of political Economy*, 112(4):725–753, 2004.

Mihalache-O'Keef, A. S. Whose greed, whose grievance, and whose opportunity? effects of foreign direct investments (fdi) on internal conflict. *World Development*, 106:187–206, 2018.

Murtin, F. and Wacziarg, R. The democratic transition. *Journal of Economic Growth*, 19(2):141–181, 2014.

Newman, C., Page, J., Rand, J., Shimeles, A., Söderbom, M., and Tarp, F. *Made in Africa: Learning to compete in industry*. Brookings Institution Press, 2016.

Nickell, S. Biases in dynamic models with fixed effects. *Econometrica: Journal of the econometric society*, pages 1417–1426, 1981.

North, D. C. *Structure and change in economic history.* New York : Norton, 1981.

North, D. C. *Institutions, Institutional Change and Economic Performance.* Political Economy of Institutions and Decisions. Cambridge University Press, 1990. doi: 10.1017/CBO9780511808678.

North, D. C. and Thomas, R. P. *The rise of the western world: A new economic history.* Cambridge University Press, 1973.

Olzak, S. Does globalization breed ethnic discontent? *Journal of Conflict Resolution*, 55(1):3–32, 2011.

Oman, C. *Policy competition for foreign direct investment: A study of competition among governments to attract FDI.* OECD Publishing, 2000.

Ortega, F. and Peri, G. Openness and income: The roles of trade and migration. *Journal of international Economics*, 92(2):231–251, 2014.

Papyrakis, E. and Gerlagh, R. The resource curse hypothesis and its transmission channels. *Journal of Comparative Economics*, 32(1):181–193, 2004.

Pettersson, T., Högbladh, S., and Öberg, M. Organized violence, 1989–2018 and peace agreements. *Journal of Peace Research*, 56(4):589–603, 2019.

Pfutze, T. Does migration promote democratization? evidence from the mexican transition. *Journal of Comparative Economics*, 40(2):159–175, 2012.

Pinto, P. M. and Zhu, B. Fortune or evil? the effect of inward foreign direct investment on corruption. *International Studies Quarterly*, 60(4):693–705, 2016.

Poe, S. C., Tate, C. N., and Keith, L. C. Repression of the human right to personal integrity revisited: A global cross-national study covering the years 1976–1993. *International studies quarterly*, 43(2):291–313, 1999.

Reed, W. Information and economic interdependence. *Journal of Conflict Resolution*, 47(1):54–71, 2003.

Robé, J.-P., Lyon-Caen, A., and Vernac, S. *Multinationals and the constitutionalization of the world power system.* Routledge, 2016.

Robinson, J. A., Torvik, R., and Verdier, T. Political foundations of the resource curse. *Journal of development Economics*, 79(2):447–468, 2006.

Rodrik, D., Subramanian, A., and Trebbi, F. Institutions rule: the primacy of institutions over geography and integration in economic development. *Journal of economic growth*, 9(2):131–165, 2004.

Roodman, D. A note on the theme of too many instruments. *Oxford Bulletin of Economics and statistics*, 71(1):135–158, 2009.

Ross, M. A closer look at oil, diamonds, and civil war. *Annu. Rev. Polit. Sci.*, 9: 265–300, 2006.

Ross, M. L. Does oil hinder democracy? *World politics*, 53(3):325–361, 2001.

Russett, B. M. and Oneal, J. R. *Triangulating peace: Democracy, interdependence, and international organizations*. WW Norton & Company Incorporated, 2001.

Sachs, J. D. and Warner, A. Natural resource abundance and economic growth, 1995.

Sala-i Martin, X. and Subramanian, A. Addressing the natural resource curse: An illustration from nigeria. *Journal of African Economies*, 22(4):570–615, 2013.

Sethi, D., Guisinger, S. E., Phelan, S. E., and Berg, D. M. Trends in foreign direct investment flows: A theoretical and empirical analysis. *Journal of international business studies*, 34(4):315–326, 2003.

Silva, J. S. and Tenreyro, S. Poisson: Some convergence issues. *The Stata Journal*, 11(2):207–212, 2011.

Smith, B. Oil wealth and regime survival in the developing world, 1960–1999. *American Journal of Political Science*, 48(2):232–246, 2004.

Sorens, J. and Ruger, W. Globalisation and intrastate conflict: An empirical analysis. *Civil Wars*, 16(4):381–401, 2014.

Spilimbergo, A. Democracy and foreign education. *American economic review*, 99 (1):528–43, 2009.

Stein, E. and Daude, C. Longitude matters: Time zones and the location of foreign direct investment. *Journal of International Economics*, 71(1):96–112, 2007.

Svensson, J. Eight questions about corruption. *Journal of economic perspectives*, 19(3):19–42, 2005.

Tong, H. and Wei, S.-J. The composition matters: capital inflows and liquidity

crunch during a global economic crisis. *The Review of Financial Studies*, 24(6): 2023–2052, 2011.

Treisman, D. The causes of corruption: a cross-national study. *Journal of public economics*, 76(3):399–457, 2000.

Treisman, D. What have we learned about the causes of corruption from ten years of cross-national empirical research? *Annu. Rev. Polit. Sci.*, 10:211–244, 2007.

Tsui, K. K. More oil, less democracy: Evidence from worldwide crude oil discoveries. *The Economic Journal*, 121(551):89–115, 2011.

UNCTAD. World investment report 201o - investing in a low-carbon economy. *UNCTAD Geneva*, 2010.

UNCTAD. World investment report 2011 - non-equity modes of international production and development. *UNCTAD Geneva*, 2011.

UNCTAD. World investment report 2017 - investment and the digital economy. *UNCTAD Geneva*, 2017.

Vahabi, M. The resource curse literature as seen through the appropriability lens: a critical survey. *Public Choice*, 175(3):393–428, 2018.

Van der Ploeg, F. and Poelhekke, S. Volatility and the natural resource curse. *Oxford economic papers*, 61(4):727–760, 2009.

Voigt, S. How (not) to measure institutions. *Journal of Institutional Economics*, 9 (1):1–26, 2013.

Wang, J.-Y. and Blomström, M. Foreign investment and technology transfer: A simple model. *European economic review*, 36(1):137–155, 1992.

Wang, M. and Wong, S. M. C. What drives economic growth? the case of cross-border m&a and greenfield fdi activities. *Kyklos*, 62(2):316–330, 2009.

Webster, A. and Piesse, J. Are foreign-owned firms more likely to pay bribes than domestic ones? evidence from emerging markets. *World Development*, 101: 142–161, 2018.

Wei, S.-J. How taxing is corruption on international investors? *Review of economics and statistics*, 82(1):1–11, 2000.

Williams, K. Do remittances improve political institutions? evidence from sub-saharan africa. *Economic Modelling*, 61:65–75, 2017.

Xu, B. Multinational enterprises, technology diffusion, and host country productivity growth. *Journal of Development Economics*, 62(2):477–493, 20000.

Ziliak, J. P. Efficient estimation with panel data when instruments are predetermined: An empirical comparison of moment-condition estimators. *Journal of Business Economic Statistics*, 15(4):419–431, 1997.