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Foreign Investors and Their Home Destination

Comparing the Effects of Western and Chinese Foreign Direct Investment on Corruption and Rule of Law in Africa

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ABSTRACT

The purpose of this thesis is to investigate the interplay between FDI stock to African countries and the control of corruption and rule of law in these countries. More specifically, this thesis compares the effects of FDI originating from the United States and Western Europe, with that of FDI coming from China, whilst accounting for the observation that foreign investors make their decision to invest in African countries in a selective way. The empirical results using FDI stock to 37 African countries during 2003-2012 carefully suggest that American and Western European FDI significantly relate to control of corruption and rule of law in African countries, whereas Chinese foreign investors are not likely to assert significantly influence. The latter finding is in line with China's non-interference policy. Furthermore, there is some evidence that democracy conditions the effect of FDI. Yet the conclusions are rather unstable and depend on the empirical method, the variables estimated and the observations included in the data sample.

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ACRONYMS

COC	Control of corruption
FDI	Foreign direct investment
FE	Fixed effects
GDP	Gross Domestic Product
MNCs	Multinational corporations
OLS	Ordinary least squares
RE	Random effects
ROL	Rule of law
UK	United Kingdom
UN	United Nations
US	United States
VIF	Variance inflation factor
WE	Western Europe
WGI	Worldwide Governance Indicators

1. Introduction

Over the past decades, the issues of rising corruption and deteriorating legal environment in Africa have grown in importance as topic of debate in the international community. This has been motivated by the awareness that both economic and human development require strong institutions and reliable governance (Acemoglu, Johnson, & Robinson, 2001; Asongu, 2013; Rodrik, Subramanian, & Trebbi, 2004). As the 2018 United Nations (UN) report concludes, institutional and infrastructure development are vital for Africa, if the continent ever want to reach the Sustainable Development Goals by 2030 (UN-Habitat and IHS-Erasmus University Rotterdam, 2018).

During the same period, Africa as a continent experienced the second highest positive growth rate in total foreign direct investment (FDI), steadily increasing from 9.1 billion US dollar in 2000, to 46 billion in 2018 (UNCTAD, 2001, 2019). The growing FDI influx has been a welcome development for Africa, filling the gaps in domestic financing. Consequently, African countries are increasingly motivated to improve their governance and strengthen their competitiveness, in order to attract more foreign investors (Demir, 2016).

Yet the role that foreign investors may play for the institutional development of the African countries they invest in, remains to be rather unclear. This thesis therefore aims to shed more light on the interplay between FDI to Africa, and control of corruption (COC) and rule of law (ROL) in the countries of the continent. Previous empirical studies that have performed similar analyses find that FDI significantly relates to improved property rights protection (Ali, Fiess, & MacDonald, 2011), a more sound legal environment (Long, Yang, & Zhang, 2015), and lower perceived corruption (Claassen, Loots, & Bezuidenhout, 2012; Kwok & Tadesse, 2006; Larraín & Tavares, 2004; Robertson & Watson, 2004).

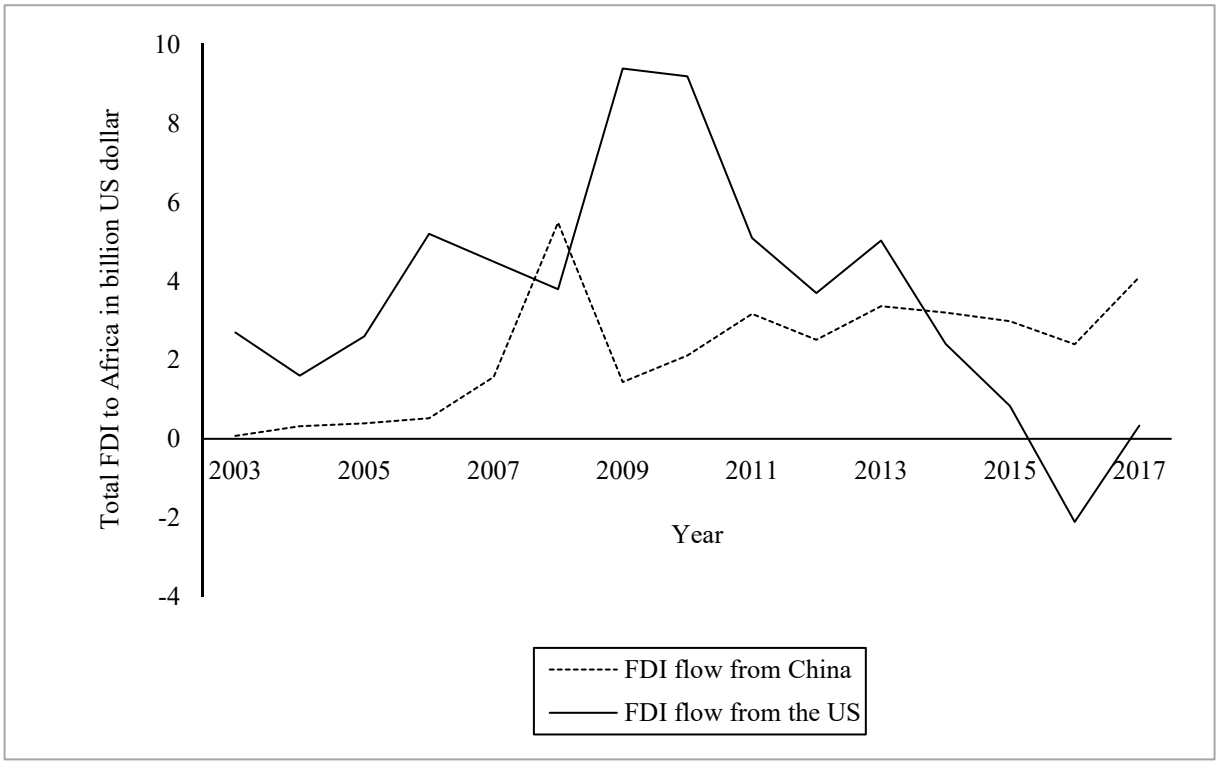
However, the great majority of the studies that have examined the effect of FDI on a certain aspect of host countries' institutional environment, so far have focused on the effects of *aggregate* capital influx. This means there is hardly any information documented on whether the effects of FDI might be conditional on the home destination of foreign investors. Because this type of information may be of high practical relevance for Africa, this thesis considers the effect of FDI on COC and ROL in African host economies, and more importantly, compares investments originating in different home countries with each other.

Africa's two biggest investors are the United States (US) and the region of Western Europe (WE).[1] Most of the investment from the US and WE flow to the African manufacturing sector. These Western firms mostly aim to take advantage of Africa's low production costs, and sometimes also intend to increase their market share. Over the last decade, resource-seeking FDI from Western firms has declined, whereas Western MNCs increasingly invest in Africa with the aim to set-up knowledge-intensive production and services (UN-Habitat and IHS-Erasmus University Rotterdam, 2018).

Since 2003, the Chinese government has actively encouraged its firms to invest abroad (Klaver & Trebilcock, 2011). As a result, China now ranks second highest in the worldwide FDI outflow rankings (UNCTAD, 2018) and is the largest developing country to invest in Africa (Busse, Erdogan, & Mühlen, 2016). Figure 1 shows the less volatile and increasing FDI inflow of China, compared to the fluctuating investment originating in the US and WE. Chinese firms seem to be driven by the goal to secure resources, acquire advanced technology and facilitate export to Africa (Huang & Wang, 2013).

FIGURE 1

Chinese FDI flows to Africa Compared to U.S. FDI Flows to Africa (2003-2017)



Notes: data is from the SAIS China-Africa Research Initiative (2019).

[1] Following the classification by the CIA World Factbook, the region of Western Europe includes Belgium, France, Germany, Ireland, Luxembourg, the Netherlands and the United Kingdom (UK).

Whilst China rises as prominent player on the African continent, so does the critique on China as an investor increase. Chinese firms mostly invest where Western firms are hesitant to go, which is mainly in countries with dictatorial regimes or high debts, like Zimbabwe and the Republic of Congo. In such countries, Chinese firms invest in oil, mining and telecommunication sectors, often starting-up infrastructural projects (Adams, 2009; Ergano & Rao, 2019). Because of this selective engagement, Western countries accuse China of being the 'new colonizer' of the African continent. Chinese firms are particularly blamed for ignoring corporate social responsibility and environmental matters. This makes Western policy makers increasingly worried that China's engagement in Africa undermines Western efforts to improve human rights, foster sustainable development and strengthen Africa's governance and institutions (Brazys & Vadlamannati, 2018; He & Zhu, 2018; Kennedy, 2012). Western policy makers, private firms and civil society thus increasingly question and criticized the role that China may play in Africa (Busse et al., 2016; Demir & Hu, 2016; García-Herrero & Xu, 2019).

The empirical evidence is partly in line with these accusations. The 'new colonizer' argument may find support in empirical studies that show that the great majority of Chinese firms focuses on exporting activities and invests in extractive industries in the most illiberal countries, such as Angola and Sudan (Klaver & Trebilcock, 2011; Yao & Wang, 2014). Likewise, empirical evidence suggests that Chinese investment crowd out Western investment in African countries (Donou-Adonsou & Lim, 2018). Additionally, there is some evidence that Chinese foreign investors do not attach great value to corruption or the interests of local communities (Graham-Harrison, 2009; Mbaye, 2011; Warmerdam, 2012).

By contrast, other empirical studies conclude that so far, the engagement of China in the African continent is actually net positive (Haroz, 2011). Chinese firms go where Western firms are unwilling to invest, filling both the financial and technological gap left open by Western foreign investors (Cheung, De Haan, Qian, & Yu, 2012; Ergano & Rao, 2019; He & Zhu, 2018). Chinese firms may create employment for African citizens and improve the infrastructure, market access and manufacturing environment of the countries they invest in (Busse et al., 2016; Klaver & Trebilcock, 2011; UN-Habitat and IHS-Erasmus University Rotterdam, 2018). Likewise, Chinese MNCs' activities are empirically related to productivity-enhancing spill over effects, stronger human capital, tax revenue for host governments and higher economic growth (Claassen et al., 2012; Donou-Adonsou & Lim, 2018; Haroz, 2011; Pigato & Tang, 2015).

Yet the particular effect of Chinese FDI on COC and ROL in African countries remains unclear. What is this effect and how does it compare to the effect of Western FDI? Are the fears

of Western actors grounded? This thesis contributes to answering these questions by comparing the effect of foreign investment originating in the US and WE, with that of foreign investment stemming from China. It is expected that American and Western European FDI improves the governance of African countries when host governments, competing over FDI, aim to improve their institutional environment to attract Western investors (Ali et al., 2011; Daude & Stein, 2007). Governments are expected to mostly focus on containing corruption and improving their legal environment, as MNCs generally attach most value to these two aspects of countries' institutional environment (Demir, 2016). African host countries are expectedly more able and willing to do so, the more democratic they are.

The opposite is expected to be true for Chinese investment. Mainly because of China's non-interference policy, it is expected that Chinese firms will not pressure African countries to change any aspect of governance. This implies that the effect of FDI is unlikely to affect neither COC nor ROL. Nonetheless, the more undemocratic African host countries are, the more probable that the effect of Chinese FDI turns from insignificant, to significantly negative.

These hypotheses are tested against a panel sample of 37 African host countries over the 2003-2012 period using four empirical regression estimations. First, the regression is estimated using the random effects (RE) estimation. Second, to account for the presumed selection bias in the sample, the Heckman two-step procedure is applied. Subsequently, to account for autocorrelation and non-stationarity, the Prais-Winsten model and first differences model are estimated. The empirical results carefully suggests that Western FDI significantly relates to COC and ROL in African countries, whereas Chinese FDI does not seem have a significant influence. Moreover, the estimated effect of democracy on COC and ROL is highly significant and positive in nearly all regression, and conditions the effect of FDI in several cases. However, these are unstable conclusions that depend on the specific empirical regression that is estimated, the independent variables of the equation, and the observations included in the sample.

The remainder of this thesis is as follows. The next chapter starts with an outline of previous literature on the topic and hypothesizes how the mechanism between FDI and the two measures of institutional quality may work. Chapter 3 introduces the data and Chapter 4 describes the methodology to test the research hypotheses. The results are presented in Chapter 5, after which Chapter 6 reviews the results against sensitivity analyses. Chapter 7 discusses the limitations of the study and provides several recommendations for further research, after which Chapter 8 concludes.

2. Literature Review

2.1. Determinants of Institutional Quality

Previous studies have suggested that a wide range of time variant and invariant factors cause institutional heterogeneity across countries. Apart from FDI, these variables are the following: (a) economic indicators, including income (Alonso & Garcimartín, 2013), initial wealth (Engerman & Sokoloff, 2002) and income inequality (Chong & Calderón, 2000; Chong & Gradstein, 2007); (b) economic openness (Islam & Montenegro, 2002; Rigobon & Rodrik, 2005); (c) political tradition (Kwok & Tadesse, 2006), (d) colonial past (Acemoglu et al., 2001; Acemoglu, Johnson, & Robinson, 2005); (e) human capital or the educational level of the population (Alonso & Garcimartín, 2013); (f) natural resources (Ades & Di Tella, 1999; Leite & Weidmann, 1999); (g) cultural factors (De Jong, 2009; Williamson, 2000), particularly trust (Beugelsdijk, 2006); (h) ethnic structures and fractionalization (Easterly & Levine, 1997; La Porta, Lopez-de-Silanes, Shleifer, & Vishny, 1999); (i) foreign aid inflows (Boone, 1996); (j) demographic pressure (Acemoglu et al., 2001; Kazianga, Masters, & McMillan, 2014); (k) geography, which affects the possibilities for knowledge diffusion (Bahar, Hausmann, & Hidalgo, 2014; Demir, 2016) and finally, a region's climate (La Porta et al., 1999), which includes geographic endowments like tropics, germs, and crops (Easterly & Levine, 2003). The interplay between these factors explains why countries are characterized by different institutional environments.

A small but increasing part of the literature considers FDI as an additional determinant of host countries' institutional environment. Previous studies that examine the relationship between FDI and institutions find that FDI significantly improves democracy (Li & Reuveny, 2003), property rights protection (Ali et al., 2011; Dang, 2013), and enhance collective labour rights (Long et al., 2015). Additionally, the majority of studies captures host countries' institutional environment by measures for (perceived) corruption. Part of these studies find that FDI increases corruption (Robertson & Watson, 2004; Zhu, 2017), whereas other find the opposite effect (Kwok & Tadesse, 2006; Larraín & Tavares, 2004). For African countries in particular, FDI seems to significantly decrease corruption (Claassen et al., 2012).

The study by Demir (2016) is a more specific study in the field. Rather than estimating the effects of *aggregate* FDI, the author compares the effect of FDI from different home countries with each other. His sample consists of 134 countries for the 1990–2009 period. In an extension case of the study, the author finds that aggregate FDI flows originating in Southern countries significantly undermine other Southern countries' overall institutional quality.

This thesis resembles the study by Demir, but then examines the effects of FDI coming from more specific regions, namely the US, WE and China. This thesis also measures institutional quality differently, namely by COC and ROL, as previously argued. MNCs namely attach most weight to these two aspects of countries' institutional environment (Demir, 2016). Moreover, this thesis measures FDI stock instead of flow and focuses on FDI going to African countries. The next section explains how the mechanism between institutional quality and FDI is expected to work and constructs the research hypotheses.

2.2. The Mechanism between Institutional Quality and Foreign Direct Investment

The mechanism between FDI and institutional quality may work through the demand and supply channels. On the demand side, foreign investors are expected to pressure the local policy makers of the country they invested in, urging the politicians to improve the institutional framework (Long et al., 2015). Foreign investors may directly urge governments to invest in institutions (Mosley & Uno, 2007), but may also indirectly try to influence the institutional reform agenda via lobbying activities and domestic interest groups (Long et al., 2015; Navaretti & Venables, 2006). MNCs can also exert pressure on host governments via their own home government and the international business community (Kwok & Tadesse, 2006). Especially MNCs that need an efficient business climate and solid property rights protection for their business to flourish, are expected to pressure host governments. More precisely, MNCs are most likely to demand more finely tuned regulations, labour laws and other institutions that cope with managing relations and conflict (Ali, Fiess, & MacDonald, 2010; McCormick, 2008). Foreign investors are expected to demand proper institutions more fiercely, the more capital they invested in a country (Daude & Stein, 2007).

On their turn, local business persons and government officials may react to these demands by 'supplying' a certain institutional infrastructure. Host governments are likely to do so when they believe that solid governance attracts foreign investors and prevents that established firms leave the country (Ali et al., 2011). After all, most African countries would consider the inflow of FDI as beneficial for the country, ensuring tax revenue and fostering economic growth.

Host governments also oftentimes opt for trade and investment agreements to attract foreign investors (Büthe & Milner, 2008). In such regional and international agreements, host governments commit to certain institutional arrangements, that eventually facilitate proper COC and solid ROL (Busse, Königer, & Nunnenkamp, 2010; Demir, 2016). Moreover, solid governance gives countries legitimacy within the global business world (Kwok & Tadesse,

2006). Whilst management practices professionalize and the younger generation learns about global business practices, it may be the case that new generations of leaders fulfil demands to institutional changes even faster.

Through these channels, it seems plausible that the presence of MNCs leads to improved COC and ROL of host countries over time. Western investors are shown to consider institutional differences as significant entry barrier (Demir & Hu, 2016). If Western MNCs indeed consider a – for them – efficient institutional environment as precondition to invest in a certain country, particularly American and Western European investors are expected to urge host governments to improve their governance. With this in mind, the following hypothesis seems plausible:

> **H_1**. Foreign direct investment from the United States and WE has a positive effect on COC and ROL in African host economies.

In contrast to Western FDI, Chinese foreign investment is not expected to be significantly related to COC and ROL in African host countries. This is because of three reasons. Firstly, Southern firms do not seem to attach great weight to the institutional environment of countries they invest in (Demir & Hu, 2016). This is because Southern MNCs are less risk averse and have their comparative advantage in operating in poor institutional environments. Assuming this also holds for Chinese MNCs, it can be expected that Chinese firms would neither urge host governments to engender institutional nor demand political reform, simply because this is not that important for Chinese investors.

Secondly, China adheres to a policy of non-interference in which it presents itself as peer business partner for African countries. This means that Sino-African economic exchanges do not involve conditions that require institutional change (Klaver & Trebilcock, 2011; Tull, 2006). Instead, China's multidirectional friendship policy emphasises and promotes countries' sovereignty in domestic affairs. It can thus be expected that Chinese foreign investors will not try to affect institutions of their host countries in any way. This expectation is in line with previous studies that call the effect of Chinese FDI flows on political governance and other institutions of African countries negligible (He & Zhu, 2018) and non-existent (Klaver & Trebilcock, 2011).

Finally, the influence of Chinese activity on the African institutional environment is limited because Chinese MNCs tend to hire their own domestic workers (Cheung et al., 2012). Because the number of jobs created for African inhabitants is limited, the transfer of skills and technology to the host country is small (Klaver & Trebilcock, 2011). If this is true, Chinese

rules and cultural norms will not trickle down through the African institutional environment. In this way, the involvement of Chinese firms in Africa will not lead to institutional change. All things considered, the following hypothesis on the role of Chinese investors can be derived:

> **H_2**. Foreign direct investment from China has no significant effect on COC and ROL in African host economies.

2.3. The Role of the Political Environment

The political environment of African countries is also expected to play a role for the relationship between FDI and COC, and between FDI and ROL. More specifically, democracy seems to undermine the foundations of corruption (Treisman, 2000) and produce better ROL (Rigobon & Rodrik, 2005). This is mostly related to the political competition involved in democratic political system. In democratic countries, politicians generally aim to be re-elected, and thus have an incentive to keep their promises. In fact, the majority of democratic countries has appropriate checks and balances in place that constrain political actors (Ali et al., 2011). In African countries, it is very common that politicians promise to fight corruption and improve ROL. Thus, the political competition entrenched in democracies is likely to exert a positive influence on the fight against corruption and the improvement of ROL (Asongu, 2013).

This thesis hypothesizes that the effect of FDI is conditioned by the degree of democracy of African host economies. This is based on previous studies that show that the effect of FDI depends on multiple aspects, like efficient financial markets (Alfaro, Chanda, Kalemli-Ozcan, & Sayek, 2004), a certain threshold of human capital (Borensztein, De Gregorio, & Lee, 1998), a certain degree of trade openness (Balasubramanyam, Salisu, & Sapsford, 1999), or an efficient political and economic framework (Alguacil, Cuadros, & Orts, 2011). Regarding the effect of FDI on COC and ROL, this thesis hypothesizes that the effect of FDI likely depends on the degree of democracy in African host economies. Having a democracy based on empowerment of civil society namely is a necessary condition for the development of poor countries. Democratic governments are probably able to fulfil the demands by Western MNCs, whereas undemocratic ones would not (Seda, 2005). Having said that, the following is expected:

> **H_3**. The higher the degree of democracy in African host economies, the higher the positive effect of foreign direct investment from the United States and WE, on COC and ROL in African host economies.

The opposite holds for Chinese foreign investment. This is because Chinese firms mainly invest in countries with lower political stability (UN-Habitat and IHS-Erasmus University Rotterdam, 2018). In such countries with poor institutional environments, FDI generally undermines sustainable development (Asongu & Ssozi, 2016; Chen, Dollar, & Tang, 2016; Eisenman, 2012). It seems equally likely that Chinese foreign investment can undermine COC and ROL, provided that Chinese MNCs invests in undemocratic host countries. This results in the following hypothesis:

> **H4**. The lower the degree of democracy in African host economies, the more likely that foreign direct investment from China undermines COC and ROL in African host economies.

3. Data

This chapter describes the data used to test the four hypotheses as constructed in the previous chapter. The data sample is constraint by the availability of data on FDI and the measures of COC, ROL, and the degree of democracy.[2] As a result, the sample includes data on 37 African countries over the 2003-2012 period.

The set-up of this chapter is as follows. First, the selection of and measures for the dependent and main explanatory variables are discussed. Thereafter, the control variables are explained in more detail. Additionally, the chapter presents an overview of the data, including summary statistics, a correlation table and scatter plots. Finally, the conclusions of the regression diagnostics are briefly discussed.

3.1. Data: Dependent and Main Explanatory Variables

Institutional quality. The institutional environment of countries is a broad concept that can be captured in various ways. Similar studies on the effect of FDI on institutions, mainly capture host countries' institutional environment by the quality of the legal environment (Ali et

[2] Data on FDI from the US and WE is available up till 2012, whereas data on Chinese FDI is reliable from 2003 onwards. Although China's official statistics organization does offer data on FDI before 2003, the data cannot be used because it is unreliable. Because the method used to collect this data is inconsistent with international standards, the values of Chinese FDI volumes before 2003 are probably underestimated (OECD, 2008). To guarantee that FDI data is rightly compared across countries over time, the period is set from 2003 to 2012. The selection of the countries in the sample is based on the availability of data on COC, ROL and democracy. All in all, this leaves the following countries to be included in the sample: Algeria, Angola, Botswana, Cameroon, Congo Democratic Republic, Congo Republic, Côte D'Ivoire, Egypt, Eritrea, Ethiopia, Equatorial Guinea, Gabon, Ghana, Kenya, Lesotho, Liberia, Libya, Madagascar, Malawi, Mali, Mauritania, Mauritius, Morocco, Mozambique, Namibia, Niger, Nigeria, Rwanda, Senegal, Sierra Leone, South Africa, Sudan, Tanzania, Togo, Tunisia, Uganda, Zambia and Zimbabwe.

al., 2011; Dang, 2013; Li & Reuveny, 2003; Long et al., 2015; Mosley & Uno, 2007) or perceived corruption (Claassen et al., 2012; Demir, 2016; Kwok & Tadesse, 2006; Larraín & Tavares, 2004). In line with these studies, this thesis captures institutional quality by both the COC and ROL indicators of the Worldwide Governance Indicators (WGI) dataset of the World Bank (World Bank, 2018). The indicators are constructed based on the perceptions of governance by firms, NGOs, experts working in the private sector, public sector agencies, and households (Kaufmann, Kraay, & Massimo, 2009). The great advantage of this dataset is its global coverage, precision and careful construction by the World Bank institutions (Thomas, 2009). Still, it has to be noticed that some measurement error cannot be avoided (Kaufmann et al., 2009). More specifically, COC captures the perceived extent to which public power is exercised for private gain. This includes petty and grand forms of corruption, coupled with extraction of the state by elites and private actors. ROL indicates the extent to which agents believe others will act according to the rules of society. It indicates the quality of the policy, the courts, contract enforcement, and property rights protection, coupled with the likelihood of crime and violence. Both measures range from -2.5 to 2.5. A higher value implies higher institutional quality.

Foreign Direct Investment. FDI is defined as a long-term investment by a foreign investor or parent enterprise in an economy other than that of the foreign investor. The investment has a lasting interest and as a result of the investment, the foreign investor exerts a significant degree of influence over the management of the enterprise in the host economy (UK Data Service, 2016; UNCTAD, 2014). FDI can be expressed in a measure of flow or stock. FDI flow is the value of capital provided or received in a certain year. FDI stock comprises of the total value of the share of the capital and reserves attributable to the parent enterprise, plus the net indebtedness of affiliates to the parent enterprise. It is oftentimes named the net position of the home country in the host country. This thesis uses FDI stock as main explanatory variable. Compared to FDI flow, FDI stock provides a more comprehensive understanding of the interest of the parent enterprise in a host region. This is because FDI stock includes the *net total* investment accumulated over the years. This means that FDI stock accounts for the interest that foreign investors have in a certain African country. And as was reasoned before, the more lasting the commitment of a foreign investor, the more likely that this foreign investor will pressure host governments to demand better institutions. (Ali et al., 2011; Daude & Stein, 2007). More precisely, FDI is captured by FDI outstock coming from the US, WE[3] and China,

[3] To construct the measure of FDI stock from Western Europe, data is obtained for each home country separately and then added up.

and going to a certain African host country. FDI outstock is expressed in percentages of the host country's Gross Domestic Product (GDP) in current 2010 US dollars.[4] In other words, FDI is a FDI-to-GDP ratio or FDI ratio for short. This allows a proper comparison of FDI values across countries over time. Data on FDI are obtained from the UNCTAD FDI database (2014) and the UK Data Service (2016). Data on GDP is obtained from the World Bank (2019).

Democratization. Hypotheses 3 and 4 are tested by use of an interaction between FDI and the democratization of African host economies. To capture a country's democracy, the widely accepted institutionalized degree of democracy index of the Polity IV project by Marshall, Gurr and Jaggers (2018) is used. The index is based on a country's openness, constraints on the chief executives and competitiveness of political participation and executive recruitment. The variable is on an eleven-point scale (0-10), where ten represents a country with full democracy. In line with previous findings, the direct effect of democratization on COC and ROL is expected to be positive (Acemoglu et al., 2005). Yet it has to be noticed that future results have to be treated carefully, as democracy remains to be a vaguely and complex concept.

3.2. Data: Control Variables

The regression estimation includes several control variables, accounting for the wide range of factors that influences the institutional environment of countries. The regression estimations for COC and ROL contain six overlapping control variables, and two or three specific control variables. Following previous studies, the following variables are expected to influence both COC and ROL: colonial heritage, demographic pressures, economic development, inequality, geography and natural resources. Additionally, there are several variables that presumably are related to either COC, or ROL, but not both. That is, government size and religion are expected to specifically influence COC, whereas fractionalization, climate and trade openness are probably related to ROL only. The control variables, their measurement and their expected effects are explained in more detail below.

[4] The measure of FDI stock is mostly positive for the 37 countries during the 2003-2012 period. Yet in several cases, the FDI ratio has negative values. In such cases, it could be that (a) there is a disinvestment in assets, meaning that a direct investor sells or liquidates an asset or subsidiary of a direct investment enterprise; (b) the parent enterprise borrows money from its affiliate or the affiliate pays off a loan from its direct investor; and/or (c) the reinvested earnings are negative, meaning that the affiliate loses money or that the dividends paid out to the direct investor are greater than the income of that period (OECD, 2015).

3.2.1. Control Variables for both Control of Corruption and Rule of Law

Colonial heritage. The colonial past of countries significantly determines their current institutional development (Acemoglu et al., 2001, 2005). Particularly countries colonized by the UK in the past are generally characterized by stronger institutions (Treisman, 2000). This is probably due to the common law legal systems that Britain introduced in its colonies. In such a system, the administration of justice is relatively strong, protecting countries against abuses of the system by government officials. In this light, African host countries that were colonized by the UK in the past, probably currently experience lower corruption levels and stronger law systems (Treisman, 2000). To control for the impact of colonial heritage, a dummy is included that indicates whether the African host country was colonized by the UK in the past (yes=1) or not (no=0). The first category includes those countries where the UK had a substantial participation in governance for a considerable period of time. Data are obtained from Mayer and Zignago (2011).

Demographic pressure. Increasing population size and density may make institutional development difficult and costly (Acemoglu et al., 2001; Demir, 2016). Then again, it is equally plausible that demographic pressure creates incentives for intensified collective actions, which stimulates scale effects, innovation and technological change, eventually leading to improved institutions (Kazianga et al., 2014). Regardless of what the direction of the effect of demographic pressures, it is important to control for it. This is done by including the host country's total population in the regression estimation. Data are obtained from the World Bank (2019).

Economic development. It is well-established in the literature that higher income levels enable positive institutional change (Ali et al., 2011; Alonso & Garcimartín, 2013; Demir & Hu, 2016; Engerman & Sokoloff, 2002) and reduce corruption (Treisman, 2000). This works mostly through the rationalization of public and private roles. It is also related to education levels of citizens, which has a big impact on people's way of living, the quality of the law system (Long et al., 2015) and the extent to which people fall back in corrupt behaviour (Barro, 1991; Kwok & Tadesse, 2006). Economic development is accounted for by a country's income level. This is measured by GDP per capita in current 2010 US dollars. Data are obtain ned from the World Bank (2019).

Inequality. Previous studies conclude that countries with relatively high income gaps are characterized by relatively lower institutional quality (Chong & Calderón, 2000; Chong & Gradstein, 2007; Dang, 2013; Engerman & Sokoloff, 1997; Jong-Sung & Khagram, 2005). The

mechanism is expected to work as follows. More unequal societies are more likely to accept corruption as norm of behaviour. As income inequality increases, the rich can use more of their wealth for bribery. Simultaneously, the rich tend to use political corruption and their increasing political influence to lower taxes (Jong-Sung & Khagram, 2005) and undermine the protection of the poor by independent judicial systems (Chong & Gradstein, 2007). In this way, income inequality is expected to undermine the quality of both COC and ROL. It is thus important to control for its influence. Following the majority of studies, income inequality is captured by the Gini index from Gapminder (2019), ranging from 0 to 100. A higher number on this index indicates more inequality.

Landlocked countries. Landlocked countries may fall behind institutional development because of natural barriers for knowledge diffusion, or have a higher incentive to improve transportation and communication networks (Bahar et al., 2014; Demir, 2016). To control for either effect, the analysis includes a dummy variable that indicates whether a country is landlocked (yes=1) or not (no=0). Data are obtained from Mayer and Zignago (2011).

Natural resources. Resource abundant countries that highly depend on production and exports of primary goods are expected to have lower COC and ROL. Resource rich countries are namely prone to corrupt behaviour by rent-seeking elites (Larraín & Tavares, 2004; Seda, 2005). This is because natural resources are geographically immobile, so that local governments are oftentimes involved in the exploitation of it. Similarly, in the race to attract foreign investors, host countries may be encouraged to bypass local laws and regulations, providing MNCs sufficient access to their natural resources (Demir, 2016). In this way, corruption and deteriorating quality of the legal environment go hand in hand. This holds particularly for oil exporting countries (Ades & Di Tella, 1999). Therefore, natural resources are controlled for by including a dummy that indicates whether a country exports conventional crude oil in a certain year (yes=1) or not (no=0). Data on this come from Gapminder (2019).

3.2.2. Control Variables Specific for Control of Corruption

Government size. The more the public sector is involved in the economy, the higher are the opportunities for corruption (Larraín & Tavares, 2004). In other words, the size of government is strongly associated with higher corruption levels (Zhu, 2017). To control for government size when measuring COC, a control variable is added that measures the general government final consumption expenditure as percentage of GDP. Data are obtained from the World Bank (2019). The measure includes all government current expenditures for purchases of goods and services, and most expenditures on national defence and security.

Religion. The religion of a country determines how loyal individuals are to their families, which is related to extent to which individuals result in corrupt behaviour. In the Protestant religion, institutions of the church play a role in the monitoring of state officials, thereby often denouncing corrupt behaviour. By contrast, in religions where church and state hierarchies are intertwined, such a role does not exists, so that corrupt behaviour is more likely. What's more, Protestantism is more egalitarian and individualistic in comparison to more 'hierarchical religions' like Catholicism or Eastern Orthodoxy. This explains why the percentage of Protestants in a country is shown to be positively related to lower corruption (La Porta et al., 1999; Treisman, 2000). It is thus important to control for religion when measuring COC. This is done by adding the share of Protestants to total population in the year 2010. Data are obtained from the Pew Research Centre (2011, 2012).

3.2.3. Control Variables Specific for Rule of Law

Ethnolinguistic fractionalization. Cultural factors are important determinants of institutions (Beugelsdijk, 2006; De Jong, 2009; Williamson, 2000). More specifically, social tensions determine government performance and the success or failure of a country's development (Seda, 2005). This explains why public good provision is oftentimes inferior in divided countries (La Porta et al., 1999). To capture social tension, the measure of ethnolinguistic fractionalization is used. This measures captures the homo- or heterogeneity of the cultural diversity of the population. Social and cultural tensions specifically undermine the quality of law and property rights protection (Ali et al., 2011; La Porta et al., 1999). Thus, ethnolinguistic fractionalization is only controlled for when measuring ROL. This is done by averaging the values on ethnic, linguistic and religious fractionalization indices of Alesina et al. (2003).[5] The variable ranges from 0 to 1. A higher number indicates higher fractionalization.

Climate. The climate of a country, which includes a country's tropics, germs, and crops, influences the extent to which an efficient development of institutions is possible (Easterly & Levine, 2003; La Porta et al., 1999). This explains why a country's distance from the equator strongly explains variation in the quality of ROL (Ali et al., 2011; Rigobon & Rodrik, 2005). It is therefore important to add a country's latitude when measuring ROL. Data on latitude are obtained from La Porta et al. (1999). The variable for latitude ranges from 0 to 1, where a higher value indicates a higher distance from the equator.

[5] Data on ethnolinguistic fractionalization is available for all countries in the sample but Rwanda. For Rwanda, data is missing on linguistic fractionalization. Therefore, only for Rwanda, the ethnolinguistic fractionalization index includes the average of the ethnic and religious fractionalization indices.

Trade openness. More open countries aim to compete internationally and are thus motivated to acquire better economic institutions. This explains why institutions are related to economic openness (Islam & Montenegro, 2002; Rigobon & Rodrik, 2005) and why open countries oftentimes have stronger ROL (Rigobon & Rodrik, 2005). Therefore, trade openness is added as control variable when measuring ROL. This is accounted for by the sum of imports and exports of goods and services, measured as share of GDP. Data are from the World Bank (2019).

3.3. Data Overview

Table 1 reports the summary statistics of all variables. There is quite some variation in the US FDI ratio, which ranges from -6% for Eritrea in 2003 to 128% for Equatorial Guinea in 2003. Also the WE FDI ratio ranges quite considerably, from -0.07% for Equatorial Guinea in 2010, to 96% for Mauritius in 2012. The highest mean is observed for the WE FDI ratio. This suggests that the majority of the FDI stock of the countries in the sample is provided by firms from the WE region.[6] Considering bilateral FDI, the top investor economies in African economy are the United States (US), the UK, France and China (UNCTAD, 2018). WE investors mainly invest in Northern African countries, whereas American MNCs are mostly located in Central African countries.

FDI from China shows less variation, ranging between 0% for the Republic of Congo and Sierra Leone in 2003, to almost 8% for Zambia in 2012. The values of Chinese FDI ratio are lower because China started investing in African countries only recently. For Chinese firms, top destinations are South Africa, Nigeria, Zambia, Algeria, Sudan and Angola.

The institutional quality indicators COC and ROL show some variation as well, although to a lesser extent. This is understandable given the relatively short period compared to the time it generally takes for institutions to change. Values on democratization indicate that the sample includes both undemocratic and democratic countries.

[6] The WE region is also the largest provider of FDI stock if all African countries are considered (UN-Habitat and IHS-Erasmus University Rotterdam, 2018).

TABLE 1
Summary Statistics

Variable	Obs.	Mean	Std. Dev.	Min	Max
Dependent Variables					
Control of Corruption	370	-0.63	0.57	-1.67	1.22
Rule of Law	370	-0.65	0.62	-1.85	1.08
Independent variables					
FDI ratio US	333	4.20	12.75	-6.09	128.30
FDI ratio WE	369	4.56	9.24	-0.07	96.18
FDI ratio China	369	0.81	1.18	0.00	7.83
Degree of democracy	370	3.67	3.24	0.00	10.00
Control variables					
Dummy for colonized by the UK	370	4.49	1.35	1.00	8.00
Population (log)	369	16.36	1.24	13.45	18.94
GDP per capita (log)	369	7.07	1.17	4.78	10.03
Gini	370	42.45	7.78	27.90	64.10
Dummy for landlocked countries	370	0.24	0.43	0.00	1.00
Dummy for oil exporting countries	370	14.48	5.10	0.95	46.60
Government expenditure to GDP	347	0.38	0.48	0.00	1.00
Share of Protestant religion	370	29.42	26.17	0.00	76.00
Ethnolinguistic fractionalization	360	0.59	0.22	0.02	0.84
Latitude	370	0.17	0.13	0.01	0.67
Openness (log)	359	4.26	0.41	3.21	5.74
Estimators of the Heckman two-step procedure					
Telephone lines (log)	370	0.32	1.46	-5.12	3.44
Export share with China to total products	370	29.75	15.37	2.70	21.86
Observations	370				

Notes: the summary statistics describe the data before missing observations were filled. COC and ROL are indices ranging from -2.5 to 2.5. FDI stock to GDP is expressed in percentages. Degree of democracy is an index ranging from 0 to 10. Dummy for colonized by the UK is a binary dummy time invariant variable equal to 1 if the African host country was colonized by the UK in the past, and 0 otherwise. Population values are midyear averages, then log transformed. GDP per capita is in current 2010 US dollar, then log transformed. Gini is a time invariant index for income inequality, ranging from 0 (lowest inequality) to 100 (highest inequality). Dummy for landlocked countries is a binary time invariant variable equal to 1 if the African host country is landlocked, and 0 otherwise. Dummy for oil exporting countries is a binary variable equal to 1 if the African host country exports conventional crude oil in a certain year, and 0 otherwise. Government expenditure is expressed as percentage of GDP. Share of Protestant religion is a time invariant variable indicating the percentage share of total population that is Protestant

in 2010. Ethnolinguistic fractionalization is the time invariant average of ethnic, linguistic and religious fractionalization indices, ranging from 0 (no fractionalization) to 1 (highest fractionalization). Latitude is a time invariant variable indicating the distance from the equator, ranging from 0 to 1. Openness is measured as the sum of exports and imports of goods and services to GDP, then log transformed. Telephone lines are the fixed telephone subscriptions per 100 people, then log transformed. Export share with China is expressed as percentage ratio to total export of products. Values are rounded to two decimals.

TABLE 2
Specific Summary Statistics

Year	Observations	Mean	Std. Dev.	Minimum	Maximum
			Control of Corruption		
2003	37	-0.61	0.58	-1.5	1
2012	37	-0.66	0.58	-1.5	1
2003-2012	370	-0.63	0.57	-1.7	1
			Rule of Law		
2003	37	-0.62	0.69	-1.7	1
2012	37	-0.65	0.59	-1.7	1
2003-2012	370	-0.65	0.62	-1.9	1
			FDI ratio US		
2003	37	5.40	21.67	-6.1	128
2012	37	4.48	12.29	-0.3	61
2003-2012	333	4.20	12.75	-6.1	128
			FDI ratio WE		
2003	37	4.84	7.64	-0.0	31
2012	37	6.34	16.66	0.0	96
2003-2012	369	4.56	9.24	-0.1	96
			FDI ratio China		
2003	37	0.22	0.50	0.0	3
2012	37	1.79	1.83	0.0	8
2003-2012	369	0.81	1.18	0.0	8
			Degree of democracy		
2003	37	3.32	3.23	0.0	10
2012	37	3.86	3.22	0.0	10
2003-2012	369	4.56	9.24	-0.1	96

Notes: the summary statistics describe the data before missing observations were filled. Values in the table are rounded to two decimals.

The summary statistics show that there are several missing observations in the sample. When estimating the regressions, these missing observations are filled in by the country mean scores over 2003-2012. When an observations is missing, a dummy is added to the estimation to indicate the effect of a variable being missing on COC or ROL.[7]

Table 2 provides more detailed summary statistics for the main variables of Equation (1) and (2) in the beginning and end of the time period. The average of the COC and ROL indices only changes slightly between 2003 and 2012. The averages of the FDI ratios of the US, WE and China show a higher absolute change.

Table 3 reports the correlation coefficients of the variables in the sample. Regarding the correlations between COC, ROL and the FDI measures, only FDI from WE is significantly correlated with the COC and ROL indices. FDI from the US significantly correlates with FDI from WE and China. FDI from WE and FDI from China also significantly correlate with each other. Nevertheless, there are no multicollinearity issues in the sample, also when the FDI measures are included in the same equation.

Figure 2 includes six scatterplots that graphically show the relationships between the two dependent and main explanatory variables, i.e. COC and ROL, and FDI from the US, WE and China. There is a small yearly change of COC and ROL, in comparison to the fluctuations in FDI, coupled with the small time period of the sample.[8] Future regression estimations need to indicate the occurrence of a statistical significant relationship.

[7] When all dummies are included in the regression estimation, two problems arise. First, there is a dependency among the dummies that indicate missing observations on FDI stock of WE, FDI stock of China, population, GDP per capita, government expenditure and openness. These variables all have a missing observation for Eritrea in the year 2012. For most variables, it is the only observations for which data is missing. As a result, the variables correlate with each other and all indicate the same missing observation. Secondly, there is a specific problem when the Heckman two-step procedure is used. This procedure is described later in this chapter. The problem is that the dummy for missing observations on telephone subscriptions correlates with FDI from the US, the UK colonizer dummy, Gini and Protestant religion. To account for this multicollinearity issue, the dummy for missing observations on telephone subscriptions is left out of the first step of the Heckman procedure.

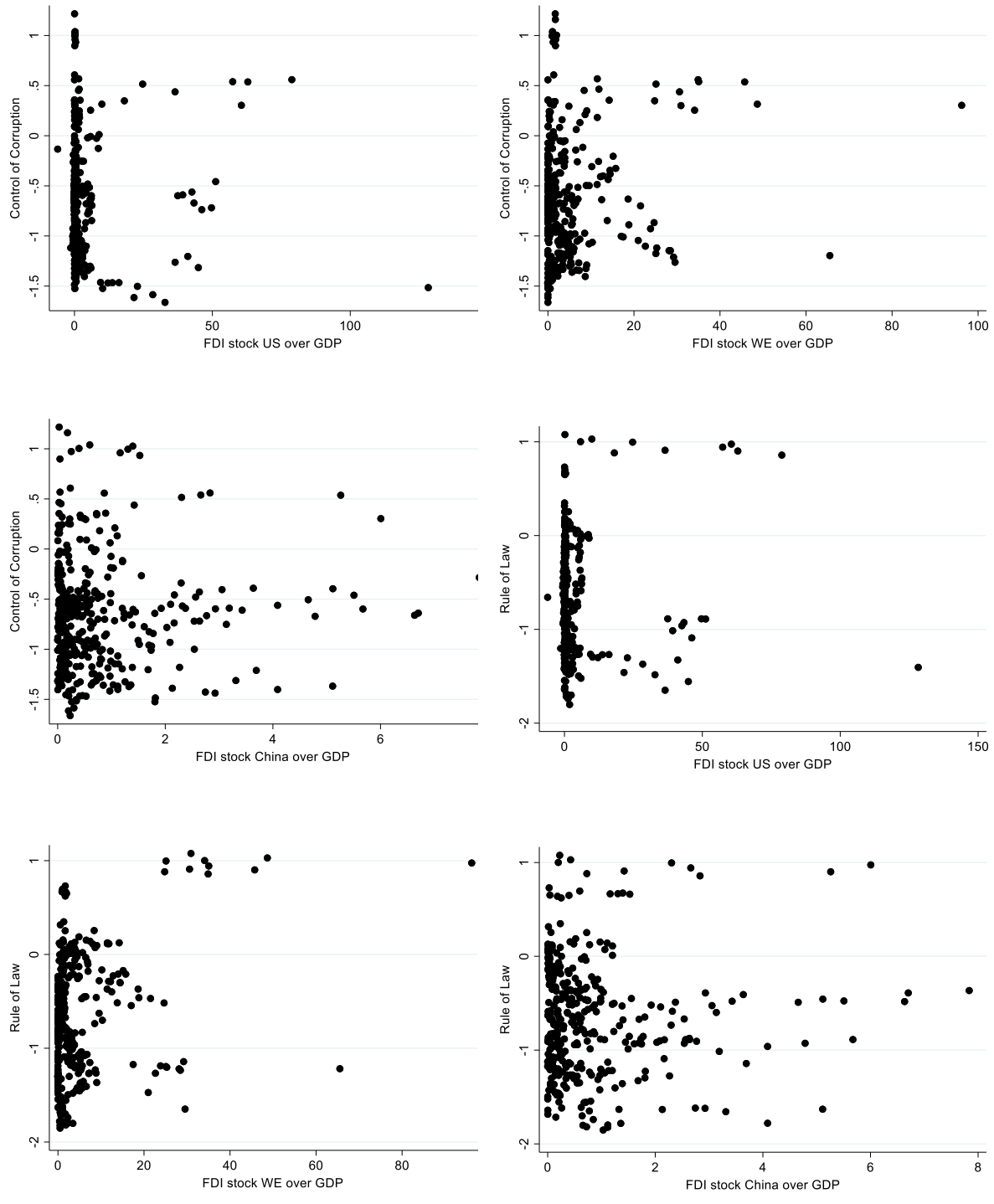
[8] Appendix B includes two time-series line plots that show the development of the COC and ROL indices by country over time. The two indices fluctuate only slightly over time compared to the fluctuations in FDI ratios. Having said that, there are also several countries that are characterized by quite a change in either COC, ROL, or both. Subsequent analyses need to show whether this may be due to fluctuations in FDI stock.

TABLE 3
Correlation Coefficients

	COC	ROL	FDI US	FDI WE	FDI China	Democracy	UK colonizer dummy	Population (log)	GDP per capita (log)	Gini	Land-locked dummy	Oil exporting dummy	Government expenditure	Protestant religion	Fractionalization	Latitude	Openness (log)
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)
(a)	1																
(b)	0.879***	1															
(c)	0.0869	0.110	1														
(d)	0.178**	0.295***	0.416***	1													
(e)	0.0950	0.0697	0.434***	0.161**	1												
(f)	0.543***	0.543***	0.248***	0.157**	0.255***	1											
(g)	0.206***	0.235***	0.0142	0.0635	0.0305	0.295***	1										
(h)	-0.238***	-0.189***	-0.350***	-0.255***	-0.167**	-0.0427	0.254***	1									
(i)	0.248***	0.307***	0.152**	0.366***	-0.0689	-0.0395	-0.0712	-0.308***	1								
(k)	0.410***	0.259***	-0.222***	-0.0186	-0.0755	0.331***	0.134*	-0.128*	0.201***	1							
(l)	0.141*	0.223***	-0.159**	-0.196***	0.201***	0.230***	0.184**	0.0151	-0.283***	0.122*	1						
(m)	-0.489***	-0.463***	-0.0800	0.0650	-0.215***	-0.429***	-0.0890	0.197***	0.406***	-0.128*	-0.385***	1					
(n)	0.442***	0.243***	-0.142*	-0.0431	-0.0811	-0.00453	-0.0188	-0.248***	0.0647	0.258***	-0.00823	-0.234***	1				
(o)	0.180**	0.0581	0.110	-0.0427	0.103	0.435***	0.249***	0.0192	-0.0662	0.693***	0.125*	-0.108	-0.0402	1			
(p)	-0.226***	-0.269***	-0.00846	0.0402	0.0895	0.249***	0.206***	0.139*	-0.325***	0.425***	0.0601	0.0250	-0.155**	0.611***	1		
(q)	0.317***	0.266***	-0.115*	-0.0103	-0.121*	-0.0575	-0.137*	0.154**	0.205***	0.0340	-0.0862	0.0420	0.183**	-0.199***	-0.366***	1	
(r)	0.149**	0.124*	0.457***	0.266***	0.168**	0.0476	-0.448***	-0.591***	0.381***	0.0989	-0.205***	0.0111	0.116*	0.176**	-0.176**	-0.0908	1

Notes: this table shows the correlation coefficients of the variables in the data sample before missing observations were filled.
(***), (**), (*) denote significance at 0.1%, 1%, and 5% levels, respectively.

FIGURE 2
Scatterplots of the Data on the Main Variables



3.4. Regression Diagnostics: Testing the Assumptions of Linear Regression

Before the regressions are estimated, the data are tested on all OLS assumptions of linear regressions. The tests are performed on the data before missing observations are filled in by their country means. The output of the regression diagnostics is included in Appendix A. The remainder of this chapter summarizes the conclusions.

Firstly, because added variable plots show that the relationships between the independent and dependent variables are roughly linear, there is no need to use squared variables in the estimation.[9] Secondly, the Breusch-Pagan Cook-Weisberg test does not detect any linear form of heteroskedasticity, so there is no need to compute robust standard errors. Thirdly, the Wooldridge test for autocorrelation in panel-data models (Wooldridge, 2010) indicates the presence of serial correlation for both the COC and ROL estimation. Autocorrelation means that the variables correlate with themselves over time. Consequently, the error term of the observations in the regression are correlated and the t-statistic overestimated. To account for this problem, the Prais-Winsten regression for panel data will be estimated in a later chapter.

Furthermore, the variance inflation factor (VIF) and tolerance values signal no multicollinearity issues. Moreover, analysis of the data by histograms illustrates the need to log transform the variables that are skewed to the right.[10] Furthermore, the Studentisized residual, Lever, Cook's distance and DfFit measures detect several outliers and influential cases. Outliers have a large residual and are cases for which the model fits badly. Influential cases are mostly extreme values that have a large effect on the slope of the regression line fitting the data. All outliers are also influential cases. The sensitivity of the analysis will be tested against the influential cases.

Finally, the data is tested on stationarity. A stochastic process is stationary when its mean and variance are constant over time, and when the covariance structure between two values depends on the length of the time separating the variables rather than on the actual times at which the observations are observed. Results can be misleading or spurious when possible non-stationarity of dependent and/or independent variables is neglected (Baumöhl & Lycósa, 2009). To test the stationarity of the panel data, multiple panel-data unit-root tests available.

[9] The added variable plots by country and by year are not included in this thesis because of brevity reasons. The graphs are available upon request.

[10] To prevent unnecessary loss of observations whilst keeping the original data structure, skewed variables that contain negative observations are first restructured to all positive values. Then the log is taken. This procedure allows to take the log of variables that initially contain negative values. Again, the histograms are not included in this thesis because of brevity reasons. Also the histograms are available upon request.

The tests differ in their asymptotic assumptions regarding the number of panels and the number of time periods in each panel. Because the panel dataset of this thesis is balanced and has relatively few time periods compared to the number of panels, the Harris–Tzavalis test seems most appropriate (Harris & Tzavalis, 1999).[11] The results of this test indicate that the data on COC, ROL, FDI from the US and most control variables, are stationary. By contrast, FDI from WE and FDI from China are non-stationary, as are the control variables population (log), GDP per capita (log) and Gini. To account for non-stationarity of these variables, the regressions will also be estimated by taking first differences. This should make all variables stationary.

4. Methodology

The following equation will be estimated to compare the effects of FDI from the US, WE and China on the COC and ROL indices of African host economies:

$$IQ_{\text{it}} = \alpha_1 + \beta_1 \text{FDI}_{US,i,t} + \beta_2 \text{FDI}_{WE,i,t} + \beta_3 \text{FDI}_{China,i,t} + \beta_4 democ_{i,t} + \gamma'_i \text{V}_{i,t} + u_{i,t} + a_i \qquad (1)$$

In Equation (1), IQ_{ijt} is the institutional quality of African host country *i* at time *t*, captured by either the COC of ROL index. $\text{FDI}_{US,i,t}$ represents the FDI ratio from the US to African host country *i* at time *t*. Likewise, $\text{FDI}_{WE,i,t}$ and $\text{FDI}_{China,i,t}$ capture the FDI ratio from respectively WE and China. The relationship between IQ and FDI is estimated between countries over time. In line with hypotheses 1 and 2, β_1 and β_2 are expected to be positively significant, whereas β_3 is expected to be insignificant. The $democ_{i,t}$ term captures the degree of democratization of African host country *i* at time *t*. V is a vector of the previously discussed control variables.[12] The random error term *u* captures the between-countries omitted effects and the error term *a* captures the unobserved specific variation within countries.

To test hypotheses 3 and 4, an interaction term is added to the estimation that multiplies the measures for FDI by the degree of democracy. That is to say, three interaction terms are added to Equation (1), meant to examine whether democracy conditions the effect of FDI coming from the US, WE and China.[13] The coefficient of the interaction between FDI from the US and democracy is expected to be positive. The same holds for the interaction between FDI

[11] The Levin–Lin–Chu test is also performed as benchmark (Levin, A. & Chu, 2002). The conclusions of this test are the same as the outcome of the Harris–Tzavalis test.

[12] As a reminder, the variables that are included in V depend on whether IQ is captured by either COC or ROL.

[13] Every interaction term included that is included in any estimation of this thesis, will always be an interaction between two centered variables. This ensures that the coefficients of the main effects of the two variables represent their value for the situation in which the other interacting variable is at its mean.

from WE and democracy. If both interaction terms indeed show positive coefficients, it would imply that the effect of Western FDI becomes more positive, the more democratic African host economies are. This is in line with the expectations. The coefficient of the interaction between FDI from China and democracy is expected to be positive as well, because it is hypothesized that the lower the degree of democracy in African host economies, the more likely that FDI from China is negatively related to COC and ROL. The three interaction terms are included in Equation (1) in the following way:

$$IQ_{it} = \alpha_1 + \beta_1 FDI_{US,i,t} + \beta_2 FDI_{WE,i,t} + \beta_3 FDI_{China,i,t} + \beta_4 democ_{i,t} + \beta_5(FDI_{US,i,t} * democ_{i,t}) + \beta_6(FDI_{WE,i,t} * democ_{i,t}) + \beta_7(FDI_{China,i,t} * democ_{i,t}) + \gamma'_i V_{i,t} + u_{i,t} + a_i \quad (2)$$

Equations (1) and (2) are first estimated by a RE model. Thereafter, the Heckman two-step procedure is applied. The remainder of this chapter illustrates the argumentation for and set-up of the two methods.

4.1. Random Effects Model

First, Equations (1) and (2) are estimated by means of a RE model, a specific technique for the panel data sample. Two other panel data regression techniques suitable for panel data are the pooled regression and the fixed effects (FE) model, but the RE model is preferred over both models. First, RE is preferred over the pooled regression. In general, RE is more efficient than pooled OLS, because the standard errors and test statistics of the pooled OLS are mostly invalid (Wooldridge, 2013). Secondly, RE is preferred over FE, even though the Hausman test indicates FE as the best option from an econometric point of view. The RE model namely has the great advantage that it allows to include the time invariant variables in the model (Wooldridge, 2013).[14] In the FE model, the time invariant variables would have been absorbed by the intercept.

The RE intercept parameter has a fixed part, the average, and a random part, offering countries to deviate from that average. The composite error term of the RE model therefore is defined as $v_{it} = a_i + u_{it}$. As a result, Equation (1) can be rewritten as:

[14] The RE model is estimated via Generalized Least Squares (GLS) and involves quasi-demeaned data on each variable. This means that the RE estimator subtracts a fraction of the time averages from the corresponding variable. This transformation allows to include the control variables that are constant over time. As a reminder, the time invariant variables in the model are Gini index, the share of Protestant religion, the ethnolinguistic fractionalization index, latitude, the dummy for being colonized by the UK, the dummy for landlocked countries and the dummy for oil exporting countries.

$$IQ_{it} = \alpha_1 + \beta_1 FDI_{US,i,t} + \beta_2 FDI_{WE,i,t} + \beta_3 FDI_{China,i,t} + \beta_4 democ_{i,t} + \gamma'_i V_{i,t} + v_{i,t} \quad (3)$$

In a similar way, Equation (2) can be rewritten as:

$$\begin{aligned} IQ_{it} = {} & \alpha_1 + \beta_1 FDI_{US,i,t} + \beta_2 FDI_{WE,i,t} + \beta_3 FDI_{China,i,t} + \beta_4 democ_{i,t} \\ & + \beta_5 (FDI_{US,i,t} * democ_{i,t}) + \beta_6 (FDI_{WE,i,t} * democ_{i,t}) \\ & + \beta_7 (FDI_{China,i,t} * democ_{i,t}) + \gamma'_i V_{i,t} + v_{i,t} \end{aligned} \quad (4)$$

The RE model estimates unique country differences over time assumes that (a) differences among countries can be 'caught' by the intercept parameters, (b) the behaviour of countries is similar in all years, (c) countries have equal variance, (d) every country has a different intercept but that their reactions in the coefficients are similar, and (e) there is no correlation between the independent variables and the error term. The next chapter includes the output of the RE regression estimation.

4.2. Heckman two-step Procedure

Figure 3, 4 and 5 show the 2003-2012 average FDI ratios of the African countries in the sample. The figures illustrate that part of the African countries in the sample has relatively high FDI, whereas other countries nearly build up any stock over the years. Moreover, the figures clearly show that firms from the US, WE and China generally invest in different countries. As an illustration, American MNCs mostly operate in Equatorial Guinea, Mauritius and Liberia. For Western European firms, Mauritius, the Republic of Congo and Gabon are popular destinations. Chinese firms on the other hand mostly operate in Zambia, Liberia and Niger, which clearly contrasts the investment patterns of American and Western European firms.

This observed 'nonrandomness' suggests that MNCs make their decision to invest in a selective way. If this is true, 'treatments' of FDI are not given randomly to African countries. If the factors that determine whether or not an African country receives FDI, are related to the country's score on COC and ROL, a selection bias problem arises.

FIGURE 3
Country Averages on the US FDI ratio over the 2003-2012 Period

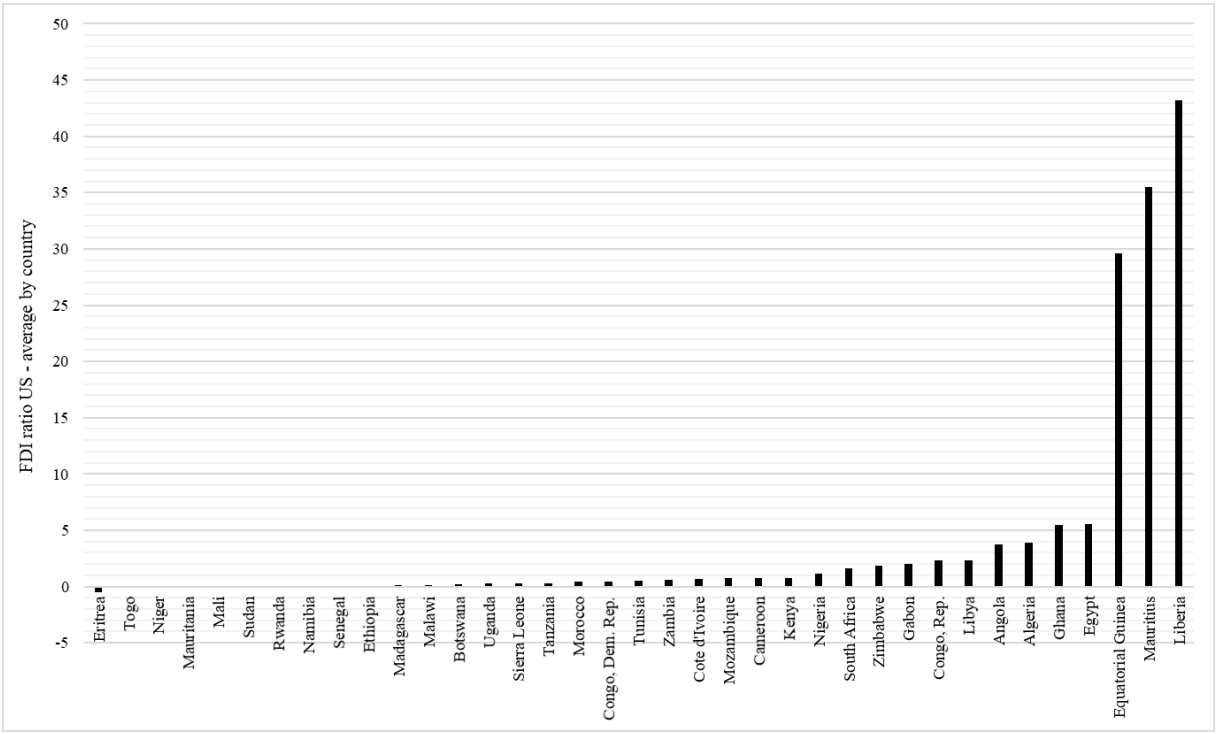


FIGURE 4
Country Averages on the WE FDI ratio over the 2003-2012 Period

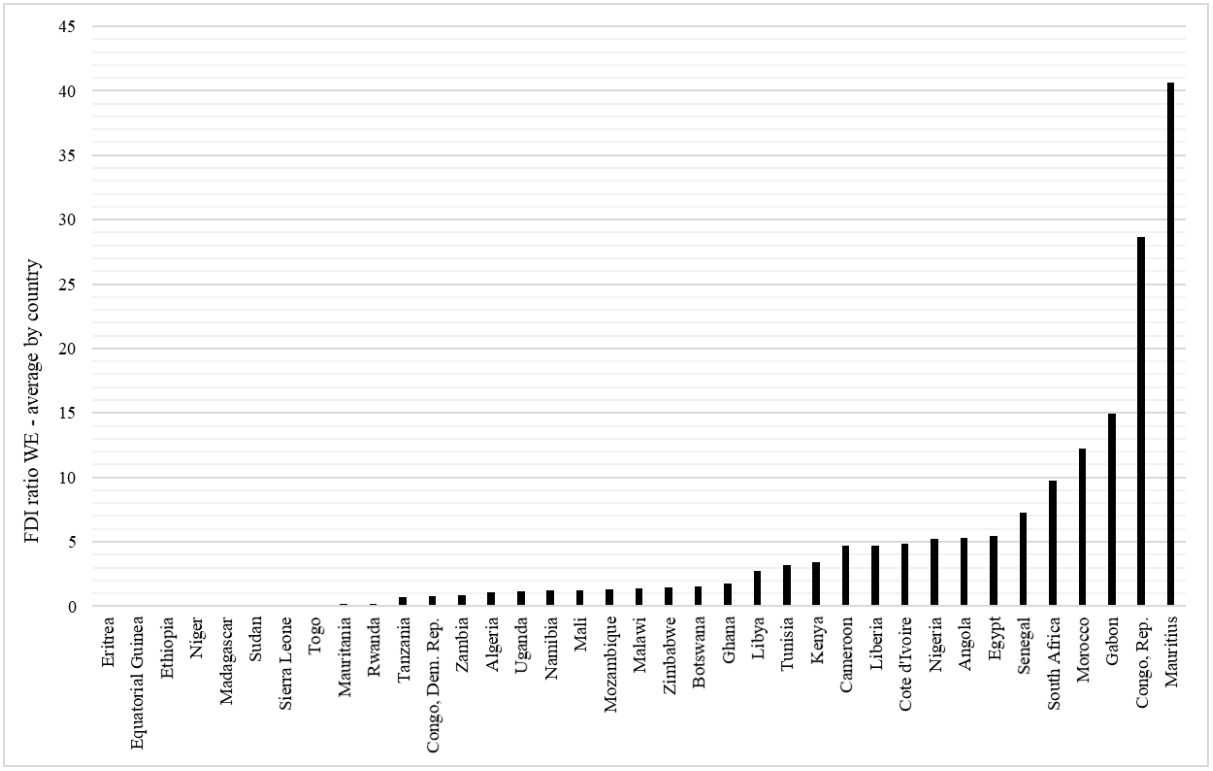
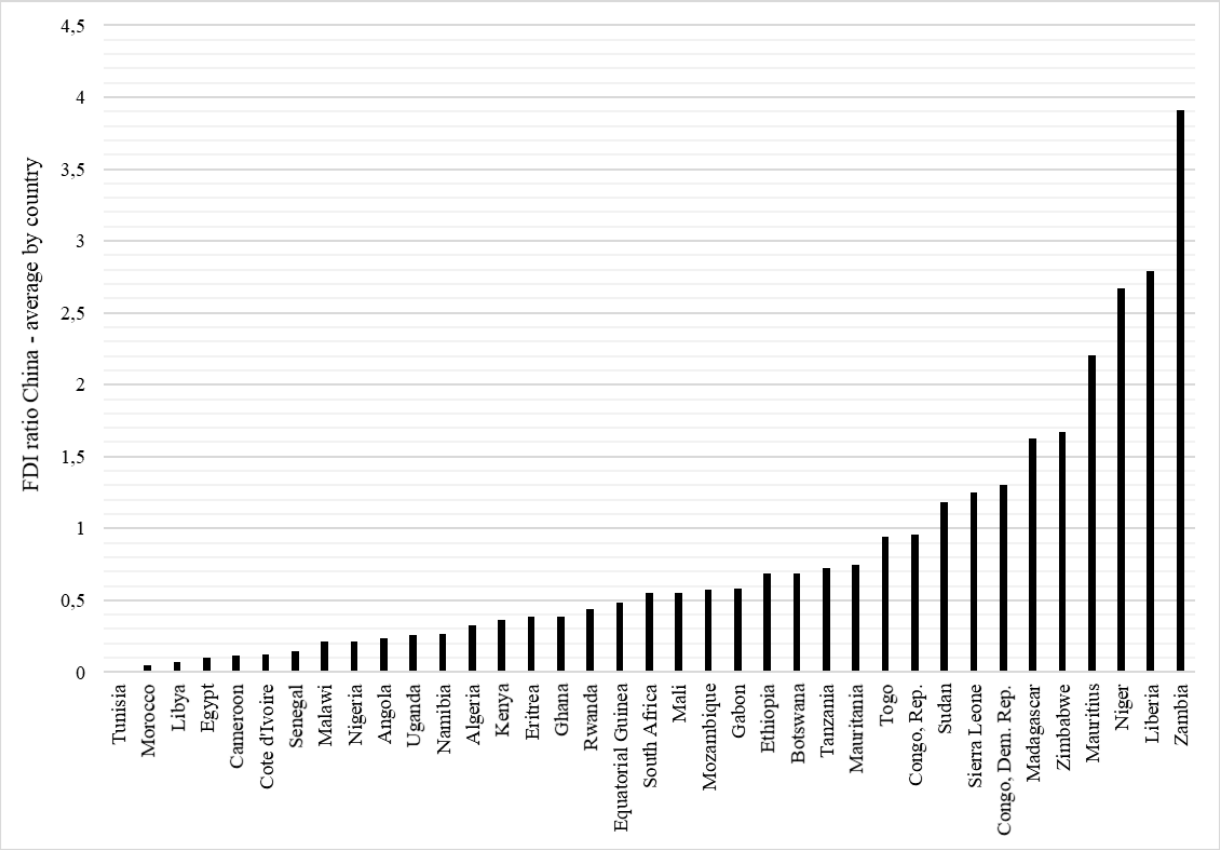


FIGURE 5
Country Averages on the China FDI ratio over the 2003-2012 Period



In general, there are two version of the selection bias problem (Smits, 2003). In the version most frequently used in the economic literature, information on the dependent variable is missing for part of the respondents, biasing the estimates of the effect of the independent variables. In this thesis, however, information on the dependent variable is available for all African countries in the sample, but the distribution of countries over the FDI values has taken place in a selective way. This version sometimes goes under the name heterogeneity bias (Smits, 2003). When such a selection bias occurs, the coefficient of FDI catches up the unmeasured effects and the estimated coefficient of the RE model will be biased.

To control for the selection bias, Equation (1) and (2) are estimated again by use of the Heckman two-step procedure.[15] This method should yield more efficient estimators and should handle the estimation better than the RE estimation (Canton & Solera, 2016). The Heckman two-step procedure is performed separately for FDI coming from the US, WE and China. This is necessary because the investment goals and strategies of Western MNCs generally differ

[15] Although the two-step Heckman procedure can solve the selection problem by controlling for the differences between African countries, it has to be noticed that one can never be sure that all relevant factors are actually included, as the number of possible differences among countries is infinite (Smits, 2003).

from that of their Chinese colleagues (Klaver & Trebilcock, 2011; Wall, 2018; Yao & Wang, 2014). In other words, MNCs from the US, WE and China select to invest in different African countries because of different reasons.

As the name implies, the two-step Heckman procedure consists of two steps. The first step involves a selection model, estimated by a Probit model. The dependent variable is set to be a dummy that indicates whether an African host country has a relatively high FDI ratio (higher=1) or a relatively low FDI ratio (lower=0). The difference between a 'high' and 'low' ratio is based on a country's average FDI ratio over the 2003-2012 period. For FDI from the US, countries that have a higher average FDI ratio of 1.20% fall in the 'higher' category'. For FDI from WE, this point is at an average FDI ratio of 1.11%. For FDI from China, it is set at 0.60%. The argumentation for this choice is provided in the next section.

The Probit model compares the 'higher' and 'lower' group of African countries to find out whether there is a selection variable that determines a country's chance to fall into the 'higher' category. The selection variable should significantly explain why foreign investors choose to invest more FDI in one African country, and nearly anything in another. Moreover, the selection variables should neither be related to COC nor to ROL.[16]

When estimating the effect of FDI from the US and WE, the available level of infrastructural development in African host countries is used as selection variable. [17] American and Western European firms are namely shown to mostly base their investment decision on the level of infrastructure, mostly because good infrastructure enhances the productivity of investments (Akinkugbe, 2005; Asiedu, 2002, 2006). Following previous empirical studies, this thesis captures infrastructure by the number of telephone subscriptions per 100 people (log).[18] Data on this measure is obtained from the World Bank (2019).

[16] It is important to focus on the determinants of FDI to African countries specifically. Provided that FDI to Africa is mainly non-market seeking, its determinants are expected to be different than that of market-seeking FDI going to Western countries (Asiedu, 2002).

[17] The economic literature presents various variables that determine the selection of Western FDI to African countries. Yet it is scarce to find a variable that is unrelated to COC and ROL. Apart from infrastructure, possible variables are macroeconomic stability (a country's inflation rate), openness to trade, government expenditure, or financial development (Anyanwu, 2011; Asiedu, 2006; Onyeiwu & Shrestha, 2004). The Heckman two-step procedure was performed with these variables as well, but the variables were not considered as proper selection variables. Their estimated coefficient were either insignificant determinants of the probability of African countries to fall into the 'higher' category, or there was a lack on data for the countries in the sample.

[18] The reliability of telecommunications would be a better selection variable to use, but data on the reliability of telecommunication is not available for the African countries in the sample. As an alternative, the availability aspect of infrastructure is used as selection variable.

As opposed to Western investments, Chinese investments in Africa are mainly market seeking (Cheung et al., 2012). Consequently, the selection variable for the Heckman regression including Chinese FDI is chosen to be trade intensity with China. Trade namely is an important channel through which China interacts with Africa (Cheung et al., 2012; Sanfilippo, 2010). More trade requires better trade supporting services and more solid knowledge on external markets. If the two improve, the transaction costs related to FDI will decrease. As a result, relatively high trade with China significantly encourages FDI from China (Sanfilippo, 2010). In other words, trade intensity with China is expected to determine why certain African countries in the sample receive relatively high FDI from China, whereas other countries do not. Trade intensity with China is captured a country's export share to China as percentage of total trade. Data are obtained from the World Integrated Trade Solution (2019).

The Probit estimation includes all the independent variables of Equation (1), except for FDI, and is used to construct the Lambda or Inverse Mill's Ratio. The latter parameter captures the unmeasured characteristics that determine why a country receives relatively high FDI. In the second step of the Heckman procedure, the Lambda is added to the list of explanatory variables. Now the main equation contains a factor for the unmeasured characteristics that determine firms' investment decision. The equations of the two-step Heckman procedure are as follows:

Step (1) $B = \gamma Z + u_2$

Step (2) $IQ = \beta X + u_1$

IQ observed if $\gamma Z + u_2 > 0$

u_2~N(0,1), u_1~N(0, sigma) and corr$(u_1, u_2) = \rho$

where 'B' is a binary dummy variable indicating whether the African host country receives relatively higher or lower FDI; 'Z' is a vector of variables, measuring those characteristics of African host countries that are related to the probability that a country receives 'higher' FDI; 'IQ' is the COC or ROL index; and 'X' is a vector of variables determining COC or ROL, including the Lambda mentioned above. Step (2) is estimated only for countries that fall into the 'higher' category of the binary dummy variable B. It will be estimated first with and then without the interaction between FDI and democracy. The next and last section of this chapter explains the countries included in the 'higher' and 'lower' categories of FDI, and provide an argumentation for the choice for the selection variables.

4.3. Heckman two-step procedure: selecting country groups

The African countries in the sample are grouped into the 'higher' and 'lower' FDI groups based on their average FDI ratio over the 2003-2012 period. The precise selection is based on cumulative relative frequency polygons of FDI from the US, WE and China, included in figure 6.[19] The polygons first increase steeply, after which their slopes decrease. In other words, there is a 'kink' in the line, which suggests that there is a certain clustering of countries with a relatively low average FDI ratio, after which the average FDI ratios start to divide. The countries are split into two groups before and after this kink. For the US, the country groups with 'lower' versus 'higher' FDI stock are defined as having an average FDI ratio of respectively below and above 1.2%. For FDI from WE, this cut-off is at 1.11%. For FDI from China, it is at 0.60%.[20]

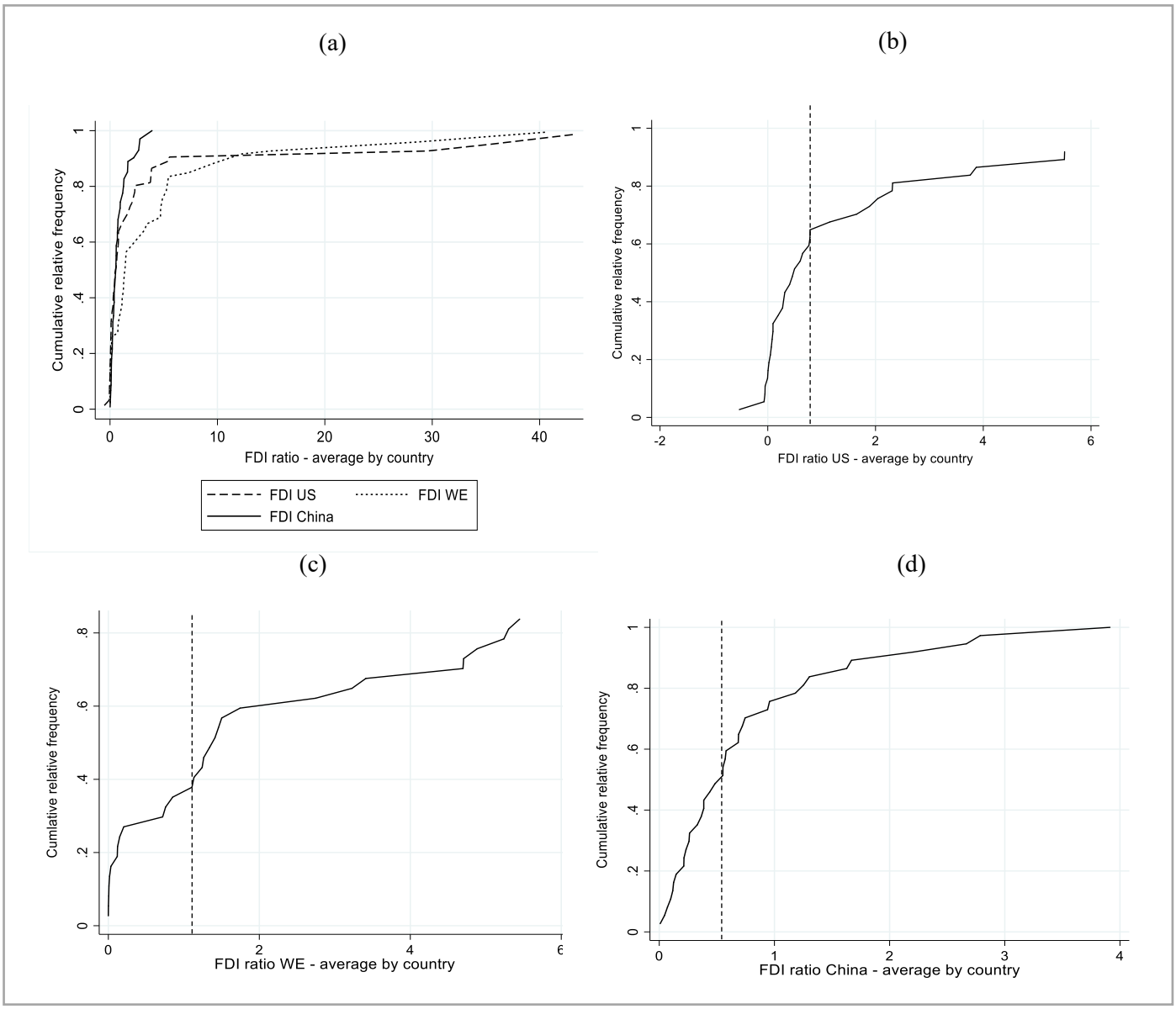
Finally, Table 4 includes the average values on COC and ROL for the 'higher' and 'lower' country groups. Also a 'favourite' group is added that includes countries with a very high average FDI ratio compared to the rest of the countries in the sample. Table 4 can be used to analyse some preliminary patterns between the main variables of interest.

The values in the table show that both over time and between groups of countries, there are slight changes in the average COC and ROL indices of the country groups. When one compares the differences between the 2003 and 2012 average COC and ROL scores, a negative time trend is observed for all but the 'favourite' countries of American foreign investors. Additionally, countries that on average receive relatively high FDI from the US, mostly score lower on their average COC and ROL, although this pattern is not clearly observed for the 'favourite' countries of American investors. A clearer pattern is observed when countries are split up into the 'higher' and 'lower' groups for FDI from WE and China. Countries that receive relatively high FDI from Western European investors on average score higher on both COC and ROL. Vice versa, countries that have receive relatively high FDI from Chinese firms, on average score lower on both COC and ROL.

[19] The corresponding frequency tables are included in Appendix C.

[20] The critical reader may argue that the 'cut-off points' could also have been defined slightly differently. Yet this would have resulted in similar regression estimations.

FIGURE 6
Cumulative Relative Frequency of the Average FDI Ratios over the 2003-2012 Period



Notes: graph (a) includes all countries of the sample. Graph (b), (c) and (d) show part of the cumulative relative frequency polygon of the FDI ratios of respectively the US, WE and China. This makes it clearer why the cut-off points of respectively 1.2%, 1.11% and 0.6% are chosen. The dashed vertical lines in (b), (c) and (d) illustrate these cut-off points. The horizontal axis represent the average FDI ratios over 2003-2012 in percentages. The vertical axis represents the cumulative relative frequency in decimals.

TABLE 4
Characteristics of Countries Grouped by 'Higher' and 'Lower' Average FDI Ratio

FDI stock to GDP		**United States**			**Western Europe**			**China**		**Total**
		<1.2%	*>1.2% (excl. favourites)*	*Favour-rites*	*<1.11%*	*>1.11% (excl. favourites)*	*Favour-rites*	*<0.60%*	*>0.60%*	
Number of countries		21	13	3	13	22	2	22	15	37
COC	mean	-0.54	-0.78	-0.64	-0.76	-0.56	-0.35	-0.62	-0.65	-0.63
	2003	-0.49	-0.76	-0.83	-0.74	-0.54	-0.35	-0.60	-0.64	-0.61
	2012	-0.56	-0.83	-0.61	-0.79	-0.59	-0.45	-0.64	-0.69	-0.66
	Δ 2003 – 2012	*-0.07*	*-0.07*	*+0.22*	*-0.05*	*-0.05*	*-0.10*	*-0.04*	*-0.05*	*-0.04*
ROL	mean	-0.59	-0.79	-0.50	-0.89	-0.52	-0.14	-0.59	-0.74	-0.65
	2003	-0.53	-0.75	-0.66	-0.85	-0.50	-0.05	-0.55	-0.72	-0.62
	2012	-0.59	-0.80	-0.40	-0.90	-0.51	-0.08	-0.60	-0.72	-0.65
	Δ 2003 – 2012	*-0.06*	*-0.05*	*+0.26*	*-0.05*	*-0.01*	*-0.03*	*-0.05*	*0*	*-0.03*

Notes: the table shows the values of the COC and ROL indicators by country group and time period. Countries are grouped according to the categories of the binary variable of the Probit regression of the Heckman procedure. 'Favourites' are countries that have relatively very high FDI stock to GDP over the 2003-2012 period. Favourites for FDI from the US are Equatorial Guinea, Mauritius, and Liberia, which have a FDI ratio of respectively 29.6%, 35.5% and 43.22%. Favourites for FDI from WE are the Republic of Congo and Mauritius, which have a FDI ratio of respectively 28.7% and 40.6%. There are no extreme values on FDI from China. Values are rounded to two decimals.

5. Empirical Results

This chapter discusses the results of the regressions that estimate the effects of American, Western European and Chinese FDI on COC and ROL in 37 African host countries over the 2003-2012 period. The regressions are estimated by the RE model, the Heckman two-step procedure, the Prais-Winsten estimation for panel data, and by the OLS and RE models taking the first difference of the non-stationary variables.

5.1. Random Effects Model

The results of the RE Estimation (5) are presented in Table 5.[21] The estimated coefficients represent the within-country and between-country effects. The interpretation of the coefficients differs for variables that are non-log transformed, variables that are log transformed and for dummy variables. Starting with the first, a one unit changes in non-log transformed variables generates a $\hat{\beta}$ unit change in COC or ROL. As an illustration, the estimated coefficient of FDI from the US in Estimation (1) indicates that when the US FDI ratio increases by one percentage point, COC is estimated to significantly increase by 0.00283. Secondly, the estimated coefficients for log transformed variables represent a $\hat{\beta}$ change in COC or ROL when the log transformed variable changes by 100%. Consider for instance the significant coefficient of the log transformed population variable included in Estimation (1). Its estimated coefficient implies that when population (log) increases with 100%, COC decreases by 0.0906. Thirdly, for dummy variables, the $\hat{\beta}$ represents the unit change in COC or ROL when the dummy moves from a 0 to a 1 score. Consider, for example, the dummy for oil exporting countries in Estimation (3). Its estimated significant coefficient is -0.102, implying that when an African host country exports oil in a certain year, its estimated ROL is 0.102 lower compared to non-oil exporting countries. Note that all estimated coefficients are rather small in absolute terms because both COC and ROL range from -2.5 to 2.5, compared to a higher absolute range for most independent variables.

For brevity reasons, the remainder of this chapter only discusses the signs and significance levels of the main variables of interest. These are COC, ROL, the measures for FDI, democracy, and the interactions between FDI and democracy. As a reminder, it was hypothesized that American and Western European investors put more pressure on the African countries they invest in, the more capital they invested in those countries. Chinese firms on the other hand are not expected to exert any significant influence over their host countries, mostly because of their non-interference policy.

To begin with, the results of Estimation (1) and (2) of Table 5 are in line with the expectation that American and Western FDI significantly relate to the COC index and Chinese FDI does not. Yet the sign of the estimated coefficient for FDI from WE is the opposite of what

[21] The curious reader may wonder whether the results are biased by including the measures for FDI from the US, WE and China in one equation. For clarity, Appendix D therefore show the RE estimation results for the equations for COC and ROL, separately for FDI from the US, WE and China. The tables show similar results.

TABLE 5
Random Effects Estimation

	(1) Control of Corruption	(2) Control of Corruption	(3) Rule of Law	(4) Rule of Law
FDI ratio US	0.00281**	0.00283**	-0.000660	-0.000488
	(2.44)	(2.39)	(-0.63)	(-0.45)
FDI ratio WE	-0.00364**	-0.00432**	-0.00116	-0.00124
	(-2.12)	(-2.17)	(-0.76)	(-0.69)
FDI ratio China	-0.00452	-0.00579	0.0155	0.0224*
	(-0.39)	(-0.41)	(1.53)	(1.77)
Degree of democracy	0.0312****	0.0337****	0.0446****	0.0461****
	(4.02)	(4.17)	(6.39)	(6.28)
Interactions:				
FDI ratio US * democracy		0.000514**		0.000000689
		(2.13)		(0.00)
FDI ratio WE * democracy		0.000132		0.0000892
		(0.33)		(0.25)
FDI ratio China * democracy		-0.00169		-0.00269
		(-0.48)		(-0.85)
Control variables:				
Dummy colonized by UK	0.146	0.133	0.300**	0.298*
	(1.03)	(0.95)	(2.03)	(1.95)
Population (log)	-0.0906*	-0.0875*	-0.102*	-0.108*
	(-1.77)	(-1.72)	(-1.85)	(-1.91)
GDP per capita (log)	0.0620**	0.0542**	0.0267	0.0242
	(2.35)	(2.02)	(1.07)	(0.95)
Gini	-0.00179	-0.00158	0.00131	0.00147
	(-0.34)	(-0.30)	(0.29)	(0.32)
Dummy for landlocked countries	0.198	0.196	0.154	0.150
	(1.23)	(1.23)	(0.92)	(0.87)
Dummy for oil exporting countries	-0.0798	-0.0766	-0.102**	-0.101**
	(-1.58)	(-1.51)	(-2.25)	(-2.24)
Government expenditure	0.0113****	0.0113****		
	(3.73)	(3.71)		
Protestant religion	0.00108	0.00102		
	(0.38)	(0.36)		
Ethnolinguistic fractionalization			-0.593	-0.600
			(-1.64)	(-1.61)
Latitude			1.043*	1.059*
			(1.85)	(1.82)
Openness (log)			0.0956**	0.0924**
			(2.39)	(2.27)
Dummies for missing observations:				
Dummy for missing obs. on FDI ratio US	0.0116	0.0135	-0.0372	-0.0387
	(0.35)	(0.41)	(-1.27)	(-1.31)
Dummy for missing obs. on government expenditure	-0.176****	-0.162***		
	(-3.49)	(-3.19)		
Dummy for missing obs. on openness (log)			0.209	0.198
			(1.45)	(1.37)

Constant	0.121	0.116	0.252	0.379
	(0.14)	(0.13)	(0.27)	(0.39)
Observations	370	370	370	370
R^2 within	0.1359	0.1468	0.1496	0.1516
R^2 between	0.3577	0.3771	0.4146	0.4139

Notes: the regressions are estimated on the data sample in which missing observations are filled in by their country mean over the period. t statistics are in parentheses. (****), (***), (**), (*) denote significance at 0.1%, 1%, 5%, and 10% levels, respectively.

was expected. An explanation for the negative estimator could be that Western European investors may be prone to use financial bribes to circumvent local laws, which reinforces local competition (Demir, 2016). Furthermore, the estimated coefficient for the degree of democracy is in consonance with the expectation that democratization positively and significantly relates to COC. Also the interaction between American FDI and democracy is significant and positive. This suggests that the absolute effect of American FDI on COC is estimated to be higher, the higher the degree of democracy of the African host country. This conforms to the assumption that the checks and balances system in democracies constrains political actors and restrains corruption (Rigobon & Rodrik, 2005; Treisman, 2000). Nevertheless, apart from this interaction term, no other interaction term shows a significant estimated coefficient, so the evidence is not that strong.

Secondly, the results of Estimation (3) and (4) contrast what was expected. The FDI ratios from the US and WE do not have significant estimators, whilst Chinese FDI shows a significant estimator in Estimation (4). The positive coefficient suggests that Chinese MNC activity in African countries positively relates to the quality of ROL in the host countries. Although this contrasts the expectation, it confirms part of the previous empirical studies that conclude that the role of China within the African continent may actually be net positive (Haroz, 2011). In addition, although the coefficient of democracy again is highly significant, none of the interaction terms between FDI and democracy show significant estimates, suggesting that democracy does not condition the effects of any FDI ratio on ROL.

5.2. Heckman two-step Procedure

As established, the estimators of the RE estimation are presumably biased because foreign investors make their decision to invest in a selective way. To account for this selection bias problem, the effects of FDI from the US, WE and China are separately estimated using the Heckman two-step procedure. The first step of the Heckman estimation includes a Probit regression that estimates the chance that an African country receives relatively high FDI. When

estimating the effect of FDI from the US, host countries considered as receiving 'high' FDI are the ones that have an average US FDI ratio higher than 1.20%. When estimating the effect of FDI from WE, the 'higher' country groups includes the countries that have a higher than 1.11% average WE FDI ratio over the 2003-2012 period. When estimating the effect of FDI from China, thus point lies at an average FDI ratio of 0.60%.

The results of the Probit estimation are used to compute a selection bias control factor named Lambda, which is added to an OLS regression. The OLS regression is estimated only for the countries that receive relatively 'high' FDI, i.e., have an average FDI ratio above 1.2% for the US FDI estimation, 1.11% for the WE FDI estimation and 0.60% for the Chinese FDI estimation. If performed correctly, the Heckman regression analysis should produce unbiased parameter estimates (Smits, 2003).

Table 6 presents the results of the Heckman estimation using FDI from the US as main explanatory variable to explain COC and ROL. For brevity, only the estimated coefficients of the main variables of interest are included. All four estimations show a significant and negative Lambda coefficient. This suggests that the omitted variable bias, which increases African countries' probability to receive an average FDI ratio US above 1.20%, decreases the COC and ROL indices. The Wald test rejects the hypothesis of independent equations, indicating the Heckman two-step procedure as warranted to correct for the selection bias. Additionally, the measure for infrastructural development, telephone subscriptions per 100 people, significantly increases African countries' probability to receive 'higher' FDI the US.

Considering the estimated coefficients, the regression output of the first step of the Heckman equation indicates that FDI from the US significantly relates to ROL, but not to COC. Note that this regression is only estimated for the African countries that have relatively high FDI stocking originating in the US. The estimated sign of the coefficient of the US FDI ratio is negative in all four equations, against what was expected.

Again, the degree of democracy significantly and positively relates to COC. By contrast, its estimator is not significant in Estimation (3) and (4) regarding ROL. This is a rather odd finding, as the degree of democracy shows a positive and significant coefficient in all previous and further estimated regressions. Apparently, for the specific sample that includes those African countries that have an average FDI ratio US of more than 1.20%, democracy does not significantly relate to ROL. What's more, the interaction term between FDI from the US and democracy is not significant in either case. The findings from the Heckman regression thus partly contrast the findings of the previous RE estimation.

TABLE 6
Heckman Two-Step Procedure for FDI ratio US

	(1) Control of Corruption (Equation of Interest)	(2) Control of Corruption (Equation of Interest)	(3) Rule of Law (Equation of Interest)	(4) Rule of Law (Equation of Interest)
FDI ratio US	-0.00126	-0.00169	-0.00275*	-0.00325**
	(-0.61)	(-0.85)	(-1.76)	(-2.20)
Degree of democracy	0.121****	0.117****	0.0147	0.0161
	(6.06)	(6.05)	(1.00)	(1.08)
FDI ratio US * democracy		0.000641		0.000233
		(1.64)		(0.72)
Constant	-0.972	-1.073	5.799****	5.893****
	(-1.25)	(-1.44)	(4.44)	(4.43)
	Probability of FDI ratio US (Selection equation)			
	(1)	(2)	(3)	(4)
Telephone lines (log)	0.542****	0.542****	0.309**	0.309**
	(3.85)	(3.85)	(1.99)	(1.99)
Constant	3.788	3.788	-20.62****	-20.62****
	(1.43)	(1.43)	(-5.20)	(-5.20)
Lambda	-0.371****	-0.353****	-0.227***	-0.230***
	(-3.70)	(-3.69)	(-2.99)	(-2.98)
Observations	370	370	370	370
Wald test of independent equations (rho = 0)	chi2(13) = 340.12 Prob > chi2 = 0.00	chi2(14) = 376.75 Prob > chi2 = 0.00	chi2(14) = 1424.97 Prob > chi2 = 0.00	chi2(15) = 1381.83 Prob > chi2 = 0.00

Notes: the regressions are estimated on the data sample in which missing observations are filled in by their country mean over the period. t statistics are in parentheses. (****), (***), (**), (*) denote significance at 0.1%, 1%, 5%, and 10% levels, respectively. For brevity reasons, regressors included but not reported are: the dummy for colonized by UK, population (log), GDP per capita (log), Gini, the dummy for landlocked countries, the dummy for oil exporting countries, government expenditure, Protestant religion, ethnolinguistic fractionalization, latitude, openness (log), the dummy for missing observations on FDI ratio US, dummy for missing observations on government expenditure, and the dummy for missing observations on openness (log). The coefficients of these regressors are reported in Appendix E.

Secondly, Table 7 presents the estimated coefficients of the Heckman procedure using FDI from WE as main explanatory variable. This time, the positive and significant Lambda suggests that the omitted variable bias, which increases the probability for African countries on having a higher than 1.11% average WE FDI ratio, increases COC and ROL. Again, the Heckman two-step procedure is warranted to correct for the selection bias of Western European firms, as indicated by the significant estimator of infrastructure and the significant outcome of the Wald test.

The estimators of Table 7 suggest that in the countries that Western European MNCs invest the most, Western European investments significantly and positively relate to COC. The negative sign again contrasts the expectations, similar to the outcome of the previous RE model. Likewise, the estimated coefficient of FDI from WE again is insignificant.

TABLE 7
Heckman Two-Step Procedure for FDI ratio WE

	(1) Control of Corruption (Equation of Interest)	(2) Control of Corruption (Equation of Interest)	(3) Rule of Law (Equation of Interest)	(4) Rule of Law (Equation of Interest)
FDI ratio WE	-0.00918****	-0.00794***	0.00364	0.000613
	(-3.41)	(-2.89)	(1.10)	(0.18)
Degree of democracy	0.0367****	0.0407****	0.0468****	0.0411***
	(3.55)	(3.72)	(3.60)	(3.10)
FDI ratio WE * democracy		-0.000689		0.00148**
		(-1.22)		(2.09)
Constant	-1.014	-0.916	1.325	1.128
	(-1.38)	(-1.22)	(0.80)	(0.67)
	Probability of FDI ratio WE (Selection equation)			
	(1)	(2)	(3)	(4)
Telephone lines (log)	0.647****	0.647****	0.585****	0.585****
	(5.93)	(5.93)	(4.80)	(4.80)
Constant	-9.012****	-9.012****	-19.61****	-19.61****
	(-3.99)	(-3.99)	(-6.39)	(-6.39)
Lambda	0.402****	0.408****	0.336**	0.369**
	(3.52)	(3.51)	(2.19)	(2.42)
Observations	370	370	370	370
Wald test of independent equations (rho = 0)	chi2(11) = 386.85 Prob > chi2 = 0.00	chi2(12) = 376.64 Prob > chi2 = 0.00	chi2(11) = 350.93 Prob > chi2 = 0.00	chi2(12) = 348.79 Prob > chi2 = 0.00

Notes: the regressions are estimated on the data sample in which missing observations are filled in by their country mean over the period. t statistics are in parentheses. (****), (***), (**), (*) denote significance at 0.1%, 1%, 5%, and 10% levels, respectively. For brevity reasons, regressors included but not reported are: the dummy for colonized by UK, population (log), GDP per capita (log), Gini, the dummy for landlocked countries, the dummy for oil exporting countries, government expenditure, Protestant religion, ethnolinguistic fractionalization, latitude, openness (log), dummy for missing observations on government expenditure, and the dummy for missing observations on openness (log). The coefficients of these regressors are reported in Appendix E.

The estimator of the degree of democracy is highly significant in all cases. This time, the interaction between FDI and democracy shows a positive and significant coefficient in Estimation (4). This implies that, for countries that receive relatively high FDI from WE, the absolute effect of FDI from WE is estimated to be higher for democracies than for autocracies. This confirms the expectation that democracy conditions the FDI, because politicians in democratic countries are more likely and able to fulfil the demands to proper governance by Western MNCs (Seda, 2005).

Table 8 presents the Heckman two-step equation using FDI from China as main explanatory variable. Again, the estimated coefficients of the Lambda term and the selection variable are significantly positive. The same holds for the outcome of the Wald test. Again, the Heckman procedure is warranted to control for the selection bias in the sample.

TABLE 8
Heckman Two-Step Procedure for FDI ratio China

	(1) Control of Corruption (Equation of Interest)	(2) Control of Corruption (Equation of Interest)	(3) Rule of Law (Equation of Interest)	(4) Rule of Law (Equation of Interest)
FDI ratio China	-0.0462**	-0.0385	-0.00769	0.0141
	(-2.43)	(-1.58)	(-0.23)	(0.33)
Degree of democracy	0.0693****	0.0706****	0.0546***	0.0580***
	(6.20)	(6.13)	(3.20)	(3.28)
FDI ratio China * democracy		-0.00302		-0.00784
		(-0.49)		(-0.79)
Constant	-4.498****	-4.469****	-0.947	-0.783
	(-3.97)	(-3.94)	(-0.56)	(-0.45)
	Probability of having 'higher' FDI from China (selection equation)			
	(1)	(2)	(3)	(4)
Export share with China	0.0940****	0.0940****	0.0827****	0.0827****
	(6.73)	(6.73)	(5.90)	(5.90)
Constant	34.28****	34.28****	25.81****	25.81****
	(9.17)	(9.17)	(6.05)	(6.05)
Lambda	0.331***	0.334***	0.590****	0.598****
	(3.15)	(3.18)	(3.39)	(3.38)
Observations	370	370	370	370
Wald test of independent equations (rho = 0)	chi2(13) = 466.58 Prob > chi2 = 0.00	chi2(14) = 464.85 Prob > chi2 = 0.00	chi2(14) = 238.93 Prob > chi2 = 0.00	chi2(15) = 233.89 Prob > chi2 = 0.00

Notes: the regressions are estimated on the data sample in which missing observations are filled in by their country mean over the period. t statistics are in parentheses. (****), (***), (**), (*) denote significance at 0.1%, 1%, 5%, and 10% levels, respectively. For brevity reasons, regressors included but not reported are: the dummy for colonized by UK, population (log), GDP per capita (log), Gini, the dummy for landlocked countries, the dummy for oil exporting countries, government expenditure, Protestant religion, ethnolinguistic fractionalization, latitude, openness (log), dummy for missing observations on government expenditure, and the dummy for missing observations on openness (log). The coefficients of these regressors are reported in Appendix E.

The results are somewhat different compared to the results of the previous RE estimation. Table 8 highlights that FDI from China significantly and negatively relates to COC in Estimation (1). The results imply that the influence of Chinese firms in the African countries in which the firms invest the most, may contribute to corruption. This is in line with some previous empirical results (Brazys & Vadlamannati, 2018; He & Zhu, 2018; Kennedy, 2012). However, the significance of the FDI estimator falls away once the interaction between FDI and democracy is added. Continuing, again all estimates of democracy are highly significant and positive. Nevertheless, none of the interaction terms show significant results, implying that democracy does not condition the effect of Chinese FDI.

TABLE 9
Prais-Winsten Estimation

	(1) Control of Corruption	(2) Control of Corruption	(3) Rule of Law	(4) Rule of Law
FDI ratio US	0.00111	0.00212	-0.000841	-0.000717
	(0.58)	(1.16)	(-0.46)	(-0.37)
FDI ratio WE	0.00134	-0.000303	0.00651***	0.00507**
	(0.82)	(-0.20)	(2.71)	(2.54)
FDI ratio China	-0.0224	-0.0225	-0.0223	-0.0178
	(-1.60)	(-1.36)	(-1.19)	(-0.86)
Democracy	0.0382****	0.0391****	0.0466****	0.0500****
	(5.63)	(5.86)	(7.03)	(8.62)
FDI ratio US * democracy		0.000966***		0.000623
		(2.63)		(1.46)
FDI ratio WE * democracy		0.000300		0.000883**
		(0.94)		(2.01)
FDI ratio China * democracy		-0.00307		-0.00784*
		(-0.85)		(-1.94)
Constant	-2.696****	-2.873****	-2.237****	-2.393****
	(-4.35)	(-4.58)	(-4.08)	(-4.46)
Observations	370	370	370	370
R^2	0.472	0.490	0.514	0.549

Notes: the Prais-Winsten estimation is estimated to account for the autocorrelation in the sample. The regressions are estimated on the data sample in which missing observations are filled in by their country mean over the period. t statistics are in parentheses. (****), (***), (**), (*) denote significance at 0.1%, 1%, 5%, and 10% levels, respectively. For brevity reasons, regressors included but not reported are: the dummy for colonized by UK, population (log), GDP per capita (log), Gini, the dummy for landlocked countries, the dummy for oil exporting countries, government expenditure, Protestant religion, ethnolinguistic fractionalization, latitude, openness (log), the dummy for missing observations on FDI ratio US, dummy for missing observations on government expenditure, and the dummy for missing observations on openness (log). The coefficients of these regressors are reported in Appendix F.

5.4. Prais-Winsten Estimation

The Prais-Winsten regression for panel data is estimated to account for the autocorrelation issues in the sample. The method does so by calculating panel-corrected error estimates for linear cross-sectional time-series models. Table 9 presents the results.

Starting with the estimated coefficients of the three FDI ratios, the only statistically significant influence that is found is that of FDI from WE on ROL. Its estimated coefficient is positive. This result is consistent with the expectation that FDI from WE eventually may contribute to stronger ROL in African countries. Again, the degree of democracy is statistically significantly and positively related to both COC and ROL. What catches the eye is that the three interaction terms show statistically significant estimators, implying that democracy conditions part of the effects of FDI.

TABLE 10
First Differences Estimation

	(1) Control of Corruption (OLS)	(2) Control of Corruption (RE)	(3) Rule of Law (OLS)	(4) Rule of Law (RE)
FDI ratio US	0.000252	0.00303*	-0.000425	-0.00193
	(0.11)	(1.74)	(-0.16)	(-1.33)
$(\text{FDI ratio WE})_t -$	0.00514	-0.000404	0.00997*	0.00230*
$(\text{FDI ratio WE})_{t-1}$	(1.15)	(-0.24)	(1.93)	(1.65)
$(\text{FDI ratio China})_t -$	-0.0216	-0.000525	-0.0292	0.0116
$(\text{FDI ratio China})_{t-1}$	(-0.53)	(-0.03)	(-0.62)	(0.92)
Degree of democracy	0.0511****	0.0326****	0.0709****	0.0423****
	(6.05)	(4.03)	(7.31)	(6.22)
Constant	-0.756****	-1.055****	-0.247**	-1.188****
	(-6.12)	(-8.35)	(-1.98)	(-3.57)
Observations	333	333	333	333
R^2 adjusted	0.54	-	0.47	-
R^2 within	-	0.14	-	0.18
R^2 between	-	0.17	-	0.36

Notes: the regressions are estimated on the data sample in which missing observations are filled in by their country mean over the period. t statistics are in parentheses. (****), (***), (**), (*) denote significance at 0.1%, 1%, 5%, and 10% levels, respectively. For brevity reasons, regressors included but not reported are: the dummy for colonized by UK, the first difference of population (log), the first difference of GDP per capita (log), the first difference of Gini, the dummy for landlocked countries, the dummy for oil exporting countries, government expenditure, Protestant religion, ethnolinguistic fractionalization, latitude, openness (log), the dummy for missing observations on FDI ratio US, dummy for missing observations on government expenditure, and the dummy for missing observations on openness (log). The coefficients of these regressors are reported in Appendix F.

Having said that, the estimators of the Prais-Winsten estimation are rather different than that of the previous RE and Heckman estimations. This raises the question whether previous estimation were actually biased because of the autocorrelation issues in the sample.

5.5. Stationarity Treatment

To account for potential problems related to the non-stationarity of several variables, an OLS and a RE regression are estimated using all stationary variables. This is done by taking the first differences of the non-stationary variables, as this method should make these variables stationary (Baumöhl & Lycósa, 2009).[22] As a reminder, the non-stationary variables are FDI from WE, FDI from China, population (log), GDP per capita (log) and Gini.

Table 10 presents the estimation results. The results on the FDI ratio US estimator are

[22] Estimating a Vector Error Correction model for panel data could have been another method to account for the non-stationary data. However, the estimators of the panel vector autoregression are only consistent when the number of time observations in the data set tends to infinity (Cagala & Glogowsky, 2015). As this requirement does not hold for the rather small time period of the data sample of this thesis, it is not appropriate to estimate the Vector Error Correction model. Consequently, taking the first differences of the non-stationary variables is the second best alternative.

logically similar as before. In this case, the first difference of FDI from WE shows a significant and positive coefficient in both the OLS and RE regression. The same is not true for the first difference of FDI from China. These findings partly confirm the expectations.

Similar to the Prais-Winsten estimation results, the results of the first differences estimation are rather different compared to the previous results of the RE and Heckman estimations. This also raises the question how the non-stationarity of several variables biases previous findings.

6. Sensitivity Analysis

The main regression results are tested against four robustness checks based on changes in the main independent variables. First, the FDI ratio variables are replaced by measures for FDI flow to GDP. Secondly, all explanatory variables are lagged once. Thereafter, the regressions are estimated using a data sample that includes missing observations. Lastly, the regressions are estimated on a sample that excludes the influential cases. The results of these robustness checks, using the RE and Heckman regression estimations, are summarized in Table 11 to 13. For brevity reasons, the tables report only the main variables of interest. The full estimation results of the robustness checks are reported in Appendix G to J. The remainder of this chapter discusses the outcome of the robustness checks.

First, the sensitivity of the results is checked by using FDI *flow* to GDP as main explanatory variable, as FDI flow is commonly used to measure investments from one country to another.[23] The estimators of the RE model show no significant estimators and the estimators of the Heckman regression show only partly significant results.[24]

[23] Data on US FDI flow is missing for Namibia and Togo, and is mostly missing for Zimbabwe. Consequently, these three countries are removed from the sample when estimating the effect of FDI flow on COC and ROL. This leaves 42 more missing observations on FDI flow from the US. These missing observations are filled in by mean imputation and dummy variable adjustment, similar to the procedure used for missing observations on FDI stock.

[24] When estimating the Heckman two-step procedure, a different categorization is made for the binary dummy variable of the Probit regression. This is because African countries that have high FDI ratios do not necessarily have high FDI flow, and vice versa. The new categories for 'lower' and 'higher' FDI are again based on cumulative relative frequency polygons for country averages. This results in 'cutoff' points of 0% for FDI from the US, 0.03% for FDI from WE, and at 0.1% for FDI from China. the 'lower' and 'higher' country categories contain a comparable number of countries. The cumulative relative frequency polygons of FDI flow to GDP are available upon request.

Secondly, to account for delayed effects, the regressions are estimated with all lagged explanatory variables.[25] Most variables that showed significant estimators before remain significant, although several estimated coefficients flip sign, and others lose their significance.

Next, the regression is estimated using the original data sample, i.e. using the sample that includes missing observations. This is done to check whether the results are not 'blown up' when the missing observations are filled in by their country means over the period. The results show that a couple of variables that were significant before, now show the opposite sign or are not significant anymore. Others remain significant. Additionally, most interactions between FDI and democracy show significant estimators.

Finally, the regressions are estimated on data in which the influential cases are removed from the sample. What catches the eye is that when estimating the Heckman regression, nearly all variables show significant estimators, although several variables have the opposite sign of what was expected.

In sum, the sensitivity analyses suggest that the results of the RE and Heckman regression are quite, as the significance levels and the direction of the estimated coefficients both depend on changes in the main explanatory variables. What catches the eye is that particularly when the influential cases are removed from the sample, nearly all main explanatory variables show significant estimators. The latter observation suggests that the previous estimated models fir rather badly for the influential cases in the sample.

[25] The explanatory variables were also lagged two and three times. These lags did not show significant coefficients and are thus excluded from the tables that show the robustness checks results.

TABLE 11
Sensitivity Analysis, RE model Estimations

Dependent variable	Robustness check	FDI home destination	Variable	Coefficient	(t statistics)	Obs.
COC	*1. FDI flow to GDP*	US	FDI flow to GDP	0.00178	(0.61)	340
			FDI flow to GDP * democracy	-0.000000232	(-0.00)	
		WE	FDI flow to GDP	-0.00232	(-0.51)	340
			FDI flow to GDP * democracy	0.00101	(1.20)	
		China	FDI flow to GDP	0.00697	(0.22)	340
			FDI flow to GDP * democracy	0.000667	(0.08)	
	2. Lagged independent variables$_{t-1}$	US	FDI stock to GDP$_{t-1}$	0.00168	(1.44)	333
			(FDI stock to GDP* democracy) $_{t-1}$	0.000614**	(2.55)	
		WE	FDI stock to GDP$_{t-1}$	-0.00491**	(-2.21)	333
			(FDI stock to GDP* democracy) $_{t-1}$	-0.0000312	(-0.05)	
		China	FDI stock to GDP$_{t-1}$	0.0142	(0.83)	333
			(FDI stock to GDP* democracy) $_{t-1}$	-0.00868**	(-2.00)	
	3. Without mean imputation for missing observations	US	FDI stock to GDP	-0.00617	(-1.51)	312
			FDI stock to GDP * democracy	0.00178***	(2.66)	
		WE	FDI stock to GDP	-0.00391*	(-1.87)	312
			FDI stock to GDP * democracy	-0.0000172	(-0.04)	
		China	FDI stock to GDP	0.00838	(0.48)	312
			FDI stock to GDP * democracy	-0.00152	(-0.35)	
	4. Without influential cases	US	FDI stock to GDP	-0.00477	(-1.23)	332
			FDI stock to GDP * democracy	0.00245****	(3.50)	
		WE	FDI stock to GDP	-0.00656	(-1.63)	332
			FDI stock to GDP * democracy	0.000128	(0.13)	
		China	FDI stock to GDP	-0.0194	(-1.13)	332
			FDI stock to GDP * democracy	0.00274	(0.61)	

Table continues on next page

ROL	*1. FDI flow to GDP*	US	FDI flow to GDP	-0.00328	(-1.27)	340
			FDI flow to GDP * democracy	-0.000942	(-1.49)	
		WE	FDI flow to GDP	0.00188	(0.46)	340
			FDI flow to GDP * democracy	0.000340	(0.46)	
		China	FDI flow to GDP	0.0254	(0.89)	340
			FDI flow to GDP * democracy	-0.00692	(-0.96)	
	2. Lagged independent variables$_{t-1}$	US	FDI stock to GDP$_{t-1}$	-0.000577	(-0.53)	333
			(FDI stock to GDP* democracy) $_{t-1}$	0.000220	(0.98)	
		WE	FDI stock to GDP$_{t-1}$	-0.00238	(-1.20)	333
			(FDI stock to GDP* democracy) $_{t-1}$	-0.00000426	(-0.01)	
		China	FDI stock to GDP$_{t-1}$	0.0330**	(2.17)	333
			(FDI stock to GDP* democracy) $_{t-1}$	-0.00824**	(-2.15)	
	3. Without mean imputation for missing observations	US	FDI stock to GDP	-0.0140****	(-4.17)	323
			FDI stock to GDP * democracy	0.00207****	(3.80)	
		WE	FDI stock to GDP	0.000199	(0.11)	323
			FDI stock to GDP * democracy	-0.000149	(-0.40)	
		China	FDI stock to GDP	0.0216	(1.44)	323
			FDI stock to GDP * democracy	-0.00176	(-0.49)	
	4. Without influential cases	US	FDI stock to GDP	-0.00832**	(-2.40)	328
			FDI stock to GDP * democracy	0.00151**	(2.46)	
		WE	FDI stock to GDP	0.00327	(0.89)	328
			FDI stock to GDP * democracy	-0.000341	(-0.38)	
		China	FDI stock to GDP	-0.0179	(-1.12)	328
			FDI stock to GDP * democracy	-0.00504	(-1.22)	

Notes: (****), (***), (**), (*) denote significance at 0.1%, 1%, 5%, and 10% levels, respectively.

TABLE 12
Sensitivity Analysis, Heckman Estimations for Control of Corruption

Robustness check	FDI home destination	Variable	Coefficient	(t statistics)	Obs.	Lambda	Wald test of indep. eqns. (rho = 0)
1. FDI flow to GDP	US	FDI flow to GDP	0.00500	(0.26)	340	-1.233*	chi2(12) = 279.96
		FDI flow to GDP * democracy	0.00144	(0.32)		(-1.83)	Prob > chi2 = 0.00
	WE	FDI flow to GDP	0.00526	(0.65)	340	-0.406****	chi2(13) = 47.81
		FDI flow to GDP * democracy	0.000975*	(1.73)		(-3.70)	Prob > chi2 = 0.00
	China	FDI flow to GDP	-0.164**	(-2.46)	340	-0.377****	chi2(12) = 393.08
		FDI flow to GDP * democracy	0.0272	(1.56)		(-4.50)	Prob > chi2 = 0.00
2. Lagged independent variables$_{t-1}$	US	FDI stock to GDP$_{t-1}$	-0.00251	(-1.36)	333	-0.310****	chi2(13) = 446.99
		(FDI stock to GDP* democracy) $_{t-1}$	0.000597	(1.61)		(-3.47)	Prob > chi2 = 0.00
	WE	FDI stock to GDP$_{t-1}$	-0.00963**	(-2.30)	333	0.526***	chi2(12) = 208.90
		(FDI stock to GDP* democracy) $_{t-1}$	0.00364	(0.32)		(3.13)	Prob > chi2 = 0.00
	China	FDI stock to GDP$_{t-1}$	-0.0111	(-0.40)	333	0.319***	chi2(12) = 422.91
		(FDI stock to GDP* democracy) $_{t-1}$	-0.0106	(-1.39)		(3.00)	Prob > chi2 = 0.00
3. Without mean imputation for missing observations	US	FDI stock to GDP	-0.0103*	(-1.77)	331	-0.429***	chi2(11) = 200.96
		FDI stock to GDP * democracy	0.00212**	(2.08)		(-2.98)	Prob > chi2 = 0.00
	WE	FDI stock to GDP	-0.00815**	(-2.36)	343	0.509****	chi2(11) = 244.10
		FDI stock to GDP * democracy	-0.000662	(-0.94)		(3.54)	Prob > chi2 = 0.00
	China	FDI stock to GDP	-0.00550	(-0.20)	347	0.375****	chi2(11) = 453.09
		FDI stock to GDP * democracy	-0.00619	(-0.97)		(3.45)	Prob > chi2 = 0.00
4. Without influential cases	US	FDI stock to GDP	-0.0123**	(-2.41)	332	-0.379***	chi2(13) = 583.91
		FDI stock to GDP * democracy	0.00246*	(1.92)		(-3.29)	Prob > chi2 = 0.00
	WE	FDI stock to GDP	-0.00963**	(-2.41)	332	0.363****	chi2(12) = 371.94
		FDI stock to GDP * democracy	-0.00228**	(-2.47)		(3.39)	Prob > chi2 = 0.00
	China	FDI stock to GDP	-0.0908****	(-3.39)	332	-0.0741	chi2(12) = 66.68
		FDI stock to GDP * democracy	-0.00956	(-1.25)		(-0.78)	Prob > chi2 = 0.00

Notes: the table shows only the main coefficients of interest of the second step of the Heckman two-step procedure. (****), (***), (**), (*) denote significance at 0.1%, 1%, 5%, and 10% levels, respectively.

TABLE 13
Sensitivity Analysis, Heckman Estimations for Rule of Law

Robustness check	FDI home destination	Variable	Coefficient	(t statistics)	Obs.	Lambda	Wald test of indep. eqns. (rho = 0)
1. FDI flow to GDP	US	FDI flow to GDP	0.00125	(0.26)	340	0.227**	chi2(14) = 841.74
		FDI flow to GDP * democracy	0.00197*	(1.73)		(1.98)	Prob > chi2 = 0.00
	WE	FDI flow to GDP	0.00907	(1.43)	340	0.267*	chi2(13) = 630.19
		FDI flow to GDP * democracy	0.00140***	(2.87)		(1.66)	Prob > chi2 = 0.00
	China	FDI flow to GDP	-0.113**	(-1.97)	340	-0.344****	chi2(13) = 616.43
		FDI flow to GDP * democracy	0.0178	(1.26)		(-4.00)	Prob > chi2 = 0.00
2. Lagged independent variables$_{t-1}$	US	FDI stock to GDP$_{t-1}$	-0.00270**	(-2.35)	333	-0.170***	chi2(14) = 2213.09
		(FDI stock to GDP* democracy) $_{t-1}$	0.000161	(0.63)		(-3.15)	Prob > chi2 = 0.00
	WE	FDI stock to GDP$_{t-1}$	0.00178	(0.42)	333	0.524***	chi2(12) = 245.86
		(FDI stock to GDP* democracy) $_{t-1}$	-0.0142	(-1.17)		(2.80)	Prob > chi2 = 0.00
	China	FDI stock to GDP$_{t-1}$	0.0683	(1.16)	333	0.662****	chi2(13) = 167.29
		(FDI stock to GDP* democracy) $_{t-1}$	-0.0172	(-1.24)		(3.29)	Prob > chi2 = 0.00
3. Without mean imputation for missing observations	US	FDI stock to GDP	-0.00972****	(-4.05)	342	-0.0835	chi2(12) = 2752.35
		FDI stock to GDP * democracy	0.00123***	(2.72)		(-1.37)	Prob > chi2 = 0.00
	WE	FDI stock to GDP	0.00197	(0.55)	355	0.527***	chi2(12) = 270.41
		FDI stock to GDP * democracy	0.00148*	(1.94)		(3.23)	Prob > chi2 = 0.00
	China	FDI stock to GDP	0.0256	(0.52)	359	0.685***	chi2(12) = 181.56
		FDI stock to GDP * democracy	-0.00927	(-0.81)		(3.20)	Prob > chi2 = 0.00
4. Without influential cases	US	FDI stock to GDP	-0.0123****	(-5.33)	328	-0.0801	chi2(12) = 2623.75
		FDI stock to GDP * democracy	0.00130**	(2.45)		(-1.56)	Prob > chi2 = 0.00
	WE	FDI stock to GDP	0.0132****	(4.53)	328	0.0327	chi2(12) = 1273.22
		FDI stock to GDP * democracy	0.00135**	(2.05)		(0.36)	Prob > chi2 = 0.00
	China	FDI stock to GDP	-0.100****	(-3.64)	328	(-0.31)	chi2(12) = 919.26
		FDI stock to GDP * democracy	-0.00202	(-0.31)			Prob > chi2 = 0.00

Notes: the table shows only the main coefficients of interest of the second step of the Heckman two-step procedure. (****), (***), (**), (*) denote significance at 0.1%, 1%, 5%, and 10% levels, respectively.

7. Discussion and Suggestions for Further Research

This thesis also has several limitations, mostly related to the measures and data used to estimate the regressions. To begin with, the time period of the sample is rather short, particularly when one considers the relatively small fluctuations in the COC and ROL indices over time. Secondly, although the WGI indices of COC and ROL can considered to be valid measures and although the indices are frequently used measures to capture part of the institutional environment of countries, the explanatory power of the WGI indices is naturally limited as it remains hard to properly capture institutional quality. More specifically, the general critique on the measures is that it remains questionable whether the indices can be properly compared across countries over time; whether the data sources used to construct the variables are sufficient; and whether there is an actual link between perceptions of governance and the reality (Thomas, 2009). These drawbacks make the COC and ROL measures rather noisy, which may have biased the estimated results.

Another limitation of the study is related to the measurement of FDI. It is namely not unlikely that the estimators for FDI from China are biased, provided that Chinese FDI is intertwined with Chinese foreign aid (Ergano & Rao, 2019; Kaplinsky & Morris, 2009; McCormick, 2008). As a result, the two measures are rather hard to disentangle and it is unclear whether the estimated coefficient of FDI from China unintentionally picks up unrelated effects.

Moreover, this thesis implicitly assumed that foreign investors originating in the same home destination, behave in a similar way. However, MNCs are certainly not homogenous entities, regardless of whether they have their headquarters in the same country or not (Kaplinsky & Morris, 2009). Rather, it is not uncommon that MNCs from the same country differ in their ownership type, investment motives and investment plans. Not to mention that it is equally plausible that different types of FDI are differently related to COC and ROL.

Similarly, African host countries are not homogenous. Countries, provinces and regions differ in their history, economic diversification, development paths and political regimes (Adams, 2009), as well as in their attitudes, and political and economic affiliations with the US, WE and China (He & Zhu, 2018). This implies that African actors in different host countries, regions and cities may differ in the extent to which they depend on FDI, and differ on how they will react on foreign investors.

Finally, previous studies indicate that institutions also affect the type, size and location of foreign investment (e.g., Alfaro, Kalemli-Ozcan, & Volosovych, 2008; Cuervo-Cazurra, 2006). This means there is a certain reverse causality in the sample. It was outside the scope of

this thesis to estimate an Instrumental Variable approach to account for this potential reverse causality, partly because various previous studies already have done so. This thesis accounted for the endogeneity in the sample by using the Heckman model, reasoning on the basis of a selection bias model.

The limitations leave open room for further research. First of all, a clear recommendation would be to repeat this study on a data sample that includes a longer time period and more countries. The sample can be augmented both with more host destinations, as well as with more home countries that provide FDI. Likewise, the analysis may be broadened by considering host regions rather than host countries. Furthermore, another suggestion would be to repeat the estimating of the regression models, yet capturing another aspect of host countries' institutional environment as dependent variables. This preferable could be measures that fluctuate more over time, and capture a wide range of aspects of countries' institutional environment. Examples of such measures are the International Country Risk Guide (ICRG) of the Political Risk Service, the Corruption Perception Index of Transparency International, or the Freedom House Index, to name just a few. Finally, an extension of the study may be to estimate the effects of different types of FDI. As an illustration, it may be interesting to compare the effect of market seeking foreign investment to, say, resource FDI.

8. Conclusion

This thesis hypothesizes that the specific effect of FDI on COC and ROL in African countries depends on the home destination of foreign investors, and may be conditioned by the degree of democracy in African host countries. In this way, this thesis carefully aims to make a new contribution to the literature. Mostly because of the rising controversy on the role of China within African countries, the effect of Chinese FDI is compared to the effect of FDI originating in the US and WE, the two biggest investors in the African continent.

FDI from the US and WE is expected to relate positively to COC and ROL in African countries. This is mostly because Western foreign investors are assumed to pressure the governments of the countries in which they invest, demanding to improve governance. Western investors are more likely to do so, the more they invested a country. On their turn, host governments are expected to fulfil the demands of Western investors, as they know that sufficient governance will attract foreign investments, which is beneficial for their economic development.

TABLE 14
Summary of the Significant Estimators of the Main Regressions

Regression estimation	*Dependent variable*	*Significant estimators*	*Estimated sign*
Random Effects	Control of Corruption	FDI ratio US	(+)
		FDI ratio WE	(–)
		FDI ratio US * democracy	(+)
	Rule of Law	FDI ratio China	(+)
Heckman	Control of Corruption	FDI ratio WE	(–)
		FDI ratio China	(–)
	Rule of Law	FDI ratio US	(–)
		FDI ratio WE * democracy	(+)
Prais-Winsten	Control of Corruption	FDI ratio US * democracy	(+)
	Rule of Law	FDI ratio WE	(+)
		FDI ratio China * democracy	(+)
		FDI ratio WE * democracy	(+)
First differences	Control of Corruption	FDI ratio US	(+)
	Rule of Law	$(\text{FDI ratio WE})_t - (\text{FDI ratio WE})_{t-1}$	(+)

Notes: the table only includes the main explanatory variables that have significant estimated coefficients.

The more democratic the host country, the more likely that the host government is willing and able to change its institutional environment to attract foreign investors. By contrast, mostly because of the non-interference policy of China, Chinese FDI is not expected to be significantly related to neither COC nor ROL.

The expectations are tested on a sample of 37 African countries over the 2003-2012 period using four types of regression estimations and performing several robustness checks. Table 14 provides an overview of the main results. For brevity, it displays only those variables that show significant estimated coefficients. In sum, the results suggest that FDI originating in the US may be positively related to COC and negatively to ROL. Vice versa, Western European and Chinese FDI seems to be negatively related to COC and positively to ROL.

In nearly all estimated regressions, the estimator of the democracy variable is highly significant and positive.[26] This finding is similar to previous studies that conclude that democracies are related to lower perceived corruption (Treisman, 2000) and stronger rule of law (Rigobon & Rodrik, 2005). Additionally, there is small empirical evidence that democracy

[26] For brevity, the democracy variable is not included in Table 14.

conditions the effect of FDI, implying that the absolute effect of Western and Chinese foreign investment is more positive (negative) in more (less) democratic African host countries.

Notwithstanding, the empirical conclusions should be treated with care, as they are rather unstable. That is, the results of Table 14 and of the previous sensitivity analyses show that the sign and significance levels of the main variables of interest are subject to the type of regression that is estimated, the variables included in that estimation, and the observations included in the sample. For instance, the outcomes of the Prais-Winsten estimation and the estimation including first differences raise the question whether the estimated results from the RE and Heckman models are biased because of autocorrelation problems and the non-stationary of several variables.

All things considered, it can be concluded, although with care, that FDI relates to COC and ROL in African host economies, and that the specific effect depends on the home destination of the foreign investors. Moreover, the evidence suggests that both Western and Chinese investors make their decision to invest in Africa in a selective way. Western firms seem to attach value to the level of infrastructural development, whereas Chinese firms mostly invest in countries that trade the most with China. Finally, the effect of FDI seems to be conditioned by the degree of democracy in the host economy. Future research has to show how stable these conclusions really are.

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Appendix A. Regression diagnostics

TABLE 15
Testing for multicollinearity: VIF values for the COC estimation

Variable	VIF	1/VIF
FDI ratio US	2.40	0.416937
FDI ratio WE	1.50	0.665328
FDI ratio China	1.37	0.728611
Degree of democracy	1.72	0.581336
Dummy for colonized by the UK	1.27	0.787165
Population (log)	1.73	0.577816
GDP per capita (log)	2.10	0.475632
Gini	3.94	0.253525
Dummy for landlocked countries	1.43	0.698962
Dummy for oil exporting countries	2.13	0.469659
Government expenditure to GDP	1.34	0.745330
Share of Protestant religion	3.45	0.289467
Mean VIF	*2.03*	

TABLE 16.
Testing for multicollinearity: VIF values for the ROL estimation

Variable	VIF	1/VIF
FDI ratio US	1.42	0.704492
FDI ratio WE	2.34	0.426443
FDI ratio China	1.51	0.663343
Degree of democracy	1.80	0.556195
Dummy for colonized by the UK	1.77	0.563537
Population (log)	1.98	0.504789
GDP per capita (log)	3.04	0.328539
Gini	2.85	0.350347
Dummy for landlocked countries	1.51	0.663197
Dummy for oil exporting countries	2.41	0.414705
Ethnolinguistic fractionalization	2.91	0.344010
Latitude	1.48	0.675506
Openness (log)	2.74	0.364640
Mean VIF	*2.14*	

TABLE 17.
Testing for homoscedasticity: Breusch-Pagan / Cook-Weisberg test for heteroskedasticity

Control of Corruption	Rule of Law
Ho: Constant variance	Ho: Constant variance
Variables: fitted values of COC	Variables: fitted values of ROL
chi2(1) = 3.66	chi2(1) = 0.15
Prob > chi2 = 0.0558	Prob > chi2 = 0.7003

TABLE 18
Testing for autocorrelation: Wooldridge test for autocorrelation in panel data

Control of Corruption	**Rule of Law**
H0: no first-order autocorrelation	H0: no first-order autocorrelation
F(1, 34) = 54.464	F(1, 33) = 18.717
Prob > F = 0.0000	Prob > F = 0.0001

TABLE 19
Number of missing observations per variable before mean imputation of missing observations

Variable	**Missing observations**	**Total observations**	**Percent Missing**
Rule of law	0	370	0.00
Control of corruption	0	370	0.00
FDI ratio US	37	370	10.00
FDI ratio WE	1	370	0.27
FDI ratio China	1	370	0.27
Degree of democracy	0	370	0.00
Dummy for colonized by the UK	0	370	0.00
Population (log)	1	370	0.27
GDP per capita (log)	1	370	0.27
Gini	0	370	0.00
Dummy for landlocked countries	0	370	0.00
Dummy for oil exporting countries	0	370	0.00
Government expenditure to GDP	23	370	6.22
Share of Protestant religion	0	370	0.00
Ethnolinguistic fractionalization	0	370	0.00
Latitude	0	370	0.00
Openness (log)	11	370	2.97
Telephone lines (log)	4	370	1.08
Export share with China to total products	0	370	0.00

TABLE 20
Outliers and influential cases in the COC OLS estimation

country	year	rstudent	lever	cook	dfit
Botswana	2003			.013014	.4438297
Botswana	2005	2599128		.0331093	.7104161
Botswana	2006			.0248438	.6140256
Congo, Rep.	2009		.1761134	.0115999	
Congo, Rep.	2012		.0906092		
Equatorial Guinea	2003		.4747713	.1337575	
Equatorial Guinea	2004		.0856926	.0119282	
Eritrea	2003		.1480429		
Eritrea	2004		.0817073		
Eritrea	2012		.1357328		
Ghana	2007				.4010478
Liberia	2003		.0916181		
Liberia	2007		.076526		
Liberia	2008		.0786693		
Liberia	2011		.087304		
Liberia	2012		.1004447		
Libya	2009		.0969091		
Mauritius	2005		.1000756		
Mauritius	2009		.0857335		
Mauritius	2010		.1416158	.0121004	.4260946
Mauritius	2011		.1273583	.0127347	.4372489
Mauritius	2012		.3233719		
Niger	2010		.0998936		
Niger	2011		.1050702		
Rwanda	2010	2715701		.0124784	.436505
Rwanda	2011	2832971		.0137716	.4589804
Rwanda	2012	3331935		.0184427	.5333967
South Africa	2011			.0109893	
South Africa	2012			.0185974	
Zambia	2009		.1023927		
Zambia	2012		.1384177		
Zimbabwe	2003			.0129492	
Zimbabwe	2004	-2982282		.0232344	
Zimbabwe	2005			.0110224	
Zimbabwe	2009			.0117818	
Zimbabwe	2010	-2595388		.0216016	
Zimbabwe	2011	-2763577		.0338451	
Zimbabwe	2012	-2780679	.081668	.0449888	

Notes: only those observations are shown that are characterized as an outliers or influential case when Estimation (1) is estimates by an OLS regression. The regression is estimated after missing observations are filled in by their country mean. To find outliers, the Studentisized residual is used, with a critical value of 2.58 (rule of thumb). The other three measures indicate influential cases. The critical value of Lever is 2 * (p/n). The critical value of Cook's distance is 4/n. The critical value of DfFit is 2 * √(p/n). p is number of predictors in regression model and n is number of cases in analysis. In the COC estimation, p is 14 and n is 370.

TABLE 21
Testing for outliers and influential cases in the ROL OLS estimation

country	year	rstudent	lever	cook	dfit
Cameroon	2003		.0819926		
Congo, Rep.	2009		.1788837	.0594232	
Congo, Rep.	2012		.0935097		
Egypt	2003			.0153069	.4979572
Egypt	2004			.0174161	.5312454
Egypt	2005			.0133015	.46347
Equatorial Guinea	2003		.4813317		
Equatorial Guinea	2004		.1650094	.0240725	
Eritrea	2012		.180672		
Ethiopia	2003		.1053443		
Ethiopia	2004		.1050861		
Ethiopia	2005		.1027069		
Ethiopia	2006		.1026029		
Ethiopia	2007		.1029788		
Ethiopia	2008		.1041943		
Ethiopia	2009		.105537		
Ethiopia	2010		.1056079		
Ghana	2012				.4091905
Liberia	2003			.0286097	
Liberia	2004		.1010873	.0114536	
Liberia	2005		.0819586		
Liberia	2006		.0925409		
Liberia	2007		.1020312		
Mauritius	2005		.1017264		
Mauritius	2010		.1285722	.0133786	.4629595
Mauritius	2011		.1170957		
Mauritius	2012		.3282017	.0139373	
Niger	2010		.0925624	.0134319	.4643124
Niger	2011		.0976833		
Uganda	2007			.0131185	.4597275
Uganda	2008			.0134358	.4652256
Zambia	2012		.1347916		
Zimbabwe	2003	-3.724.292		.0209199	
Zimbabwe	2004	-4.090.796		.0274185	
Zimbabwe	2005	-3.245.695		.0309957	
Zimbabwe	2006	-3.786.613		.0263721	
Zimbabwe	2007	-3.069.344		.0288735	
Zimbabwe	2008	-3.130.335		.0370842	
Zimbabwe	2009	-3.855.727		.0384172	
Zimbabwe	2010	-3.858.444		.0408159	
Zimbabwe	2011	-3.306.896		.0392568	
Zimbabwe	2012	-2.852.803		.0368049	

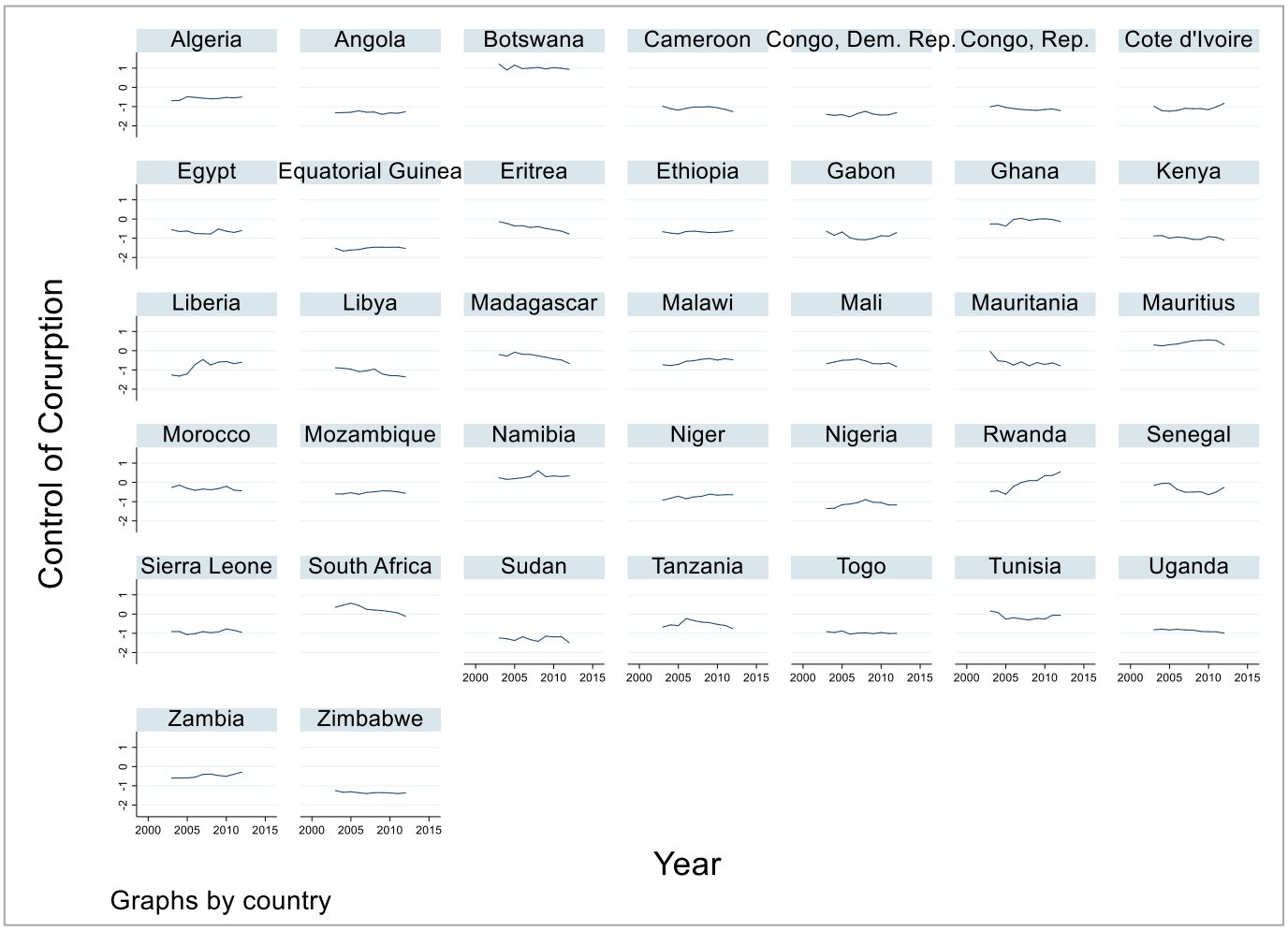
Notes: only those observations are shown that are characterized as an outliers or influential case when Estimation (1) is estimates by an OLS regression. The regression is estimated after missing observations are filled in by their

country mean. To find outliers, the Studentisized residual is used, with a critical value of 2.58 (rule of thumb). The other three measures indicate influential cases. The critical value of Lever is 2 * (p/n). The critical value of Cook's distance is 4/n. The critical value of DfFit is 2 * √(p/n). p is number of predictors in regression model and n is number of cases in analysis. In the ROL estimation, p is 15 and n is 370.

Appendix B. Time-series line plots for COC and ROL

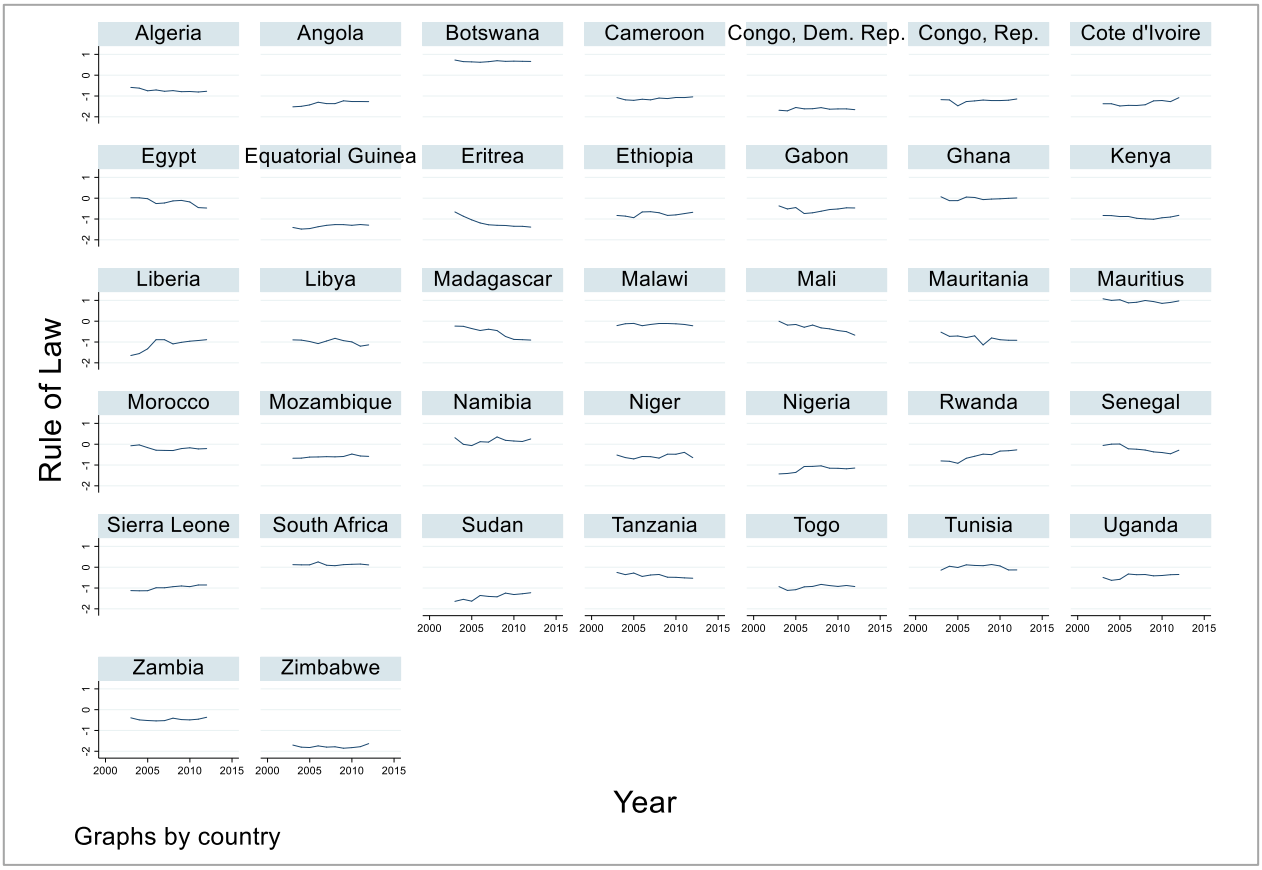
FIGURE 7

Time-series line plot for Control of Corruption over 2003-2012



Notes: the time-series line plot shows the data before mean imputation of missing values.

FIGURE 8
Time-series line plot for Rule of Law over 2003-2012



Notes: the time-series line plot shows the data before mean imputation of missing values.

Appendix C. Cumulative frequency tables of average FDI ratios US, WE and China

TABLE 22
Cumulative relative frequency table of the 2003-2012 average on US FDI ratio

Average of FDI ratio US	Frequency	Percent	Cumulative percent
-.5281618	1	2.70	2.70
-.0689618	1	2.70	5.41
-.0520265	1	2.70	8.11
-.0490415	1	2.70	10.81
-.003854	1	2.70	13.51
.0050667	1	2.70	16.22
.0216203	1	2.70	18.92
.0483345	1	2.70	21.62
.0658348	1	2.70	24.32
.0810757	1	2.70	27.03
.0968395	1	2.70	29.73
.0972618	1	2.70	32.43
.1879937	1	2.70	35.14
.2745518	1	2.70	37.84
.2942537	1	2.70	40.54
.3165166	1	2.70	43.24
.4051664	1	2.70	45.95
.4545433	1	2.70	48.65

.4965228	1	2.70	51.35
.6013582	1	2.70	54.05
.648378	1	2.70	56.76
.7635547	1	2.70	59.46
.7835692	1	2.70	62.16
.7850817	1	2.70	64.86
1.149752	1	2.70	67.57
1.648263	1	2.70	70.27
1.887586	1	2.70	72.97
2.041639	1	2.70	75.68
2.308774	1	2.70	78.38
2.317992	1	2.70	81.08
3.758081	1	2.70	83.78
3.870014	1	2.70	86.49
5.505848	1	2.70	89.19
5.509791	1	2.70	91.89
29.56314	1	2.70	94.59
35.48337	1	2.70	97.30
43.22091	1	2.70	100.00
Total	*37*	*100.00*	

TABLE 23
Cumulative relative frequency table of the 2003-2012 average on WE FDI ratio

Average of FDI ratioWE	**Frequency**	**Percent**	**Cumulative percent**
.0011049	1	2.70	2.70
.0053603	1	2.70	5.41
.0080893	1	2.70	8.11
.0166279	1	2.70	10.81
.0339348	1	2.70	13.51
.1182869	1	2.70	16.22
.1221319	1	2.70	18.92
.1509712	1	2.70	21.62
.2045823	1	2.70	24.32
.4561724	1	2.70	27.03
.719217	1	2.70	29.73
.7590742	1	2.70	32.43
.8526983	1	2.70	35.14
1.107921	1	2.70	37.84
1.134488	1	2.70	40.54
1.24275	1	2.70	43.24
1.263588	1	2.70	45.95
1.339144	1	2.70	48.65
1.41224	1	2.70	51.35
1.457924	1	2.70	54.05
1.502044	1	2.70	56.76
1.745194	1	2.70	59.46
2.746719	1	2.70	62.16
3.227966	1	2.70	64.86
3.411357	1	2.70	67.57
4.698283	1	2.70	70.27
4.706664	1	2.70	72.97
4.886175	1	2.70	75.68
5.239956	1	2.70	78.38
5.302831	1	2.70	81.08

5.449108	1	2.70	83.78
7.280978	1	2.70	86.49
9.725321	1	2.70	89.19
12.2337	1	2.70	91.89
14.93807	1	2.70	94.59
28.67234	1	2.70	97.30
40.61079	1	2.70	100.00
Total	*37*	*100.00*	

TABLE 24
Cumulative relative frequency table of the 2003-2012 average on China FDI ratio

Average of FDI ratio China	**Frequency**	**Percent**	**Cumulative percent**
.0082286	1	2.70	2.70
.0461288	1	2.70	5.41
.0711992	1	2.70	8.11
.0994565	1	2.70	10.81
.1175315	1	2.70	13.51
.1248389	1	2.70	16.22
.1468372	1	2.70	18.92
.213101	1	2.70	21.62
.2149836	1	2.70	24.32
.2325127	1	2.70	27.03
.258411	1	2.70	29.73
.2631436	1	2.70	32.43
.3298458	1	2.70	35.14
.3642845	1	2.70	37.84
.3865611	1	2.70	40.54
.428506	1	2.70	43.24
.4384648	1	2.70	45.95
.4837953	1	2.70	48.65
.5519897	1	2.70	51.35
.5530876	1	2.70	54.05
.5724332	1	2.70	56.76
.5803868	1	2.70	59.46
.6858382	1	2.70	62.16
.6887253	1	2.70	64.86
.7212468	1	2.70	67.57
.7456735	1	2.70	70.27
.9403126	1	2.70	72.97
.9579552	1	2.70	75.68
1.18138	1	2.70	78.38
1.253327	1	2.70	81.08
1.303993	1	2.70	83.78
1.627231	1	2.70	86.49
1.66924	1	2.70	89.19
2.206016	1	2.70	91.89
2.666416	1	2.70	94.59
2.787324	1	2.70	97.30
3.913311	1	2.70	100.00
Total	*37*	*100.00*	

Appendix D. Main regression estimations – Random Effects model

TABLE 25
RE model for Control of Corruption

	(1)	(2)	(3)	(4)	(5)	(6)
FDI ratio US	0.00227**	0.00204*				
	(2.09)	(1.86)				
FDI ratio WE			-0.00305*	-0.00410**		
			(-1.80)	(-2.04)		
FDI ratio China					0.0000778	-0.00450
					(0.01)	(-0.32)
Degree of democracy	0.0312****	0.0325****	0.0321****	0.0327****	0.0318****	0.0308****
	(4.00)	(4.15)	(4.11)	(4.16)	(4.05)	(3.83)
FDI ratio US * democracy		0.000381*				
		(1.70)				
FDI ratio WE * democracy				0.000371		
				(0.96)		
FDI ratio China * democracy						0.00166
						(0.52)
Dummy UK colonized	0.140	0.133	0.151	0.140	0.145	0.145
	(1.02)	(1.01)	(1.10)	(1.02)	(1.05)	(1.03)
Population (log)	-0.0885*	-0.0858*	-0.102**	-0.100**	-0.0980**	-0.0965*
	(-1.80)	(-1.81)	(-2.10)	(-2.05)	(-1.98)	(-1.91)
GDP per capita (log)	0.0531**	0.0451*	0.0554**	0.0555**	0.0511*	0.0524**
	(2.23)	(1.86)	(2.32)	(2.32)	(1.96)	(1.98)
Gini	-0.000856	-0.0000633	-0.000610	-0.000561	-0.000525	-0.00101
	(-0.17)	(-0.01)	(-0.12)	(-0.11)	(-0.10)	(-0.19)
Dummy landlocked	0.204	0.198	0.174	0.172	0.188	0.191
	(1.31)	(1.32)	(1.13)	(1.10)	(1.20)	(1.21)
Dummy oil exporting	-0.0777	-0.0772	-0.0787	-0.0776	-0.0754	-0.0734
	(-1.53)	(-1.52)	(-1.54)	(-1.52)	(-1.47)	(-1.43)
Government exp.	0.0115****	0.0114****	0.0109****	0.0108****	0.0112****	0.0111****
	(3.84)	(3.77)	(3.63)	(3.59)	(3.68)	(3.63)
Protestant religion	0.000900	0.000717	0.000873	0.00103	0.000891	0.00108
	(0.32)	(0.27)	(0.31)	(0.37)	(0.32)	(0.38)
Dummy missing FDI US	0.0125	0.0131	0.00906	0.00918	0.0117	0.0139
	(0.38)	(0.40)	(0.27)	(0.28)	(0.35)	(0.42)
Dummy missing govn. exp.	-0.171****	-0.155***	-0.143***	-0.142***	-0.146***	-0.147***
	(-3.42)	(-3.05)	(-2.94)	(-2.92)	(-2.97)	(-2.99)
Constant	0.0935	0.0782	0.321	0.293	0.261	0.247
	(0.11)	(0.09)	(0.38)	(0.34)	(0.30)	(0.28)
Observations	370	370	370	370	370	370
R^2 within	0.1194	0.1255	0.1164	0.1176	0.1056	0.1074
R^2 between	0.3735	0.3895	0.3755	0.3828	0.3849	0.3805

Notes: COC is the dependent variable in all six estimations. The regressions are estimated on the data sample in which missing observations are filled in by their country mean over the period. t statistics are in parentheses. (****), (***), (**), (*) denote significance at 0.1%, 1%, 5%, and 10% levels, respectively.

TABLE 26
RE model for Rule of Law

	(1)	(2)	(3)	(4)	(5)	(6)
FDI ratio US	-0.000283	-0.000282				
	(-0.29)	(-0.28)				
FDI ratio WE			-0.000848	-0.00111		
			(-0.57)	(-0.62)		
FDI ratio China					0.0125	0.0216*
					(1.31)	(1.73)
Degree of democracy	0.0443****	0.0446****	0.0446****	0.0447****	0.0442****	0.0459****
	(6.35)	(6.35)	(6.38)	(6.36)	(6.36)	(6.44)
FDI ratio US * democracy		-0.0000108				
		(-0.05)				
FDI ratio WE * democracy				0.0000869		
				(0.25)		
FDI ratio China * democracy						-0.00309
						(-1.10)
Dummy colonized by UK	0.295*	0.292**	0.292**	0.290*	0.298*	0.299*
	(1.91)	(2.01)	(1.99)	(1.94)	(1.95)	(1.92)
Population (log)	-0.0878	-0.0838	-0.0847	-0.0852	-0.0968*	-0.107*
	(-1.56)	(-1.57)	(-1.58)	(-1.57)	(-1.73)	(-1.86)
GDP per capita (log)						
Gini	0.000528	0.000925	0.000724	0.000651	0.00101	0.00129
	(0.12)	(0.20)	(0.16)	(0.14)	(0.22)	(0.28)
Dummy landlocked	0.185	0.182	0.181	0.181	0.170	0.161
	(1.06)	(1.11)	(1.09)	(1.08)	(0.98)	(0.92)
Dummy oil exporting	-0.103**	-0.107**	-0.107**	-0.106**	-0.101**	-0.100**
	(-2.29)	(-2.36)	(-2.38)	(-2.35)	(-2.24)	(-2.24)
Government exp.						
Protestant religion						
Fractionali-zation	-0.566	-0.575	-0.568	-0.564	-0.587	-0.599
	(-1.50)	(-1.62)	(-1.58)	(-1.55)	(-1.58)	(-1.57)
Latitude	1.012*	0.999*	1.005*	1.004*	1.047*	1.069*
	(1.72)	(1.80)	(1.80)	(1.77)	(1.80)	(1.80)
Openness (log)	0.105***	0.105***	0.103***	0.102**	0.103***	0.0983**
	(2.66)	(2.62)	(2.61)	(2.57)	(2.62)	(2.50)
Dummy missing FDI US	-0.0336	-0.0352	-0.0351	-0.0347	-0.0352	-0.0376
	(-1.15)	(-1.19)	(-1.19)	(-1.18)	(-1.20)	(-1.29)
Dummy missing openness	0.232	0.235	0.223	0.220	0.214	0.204
	(1.63)	(1.63)	(1.56)	(1.53)	(1.50)	(1.43)
Constant	-0.0864	-0.169	-0.146	-0.131	0.140	0.329
	(-0.09)	(-0.19)	(-0.16)	(-0.14)	(0.15)	(0.34)
Observations	370	370	370	370	370	370
R^2 within	0.1384	0.1378	0.1396	0.1397	0.1453	0.1488
R^2 between	0.4374	0.4425	0.4361	0.4360	0.4209	0.4172

Notes: ROL is the dependent variable in all six estimations. The regressions are estimated on the data sample in

which missing observations are filled in by their country mean over the period. t statistics are in parentheses. (****), (***), (**), (*) denote significance at 0.1%, 1%, 5%, and 10% levels, respectively.

Appendix E. Main regression estimations – Heckman two-step procedure

TABLE 27
Heckman two-step procedure for FDI ratio US

	(1) Control of Corruption (Equation of Interest)	(2) Control of Corruption (Equation of Interest)	(3) Rule of Law (Equation of Interest)	(4) Rule of Law (Equation of Interest)
FDI ratio US	-0.00126	-0.00169	-0.00275*	-0.00325**
	(-0.61)	(-0.85)	(-1.76)	(-2.20)
Degree of democracy	0.121****	0.117****	0.0147	0.0161
	(6.06)	(6.05)	(1.00)	(1.08)
FDI ratio US * democracy		0.000641		0.000233
		(1.64)		(0.72)
Dummy for colonized UK	0.285**	0.300**	1.186****	1.166****
	(2.07)	(2.28)	(13.05)	(12.19)
Population (log)	0.0282	0.0304	-0.283****	-0.281****
	(0.76)	(0.86)	(-8.06)	(-7.82)
GDP per capita (log)	-0.212**	-0.205**	-0.00989	-0.0162
	(-2.33)	(-2.36)	(-0.22)	(-0.35)
Gini	0.0366**	0.0359***	-0.0286****	-0.0270****
	(2.51)	(2.58)	(-5.09)	(-4.38)
Dummy landlocked	-1.100****	-1.062****	-1.813****	-1.812****
	(-7.05)	(-7.08)	(-18.71)	(-18.39)
Dummy oil exporting	-0.0873	-0.0344	0.114	0.114
	(-0.53)	(-0.22)	(1.12)	(1.10)
Government expenditure	0.0127	0.0102		
	(1.31)	(1.10)		
Protestant religion	-0.0147***	-0.0138***		
	(-3.01)	(-2.96)		
Ethnolinguistic fractionalization			1.417****	1.341****
			(5.84)	(5.12)
Latitude			2.744****	2.655****
			(7.45)	(6.68)
Openness (log)			-0.503****	-0.521****
			(-3.48)	(-3.47)
Missing on FDI ratio US	0.0320	0.0202	0.0332	0.0314
	(0.29)	(0.19)	(0.56)	(0.52)
Missing on govn. exp.	-0.333*	-0.258		
	(-1.94)	(-1.51)		
Missing on openness			-1.819***	-1.800***
			(-3.09)	(-3.02)
Constant	-0.972	-1.073	5.799****	5.893****
	(-1.25)	(-1.44)	(4.44)	(4.43)
	Probability of having 'higher' FDI from the US (Selection equation)			
	(1)	(2)	(3)	(4)
Telephone lines (log)	0.542****	0.542****	0.309**	0.309**
	(3.85)	(3.85)	(1.99)	(1.99)
Degree of democracy	-0.0274	-0.0274	0.148***	0.148***
	(-0.38)	(-0.38)	(2.87)	(2.87)

Dummy for colonized by UK	0.0873	0.0873	1.806****	1.806****
	(0.20)	(0.20)	(4.61)	(4.61)
Population (log)	-0.346***	-0.346***	0.00985	0.00985
	(-2.73)	(-2.73)	(0.08)	(0.08)
GDP per capita (log)	1.199****	1.199****	0.739****	0.739****
	(5.35)	(5.35)	(3.93)	(3.93)
Gini	-0.281****	-0.281****	-0.128****	-0.128****
	(-7.94)	(-7.94)	(-5.14)	(-5.14)
Dummy landlocked countries	-0.377	-0.377	-0.0934	-0.0934
	(-0.82)	(-0.82)	(-0.26)	(-0.26)
Dummy oil exporting countries	1.867****	1.867****	1.305****	1.305****
	(4.67)	(4.67)	(4.11)	(4.11)
Government expenditure	0.00183	0.00183		
	(0.06)	(0.06)		
Share of Protestant religion	0.103****	0.103****		
	(7.79)	(7.79)		
Ethnolinguistic fractionalization			2.620***	2.620***
			(2.69)	(2.69)
Latitude			0.371	0.371
			(0.28)	(0.28)
Openness (log)			3.772****	3.772****
			(6.80)	(6.80)
Missing on govn. exp.	0.269	0.269		
	(0.41)	(0.41)		
Missing on openness			13.30****	13.30****
			(6.42)	(6.42)
Constant	3.788	3.788	-20.62****	-20.62****
	(1.43)	(1.43)	(-5.20)	(-5.20)
Lambda	-0.371****	-0.353****	-0.227***	-0.230***
	(-3.70)	(-3.69)	(-2.99)	(-2.98)
Observations	370	370	370	370
Wald test of independent equations (rho = 0)	chi2(13) = 340.12 Prob > chi2 = 0.00	chi2(14) = 376.75 Prob > chi2 = 0.00	chi2(14) = 1424.97 Prob > chi2 = 0.00	chi2(15) = 1381.83 Prob > chi2 = 0.00

Notes: the regressions are estimated on the data sample in which missing observations are filled in by their country mean over the period. t statistics are in parentheses. (****), (***), (**), (*) denote significance at 0.1%, 1%, 5%, and 10% levels, respectively.

TABLE 28
Heckman two-step procedure for FDI ratio WE

	(1) Control of Corruption (Equation of Interest)	(2) Control of Corruption (Equation of Interest)	(3) Rule of Law (Equation of Interest)	(4) Rule of Law (Equation of Interest)
FDI ratio WE	-0.00918****	-0.00794***	0.00364	0.000613
	(-3.41)	(-2.89)	(1.10)	(0.18)
Degree of democracy	0.0367****	0.0407****	0.0468****	0.0411***
	(3.55)	(3.72)	(3.60)	(3.10)
FDI ratio WE * Democracy		-0.000689		0.00148**
		(-1.22)		(2.09)
Dummy colonized UK	0.616****	0.651****	0.339****	0.293***
	(6.98)	(6.82)	(3.81)	(3.19)

Population (log)	-0.157****	-0.164****	-0.136***	-0.126***
	(-4.76)	(-4.79)	(-2.95)	(-2.72)
GDP per capita	0.185****	0.185****	0.245****	0.226****
(log)	(3.96)	(3.89)	(3.90)	(3.53)
Gini	0.0357****	0.0355****	0.0109**	0.0157***
	(6.32)	(6.19)	(2.12)	(2.73)
Dummy	-0.440****	-0.456****	-0.301***	-0.290***
landlocked	(-4.85)	(-4.87)	(-2.92)	(-2.81)
Dummy oil	-0.523****	-0.528****	-0.574****	-0.533****
exporting	(-6.69)	(-6.65)	(-5.83)	(-5.27)
Government	0.0152*	0.0157*		
expenditure	(1.88)	(1.91)		
Protestant	-0.00909****	-0.00970****		
religion	(-5.02)	(-5.07)		
Ethnolinguistic			-0.650**	-0.734***
fractionalization			(-2.56)	(-2.82)
Latitude			0.374	0.225
			(1.38)	(0.79)
Openness (log)			-0.411***	-0.391***
			(-2.84)	(-2.69)
Missing on	-1.033****	-1.026****		
govn. exp.	(-5.15)	(-5.04)		
Constant	-1.014	-0.916	1.325	1.128
	(-1.38)	(-1.22)	(0.80)	(0.67)
	Probability of having 'higher' FDI from WE (Selection equation)			
	(1)	(2)	(3)	(4)
Telephone lines	0.647****	0.647****	0.585****	0.585****
(log)	(5.93)	(5.93)	(4.80)	(4.80)
Degree of	0.117****	0.117****	0.0702**	0.0702**
democracy	(3.40)	(3.40)	(2.02)	(2.02)
Dummy for	-0.536**	-0.536**	-0.104	-0.104
colonized by UK	(-2.54)	(-2.54)	(-0.44)	(-0.44)
Population (log)	0.231**	0.231**	0.430****	0.430****
	(2.51)	(2.51)	(3.96)	(3.96)
GDP per capita	0.323**	0.323**	0.366**	0.366**
(log)	(2.29)	(2.29)	(2.48)	(2.48)
Gini	0.0374*	0.0374*	0.00451	0.00451
	(1.85)	(1.85)	(0.23)	(0.23)
Dummy land-	0.109	0.109	0.421*	0.421*
locked countries	(0.46)	(0.46)	(1.76)	(1.76)
Dummy oil expor-	0.146	0.146	-0.298	-0.298
ting countries	(0.53)	(0.53)	(-1.10)	(-1.10)
Government	0.0437**	0.0437**		
expenditure	(2.13)	(2.13)		
Share of Protestant	0.0356****	0.0356****		
religion	(5.98)	(5.98)		
Ethnolinguistic			4.018****	4.018****
fractionalization			(5.52)	(5.52)
Latitude			1.562	1.562
			(1.62)	(1.62)
Openness (log)			1.711****	1.711****
			(4.99)	(4.99)
Missing on	-2.047****	-2.047****		
govn. exp.	(-4.85)	(-4.85)		

Constant	-9.012****	-9.012****	-19.61****	-19.61****
	(-3.99)	(-3.99)	(-6.39)	(-6.39)
Lambda	0.402****	0.408****	0.336**	0.369**
	(3.52)	(3.51)	(2.19)	(2.42)
Observations	370	370	370	370
Wald test of independent equations (rho = 0)	chi2(11) = 386.85 Prob > chi2 = 0.00	chi2(12) = 376.64 Prob > chi2 = 0.00	chi2(11) = 350.93 Prob > chi2 = 0.00	chi2(12) = 348.79 Prob > chi2 = 0.00

Notes: the regressions are estimated on the data sample in which missing observations are filled in by their country mean over the period. t statistics are in parentheses. (****), (***), (**), (*) denote significance at 0.1%, 1%, 5%, and 10% levels, respectively. The dummy for missing observations on openness (log) is omitted because of a perfect correlation with this variable.

TABLE 29
Heckman two-step procedure for FDI ratio China

	(1) Control of Corruption (Equation of Interest)	(2) Control of Corruption (Equation of Interest)	(3) Rule of Law (Equation of Interest)	(4) Rule of Law (Equation of Interest)
FDI ratio China	-0.0462**	-0.0385	-0.00769	0.0141
	(-2.43)	(-1.58)	(-0.23)	(0.33)
Degree of democracy	0.0693****	0.0706****	0.0546***	0.0580***
	(6.20)	(6.13)	(3.20)	(3.28)
FDI ratio China * Democracy		-0.00302		-0.00784
		(-0.49)		(-0.79)
Dummy colonized UK	-0.372****	-0.370****	-0.537****	-0.529****
	(-5.65)	(-5.61)	(-3.75)	(-3.64)
Population (log)	0.0281	0.0262	-0.131*	-0.141*
	(0.54)	(0.50)	(-1.69)	(-1.77)
GDP per capita (log)	0.396****	0.395****	0.526****	0.523****
	(7.89)	(7.87)	(5.88)	(5.76)
Gini	0.0156***	0.0153***	-0.0102	-0.0104
	(2.74)	(2.69)	(-1.18)	(-1.18)
Dummy landlocked	-0.199**	-0.204**	-0.229*	-0.240*
	(-2.52)	(-2.56)	(-1.68)	(-1.74)
Dummy oil exporting	-0.773****	-0.773****	-0.882****	-0.879****
	(-9.18)	(-9.17)	(-6.34)	(-6.24)
Government expenditure	0.0178**	0.0179**		
	(2.13)	(2.14)		
Protestant religion	-0.00457***	-0.00456***		
	(-3.26)	(-3.24)		
Ethnolinguistic fractionalization			0.379	0.380
			(0.53)	(0.53)
Latitude			1.466	1.423
			(1.07)	(1.02)
Openness (log)			-0.291*	-0.295*
			(-1.69)	(-1.69)
Missing on govn. exp.	0.457****	0.465****		
	(4.07)	(4.09)		

Missing on openness			-0.139	-0.105
			(-0.23)	(-0.17)
Constant	-4.498****	-4.469****	-0.947	-0.783
	(-3.97)	(-3.94)	(-0.56)	(-0.45)
	Probability of having 'higher' FDI from China (Selection equation)			
	(1)	(2)	(3)	(4)
Export share with China	0.0940****	0.0940****	0.0827****	0.0827****
	(6.73)	(6.73)	(5.90)	(5.90)
Degree of democracy	0.0459	0.0459	0.0365	0.0365
	(1.50)	(1.50)	(1.21)	(1.21)
Dummy colonized UK	0.226	0.226	0.265	0.265
	(1.21)	(1.21)	(1.32)	(1.32)
Population (log)	-1.592****	-1.592****	-1.318****	-1.318****
	(-8.66)	(-8.66)	(-6.88)	(-6.88)
GDP per capita (log)	-1.700****	-1.700****	-1.516****	-1.516****
	(-8.35)	(-8.35)	(-8.09)	(-8.09)
Gini	0.0188	0.0188	-0.0105	-0.0105
	(0.92)	(0.92)	(-0.77)	(-0.77)
Dummy landlocked	0.914****	0.914****	1.158****	1.158****
	(3.69)	(3.69)	(4.68)	(4.68)
Dummy oil exporting	0.940****	0.940****	0.957****	0.957****
	(3.44)	(3.44)	(3.58)	(3.58)
Government expenditure	-0.0677****	-0.0677****		
	(-3.35)	(-3.35)		
Protestant religion	-0.00411	-0.00411		
	(-0.74)	(-0.74)		
Ethnolinguistic fractionalization			0.515	0.515
			(0.97)	(0.97)
Latitude			-0.243	-0.243
			(-0.33)	(-0.33)
Openness (log)			0.684**	0.684**
			(2.24)	(2.24)
Missing on govn. exp.	0.622*	0.622*		
	(1.82)	(1.82)		
Missing on openness			2.472**	2.472**
			(2.34)	(2.34)
Constant	34.28****	34.28****	25.81****	25.81****
	(9.17)	(9.17)	(6.05)	(6.05)
Lambda	0.331***	0.334***	0.590****	0.598****
	(3.15)	(3.18)	(3.39)	(3.38)
Observations	370	370	370	370
Wald test of independent equations (rho = 0)	chi2(13) = 466.58 Prob > chi2 = 0.00	chi2(14) = 464.85 Prob > chi2 = 0.00	chi2(14) = 238.93 Prob > chi2 = 0.00	chi2(15) = 233.89 Prob > chi2 = 0.00

Notes: the regressions are estimated on the data sample in which missing observations are filled in by their country mean over the period. t statistics are in parentheses. (****), (***), (**), (*) denote significance at 0.1%, 1%, 5%, and 10% levels, respectively.

Appendix F. Main regression estimations – Prais-Winsten model and first differences

TABLE 30
Prais-Winsten estimation

	(1) Control of Corruption	(2) Control of Corruption	(3) Rule of Law	(4) Rule of Law
FDI ratio US	0.00111	0.00212	-0.000841	-0.000717
	(0.55)	(1.15)	(-0.46)	(-0.37)
FDI ratio WE	0.00134	-0.000303	0.00651***	0.00507**
	(0.82)	(-0.20)	(2.71)	(2.54)
FDI ratio China	-0.0224	-0.0225	-0.0223	-0.0178
	(-1.60)	(-1.36)	(-1.19)	(-0.86)
Degree of democracy	0.0382****	0.0391****	0.0466****	0.0500****
	(5.63)	(5.86)	(7.03)	(8.62)
FDI ratio US * democracy		0.000966***		0.000623
		(2.63)		(1.46)
FDI ratio WE * democracy		0.000300		0.000883**
		(0.94)		(2.01)
FDI ratio China * democracy		-0.00307		-0.00784*
		(-0.85)		(-1.94)
Dummy colonized by UK	0.0574	0.0418	0.181****	0.140****
	(1.25)	(0.90)	(5.53)	(4.54)
Population (log)	0.00569	0.0117	0.00806	0.0195
	(0.23)	(0.45)	(0.35)	(0.84)
GDP per capita (log)	0.132****	0.127****	0.146****	0.154****
	(5.81)	(5.38)	(4.81)	(5.03)
Gini	0.0211****	0.0240****	0.00994***	0.0117****
	(3.61)	(4.28)	(3.26)	(3.66)
Dummy landlocked	0.122**	0.135**	0.114***	0.110***
	(2.26)	(2.51)	(2.88)	(2.77)
Dummy oil exporting	-0.400****	-0.379****	-0.411****	-0.427****
	(-5.21)	(-5.31)	(-5.44)	(-6.10)
Government exp.	0.0154****	0.0153****		
	(4.05)	(4.15)		
Protestant religion	-0.00374**	-0.00416***		
	(-2.33)	(-2.64)		
Fractionalization			-0.638****	-0.671****
			(-6.14)	(-7.30)
Latitude			0.541****	0.461****
			(4.42)	(4.34)
Openness (log)			0.0407	0.0135
			(0.77)	(0.25)
Dummy missing FDI US	-0.0148	-0.0180	-0.0724	-0.0953
	(-0.41)	(-0.49)	(-1.30)	(-1.58)
Dummy missing govn. exp.	-0.0929*	-0.0756		
	(-1.93)	(-1.56)		

Dummy missing openness			0.136	0.0882
			(0.77)	(0.51)
Constant	-2.696****	-2.873****	-2.237****	-2.393****
	(-4.35)	(-4.58)	(-4.08)	(-4.46)
Observations	370	370	370	370
R^2	0.472	0.490	0.514	0.549

Notes: the regression is estimated using data for which missing observations are filled by mean imputation. The t statistics are in parentheses. (****), (***), (**), (*) denote significance at 0.1%, 1%, 5%, and 10% levels, respectively.

TABLE 31
First differences estimation

	(1) Control of Corruption (OLS)	(2) Control of Corruption (RE)	(3) Rule of Law (OLS)	(4) Rule of Law (RE)
FDI ratio US	0.000252	0.00303*	-0.000425	-0.00193
	(0.11)	(1.74)	(-0.16)	(-1.33)
$(\text{FDI ratio WE})_t$	0.00514	-0.000404	0.00997*	0.00230*
$-(\text{FDI ratio WE})_{t-1}$	(1.15)	(-0.24)	(1.93)	(1.65)
$(\text{FDI ratio China})_t$	-0.0216	-0.000525	-0.0292	0.0116
$-(\text{FDI ratio China})_{t-1}$	(-0.53)	(-0.03)	(-0.62)	(0.92)
Degree of democracy	0.0511****	0.0326****	0.0709****	0.0423****
	(6.05)	(4.03)	(7.31)	(6.22)
Dummy for colonized UK	-0.0250	0.116	0.144**	0.292*
	(-0.50)	(0.84)	(2.42)	(1.88)
$(\text{Population (log)})_t -$	-17.41****	3.588**	-9.931***	2.452**
$(\text{Population (log)})_{t-1}$	(-7.59)	(2.53)	(-3.24)	(1.97)
$(\text{GDP per capita (log)})_t -$	0.163	-0.00696	-0.0303	-0.00835
$(\text{GDP per capita (log)})_{t-1}$	(1.08)	(-0.12)	(-0.17)	(-0.18)
$\text{Gini}_t - \text{Gini}_{t-1}$	0.0165	-0.0114	-0.0203	-0.0205
	(0.38)	(-0.55)	(-0.42)	(-1.24)
Dummy landlocked	0.136**	0.171	0.0265	0.144
	(2.15)	(1.08)	(0.37)	(0.82)
Dummy oil exporting	-0.311****	-0.0110	-0.347****	-0.0613
	(-5.68)	(-0.21)	(-5.66)	(-1.42)
Government expenditure	0.0321****	0.00681*		
	(6.36)	(1.92)		
Protestant religion	0.00148	0.000685		
	(1.50)	(0.26)		
Ethnolinguistic fractionaliz.			-0.645****	-0.743**
			(-4.52)	(-2.05)
Latitude			0.451**	0.980*
			(2.01)	(1.67)
$(\text{Openness (log)})_t -$			0.0921	0.109***
$(\text{Openness (log)})_{t-1}$			(1.18)	(2.72)
Missing on FDI ratio US	-0.324****	0.0462	-0.415****	0.00126
	(-4.62)	(1.40)	(-5.08)	(0.05)
Missing on govn. exp.	-0.249**	-0.120**		
	(-2.41)	(-2.33)		
Missing on openness			-0.110	0.277*
			(-0.65)	(1.91)
Constant	-0.756****	-1.055****	-0.247**	-1.188****

	(-6.12)	(-8.35)	(-1.98)	(-3.57)
Observations	333	333	333	333
R^2 adjusted	0.54	-	0.47	-
R^2 within	-	0.14	-	0.18
R^2 between	-	0.17	-	0.36

Notes: the regressions are estimated on the data sample in which missing observations are filled in by their country mean over the period. t statistics are in parentheses. (****), (***), (**), (*) denote significance at 0.1%, 1%, 5%, and 10% levels, respectively.

Appendix G. Sensitivity analysis – FDI flow to GDP

TABLE 32
RE model FDI flow to GDP

	(1) Control of Corruption	(2) Control of Corruption	(3) Rule of Law	(4) Rule of Law
FDI flow US	0.00202	0.00178	-0.00266	-0.00328
	(0.71)	(0.61)	(-1.06)	(-1.27)
FDI flow WE	0.00163	-0.00232	0.00223	0.00188
	(0.51)	(-0.51)	(0.80)	(0.46)
FDI flow China	0.00981	0.00697	0.00693	0.0254
	(0.47)	(0.22)	(0.38)	(0.89)
Degree of democracy	0.0337****	0.0336****	0.0477****	0.0491****
	(4.18)	(4.13)	(6.78)	(6.93)
FDI flow US * democracy		-0.000000232		-0.000942
		(-0.00)		(-1.49)
FDI flow WE * democracy		0.00101		0.000340
		(1.20)		(0.46)
FDI flow China * democracy		0.000667		-0.00692
		(0.08)		(-0.96)
Dummy colonized by UK	0.226	0.223	0.441****	0.436****
	(1.61)	(1.62)	(3.56)	(3.99)
Population (log)	-0.0852*	-0.0859*	-0.0684	-0.0638
	(-1.71)	(-1.75)	(-1.49)	(-1.55)
GDP per capita (log)	0.0576**	0.0572**	0.0315	0.0354
	(2.24)	(2.20)	(1.36)	(1.54)
Gini	-0.00250	-0.00254	-0.000286	0.000838
	(-0.46)	(-0.47)	(-0.06)	(0.19)
Dummy for landlocked countries	0.342**	0.338**	0.396***	0.385***
	(2.13)	(2.14)	(2.82)	(3.10)
Dummy for oil exporting countries	-0.0763	-0.0779	-0.111**	-0.124***
	(-1.47)	(-1.49)	(-2.47)	(-2.72)
Government expenditure	0.0140****	0.0141****		
	(3.98)	(3.99)		
Protestant religion	0.000816	0.000929		
	(0.28)	(0.32)		
Ethnolinguistic fractionalization			-0.797***	-0.812***
			(-2.65)	(-3.06)
Latitude			1.141**	1.122***
			(2.48)	(2.77)
Openness (log)			0.106***	0.113***
			(2.58)	(2.67)
Dummy for missing obs. on	-0.00237	-0.00121	-0.0192	-0.0208

FDI flow US	(-0.08)	(-0.04)	(-0.73)	(-0.78)
Dummy for missing obs. on government expenditure	-0.164***	-0.166***		
	(-3.11)	(-3.12)		
Dummy for missing obs. on openness (log)			0.232	0.246*
			(1.58)	(1.65)
Constant	-0.00888	0.00899	-0.292	-0.454
	(-0.01)	(0.01)	(-0.37)	(-0.61)
Observations	340	340	340	340
R^2 within	0.160	0.151	0.123	0.125
R^2 between	0.632	0.651	0.463	0.460

Notes: the regressions are estimated on the data sample in which missing observations are filled in by their country mean over the period. t statistics are in parentheses. (****), (***), (**), (*) denote significance at 0.1%, 1%, 5%, and 10% levels, respectively.

TABLE 33
Heckman FDI flow to GDP, US

	(1) Control of Corruption (Equation of Interest)	(2) Control of Corruption (Equation of Interest)	(3) Rule of Law (Equation of Interest)	(4) Rule of Law (Equation of Interest)
FDI flow US	0.00458	0.00500	0.000898	0.00125
	(0.24)	(0.26)	(0.18)	(0.26)
Degree of democracy	0.0331	0.0308	0.121****	0.119****
	(0.69)	(0.63)	(9.53)	(9.49)
FDI flow US * democracy		0.00144		0.00197*
		(0.32)		(1.73)
Dummy for colonized UK	0.325	0.330	0.328****	0.329****
	(1.23)	(1.24)	(4.35)	(4.41)
Population (log)	-0.0771	-0.0797	0.130****	0.128****
	(-0.67)	(-0.68)	(5.82)	(5.79)
GDP per capita (log)	-0.228	-0.237	0.159****	0.151****
	(-0.89)	(-0.91)	(4.20)	(4.01)
Gini	-0.00418	-0.00336	0.00925***	0.0106***
	(-0.24)	(-0.19)	(2.59)	(2.95)
Dummy landlocked	0.735**	0.730**	0.216***	0.200***
	(2.49)	(2.44)	(2.88)	(2.69)
Dummy oil exporting	-0.109	-0.0950	-0.566****	-0.550****
	(-0.32)	(-0.28)	(-8.11)	(-7.90)
Government expenditure	0.0849**	0.0853**		
	(2.57)	(2.55)		
Protestant religion	-0.00675	-0.00685		
	(-1.01)	(-1.01)		
Ethnolinguistic fractionalization			-1.605****	-1.631****
			(-11.31)	(-11.56)
Latitude			1.746****	1.722****
			(8.31)	(8.29)
Openness (log)			0.229***	0.219***
			(2.74)	(2.65)
Missing on FDI flow US	0.154	0.161	-0.0663	-0.0588
	(0.61)	(0.62)	(-1.00)	(-0.90)

Missing on govn. exp.	-1.235**	-1.233**		
	(-2.20)	(-2.17)		
Missing on openness			1.243****	1.246****
			(3.44)	(3.48)
Constant	2.120	2.198	-5.276****	-5.180****
	(0.57)	(0.58)	(-5.94)	(-5.90)
	Probability of having 'higher' FDI from the US (Selection equation)			
	(1)	(2)	(3)	(4)
Telephone lines (log)	0.173*	0.173*	-0.419****	-0.419****
	(1.82)	(1.82)	(-3.47)	(-3.47)
Degree of democracy	0.0236	0.0236	0.0703**	0.0703**
	(0.79)	(0.79)	(2.22)	(2.22)
Dummy for colonized by UK	-0.187	-0.187	0.812****	0.812****
	(-1.00)	(-1.00)	(3.50)	(3.50)
Population (log)	0.169**	0.169**	0.202**	0.202**
	(2.10)	(2.10)	(2.34)	(2.34)
GDP per capita (log)	0.468****	0.468****	0.717****	0.717****
	(3.35)	(3.35)	(4.79)	(4.79)
Gini	0.0137	0.0137	0.0363**	0.0363**
	(0.78)	(0.78)	(2.18)	(2.18)
Dummy landlocked countries	-0.283	-0.283	0.172	0.172
	(-1.21)	(-1.21)	(0.74)	(0.74)
Dummy oil exporting countries	-0.461*	-0.461*	-0.152	-0.152
	(-1.93)	(-1.93)	(-0.62)	(-0.62)
Government expenditure	-0.0626***	-0.0626***		
	(-2.77)	(-2.77)		
Share of Protestant religion	0.0134***	0.0134***		
	(2.58)	(2.58)		
Ethnolinguistic fractionalization			-1.167**	-1.167**
			(-2.17)	(-2.17)
Latitude			4.324****	4.324****
			(4.81)	(4.81)
Openness (log)			0.562**	0.562**
			(2.13)	(2.13)
Dummies for missing observations				
Missing on govn. exp.	2.253****	2.253****		
	(3.38)	(3.38)		
Missing on openness			4.660****	4.660****
			(4.83)	(4.83)
Constant	-5.940***	-5.940***	-12.72****	-12.72****
	(-2.92)	(-2.92)	(-5.16)	(-5.16)
Lambda	-1.219*	-1.233*	0.234**	0.227**
	(-1.83)	(-1.83)	(2.02)	(1.98)
Observations	340	340	340	340
Wald test of independent equations (rho = 0)	chi2(12) = 48.84 Prob > chi2 = 0.00	chi2(13) = 47.81 Prob > chi2 = 0.00	chi2(13) = 816.38 Prob > chi2 = 0.00	chi2(14) = 841.74 Prob > chi2 = 0.00

Notes: the regressions are estimated on the data sample in which missing observations are filled in by their country mean over the period. t statistics are in parentheses. (****), (***), (**), (*) denote significance at 0.1%, 1%, 5%, and 10% levels, respectively.

Table 34
Heckman FDI flow to GDP, WE

	(1) Control of Corruption (Equation of Interest)	(2) Control of Corruption (Equation of Interest)	(3) Rule of Law (Equation of Interest)	(4) Rule of Law (Equation of Interest)
FDI flow WE	0.00493	0.00526	0.00831	0.00907
	(0.69)	(0.65)	(1.01)	(1.43)
Degree of democracy	0.0583****	0.0525****	0.0550****	0.0478****
	(6.83)	(5.15)	(5.13)	(5.52)
FDI flow WE * Democracy		0.000975*		0.00140***
		(1.73)		(2.87)
Dummy colonized UK	0.1000*	0.0663	0.365****	0.320****
	(1.88)	(1.05)	(5.17)	(5.65)
Population (log)	0.0293	0.0332	0.0539	0.0491*
	(1.48)	(1.47)	(1.60)	(1.88)
GDP per capita (log)	0.137****	0.118***	0.259****	0.204****
	(4.24)	(3.10)	(5.48)	(4.95)
Gini	0.0115**	0.0139**	-0.00359	0.00223
	(2.32)	(2.41)	(-0.79)	(0.56)
Dummy landlocked	0.200***	0.216***	0.238***	0.252****
	(3.05)	(2.89)	(3.17)	(4.33)
Dummy oil exporting	-0.354****	-0.329****	-0.681****	-0.586****
	(-4.92)	(-3.99)	(-6.49)	(-6.71)
Government expenditure	0.0393****	0.0389****		
	(6.86)	(5.99)		
Protestant religion	-0.00451***	-0.00424**		
	(-2.83)	(-2.34)		
Ethnolinguistic fractionalization			-0.344*	-0.546***
			(-1.65)	(-3.14)
Latitude			1.001****	0.828****
			(4.58)	(4.68)
Openness (log)			0.197*	0.139
			(1.79)	(1.60)
Missing on govn. exp.	0.0591	0.0326		
	(0.61)	(0.29)		
Missing on openness (log)			0.646*	0.401
			(1.69)	(1.31)
Constant	-3.074****	-3.074****	-4.209****	-3.539****
	(-6.87)	(-6.06)	(-3.60)	(-3.79)
	Probability of having 'higher' FDI from WE (Selection equation)			
	(1)	(2)	(3)	(4)
Telephone lines (log)	0.687****	0.687****	0.0570	0.0570
	(4.05)	(4.05)	(0.36)	(0.36)
Degree of democracy	0.198****	0.198****	0.0996**	0.0996**
	(3.33)	(3.33)	(2.07)	(2.07)
Dummy for colonized by UK	-0.637**	-0.637**	0.699**	0.699**
	(-2.16)	(-2.16)	(1.98)	(1.98)
Population (log)	-0.232	-0.232	0.326***	0.326***
	(-1.55)	(-1.55)	(2.74)	(2.74)
GDP per capita (log)	0.525**	0.525**	0.708****	0.708****
	(2.50)	(2.50)	(3.64)	(3.64)
Gini	-0.259****	-0.259****	-0.0343	-0.0343
	(-5.42)	(-5.42)	(-1.12)	(-1.12)
Dummy land-	-1.532****	-1.532****	-0.433	-0.433

locked countries	(-3.66)	(-3.66)	(-1.29)	(-1.29)
Dummy oil expor-	-2.129****	-2.129****	-1.750****	-1.750****
ting countries	(-4.70)	(-4.70)	(-4.54)	(-4.54)
Government	0.0217	0.0217		
expenditure	(0.74)	(0.74)		
Share of Protestant	0.111****	0.111****		
religion	(6.48)	(6.48)		
Ethnolinguistic			3.105****	3.105****
fractionalization			(4.05)	(4.05)
Latitude			1.750*	1.750*
			(1.66)	(1.66)
Openness (log)			2.057****	2.057****
			(4.54)	(4.54)
Missing on	-0.950**	-0.950**		
govn. exp.	(-2.26)	(-2.26)		
Missing on			7.602****	7.602****
openness (log)			(4.63)	(4.63)
Constant	10.46***	10.46***	-18.16****	-18.16****
	(2.59)	(2.59)	(-5.00)	(-5.00)
Lambda	-0.358****	-0.406****	0.428**	0.267*
	(-3.80)	(-3.70)	(2.24)	(1.66)
Observations	340	340	340	340
Wald test of independent equations (rho = 0)	chi2(11) = 356.83 Prob > chi2 = 0.00	chi2(12) = 279.96 Prob > chi2 = 0.00	chi2(12) = 365.89 Prob > chi2 = 0.00	chi2(13) = 630.19 Prob > chi2 = 0.00

Notes: the regressions are estimated on the data sample in which missing observations are filled in by their country mean over the period. t statistics are in parentheses. (****), (***), (**), (*) denote significance at 0.1%, 1%, 5%, and 10% levels, respectively.

TABLE 35
Heckman FDI flow to GDP, China

	(1) Control of Corruption (Equation of Interest)	(2) Control of Corruption (Equation of Interest)	(3) Rule of Law (Equation of Interest)	(4) Rule of Law (Equation of Interest)
FDI flow	-0.0828*	-0.164**	-0.0594	-0.113**
China	(-1.76)	(-2.46)	(-1.49)	(-1.97)
Degree of	0.0109	0.00906	0.0522****	0.0504****
democracy	(0.90)	(0.75)	(4.18)	(4.01)
FDI flow China		0.0272		0.0178
* Democracy		(1.56)		(1.26)
Dummy	0.277****	0.280****	0.388****	0.390****
colonized UK	(3.81)	(3.88)	(5.18)	(5.21)
Population (log)	0.130****	0.135****	0.181****	0.185****
	(3.77)	(3.93)	(4.72)	(4.81)
GDP per capita	0.269****	0.270****	0.260****	0.260****
(log)	(6.51)	(6.57)	(6.20)	(6.20)
Gini	-0.00452	-0.00501	-0.00357	-0.00385
	(-0.72)	(-0.80)	(-0.84)	(-0.90)
Dummy	0.208***	0.219***	0.168**	0.177**
landlocked	(2.60)	(2.74)	(2.41)	(2.53)
Dummy oil	-0.645****	-0.643****	-0.581****	-0.580****
exporting	(-7.07)	(-7.10)	(-6.73)	(-6.72)

Government expenditure	0.0486****	0.0489****		
	(6.61)	(6.70)		
Protestant religion	0.00446***	0.00457***		
	(2.72)	(2.80)		
Ethnolinguistic fractionalization			-1.051****	-1.046****
			(-4.40)	(-4.38)
Latitude			1.333****	1.361****
			(4.03)	(4.12)
Openness (log)			0.239***	0.248***
			(2.65)	(2.73)
Missing on govn. exp.	-0.290**	-0.310***		
	(-2.51)	(-2.69)		
Missing on openness			0.665**	0.669**
			(2.05)	(2.07)
Constant	-4.919****	-4.973****	-5.835****	-5.924****
	(-7.24)	(-7.35)	(-7.12)	(-7.20)
	Probability of having 'higher' FDI from China (Selection equation)			
	(1)	(2)	(3)	(4)
Export share with China	0.135****	0.135****	0.110****	0.110****
	(7.44)	(7.44)	(6.38)	(6.38)
Degree of democracy	0.113***	0.113***	0.169****	0.169****
	(3.09)	(3.09)	(4.73)	(4.73)
Dummy colonized UK	-0.873****	-0.873****	-0.973****	-0.973****
	(-3.97)	(-3.97)	(-3.81)	(-3.81)
Population (log)	-2.080****	-2.080****	-1.671****	-1.671****
	(-8.63)	(-8.63)	(-7.40)	(-7.40)
GDP per capita (log)	-2.102****	-2.102****	-1.749****	-1.749****
	(-8.25)	(-8.25)	(-7.69)	(-7.69)
Gini	0.139****	0.139****	0.0862****	0.0862****
	(5.20)	(5.20)	(4.69)	(4.69)
Dummy landlocked	1.382****	1.382****	1.392****	1.392****
	(4.64)	(4.64)	(4.86)	(4.86)
Dummy oil exporting	1.089****	1.089****	1.531****	1.531****
	(3.79)	(3.79)	(5.14)	(5.14)
Government expenditure	-0.122****	-0.122****		
	(-4.38)	(-4.38)		
Protestant religion	-0.0226****	-0.0226****		
	(-3.32)	(-3.32)		
Ethnolinguistic fractionalization			-2.288****	-2.288****
			(-3.42)	(-3.42)
Latitude			-2.092**	-2.092**
			(-2.37)	(-2.37)
Openness (log)			-0.277	-0.277
			(-0.80)	(-0.80)
Missing on govn. exp.	0.483	0.483		
	(1.26)	(1.26)		
Missing on openness			0.445	0.445
			(0.37)	(0.37)
Constant	40.71****	40.71****	34.66****	34.66****
	(8.49)	(8.49)	(6.73)	(6.73)
Lamnda	-0.377****	-0.377****	-0.344****	-0.344****
	(-4.48)	(-4.50)	(-4.00)	(-4.00)
Observations	340	340	340	340

Wald test of independent equations (rho = 0)	chi2(11) = 385.84 Prob > chi2 = 0.00	chi2(12) = 393.08 Prob > chi2 = 0.00	chi2(12) = 614.79 Prob > chi2 = 0.00	chi2(13) = 616.43 Prob > chi2 = 0.00

Notes: the regressions are estimated on the data sample in which missing observations are filled in by their country mean over the period. t statistics are in parentheses. (****), (***), (**), (*) denote significance at 0.1%, 1%, 5%, and 10% levels, respectively.

Appendix H. Sensitivity analysis – lagged independent variables

TABLE 36
RE model, lagged independent variables

	(1) Control of Corruption$_t$	(2) Control of Corruption$_t$	(3) Rule of Law$_t$	(4) Rule of Law$_t$
FDI ratio US$_{t-1}$	0.00119	0.00168	-0.000927	-0.000577
	(1.04)	(1.44)	(-0.87)	(-0.53)
FDI ratio WE $_{t-1}$	-0.00469**	-0.00491**	-0.00193	-0.00238
	(-2.11)	(-2.21)	(-0.98)	(-1.20)
FDI ratio China $_{t-1}$	-0.000996	0.0142	0.0128	0.0330**
	(-0.07)	(0.83)	(1.09)	(2.17)
Degree of democracy $_{t-1}$	0.0361****	0.0422****	0.0327****	0.0380****
	(4.20)	(4.72)	(4.30)	(4.73)
(FDI ratio US * democracy)		0.000614**		0.000220
		(2.55)		(0.98)
(FDI ratio WE * democracy) $_{t-1}$		-0.0000312		-0.00000426
		(-0.05)		(-0.01)
(FDI ratio China * democracy) $_{t-1}$		-0.00868**		-0.00824**
		(-2.00)		(-2.15)
Dummy colonized by UK $_{t-1}$	0.136	0.123	0.317**	0.306**
	(0.95)	(0.87)	(2.08)	(1.97)
Population (log) $_{t-1}$	-0.0872*	-0.0902*	-0.0782	-0.0887
	(-1.67)	(-1.74)	(-1.37)	(-1.52)
GDP per capita (log) $_{t-1}$	0.0653**	0.0491*	0.0536**	0.0437*
	(2.42)	(1.79)	(2.13)	(1.71)
Gini $_{t-1}$	-0.00111	0.000114	0.00467	0.00567
	(-0.20)	(0.02)	(0.96)	(1.15)
Dummy for landlocked countries $_{t-1}$	0.185	0.174	0.175	0.150
	(1.13)	(1.08)	(1.01)	(0.85)
Dummy for oil exporting countries $_{t-1}$	-0.0939*	-0.0911*	-0.0931*	-0.0939*
	(-1.72)	(-1.67)	(-1.94)	(-1.96)
Government expenditure $_{t-1}$	0.00858***	0.00896***		
	(2.84)	(2.97)		
Protestant religion $_{t-1}$	0.00120	0.000496		
	(0.41)	(0.17)		
Ethnolinguistic fractionalization $_{t-1}$			-0.556	-0.615
			(-1.50)	(-1.62)
Latitude $_{t-1}$			0.947	0.963
			(1.63)	(1.63)
Openness (log) $_{t-1}$			0.123***	0.107**
			(2.96)	(2.56)

Dummy for missing obs. on FDI flow US $_{t-1}$	-0.0393	-0.0381	-0.0513*	-0.0519*
	(-1.17)	(-1.13)	(-1.74)	(-1.77)
Dummy for missing obs. on government expenditure $_{t-1}$	-0.153***	-0.138**		
	(-2.74)	(-2.44)		
Dummy for missing obs. on openness (log) $_{t-1}$			0.366**	0.334**
			(2.21)	(2.00)
Constant	0.0540	0.158	-0.551	-0.271
	(0.06)	(0.17)	(-0.57)	(-0.27)
Observations	333	333	333	333
R^2 within	0.118	0.138	0.119	0.132
R^2 between	0.386	0.404	0.422	0.423

Notes: the regressions are estimated on the data sample in which missing observations are filled in by their country mean over the period. t statistics are in parentheses. (****), (***), (**), (*) denote significance at 0.1%, 1%, 5%, and 10% levels, respectively.

TABLE 37
Heckman FDI ratio US, lagged independent variables

	(1) Control of Corruption$_t$ (Equation of Interest)	(2) Control of Corruption$_t$ (Equation of Interest)	(3) Rule of Law$_t$ (Equation of Interest)	(4) Rule of Law$_t$ (Equation of Interest)
FDI ratio US $_{t-1}$	-0.00217	-0.00251	-0.00239**	-0.00270**
	(-1.11)	(-1.36)	(-1.97)	(-2.35)
Degree of democracy $_{t-1}$	0.121****	0.118****	0.0195	0.0204*
	(6.29)	(6.39)	(1.60)	(1.68)
(FDI ratio US * Democracy) $_{t-1}$		0.000597		0.000161
		(1.61)		(0.63)
Dummy for colonized UK $_{t-1}$	0.272**	0.289**	1.191****	1.179****
	(2.11)	(2.35)	(16.66)	(16.00)
Population (log) $_{t-1}$	0.0265	0.0271	-0.256****	-0.254****
	(0.74)	(0.79)	(-9.05)	(-8.89)
GDP per capita (log) $_{t-1}$	-0.180**	-0.175**	0.0207	0.0170
	(-2.09)	(-2.13)	(0.59)	(0.48)
Gini $_{t-1}$	0.0304**	0.0296**	-0.0319****	-0.0309****
	(2.11)	(2.16)	(-7.23)	(-6.53)
Dummy landlocked $_{t-1}$	-1.106****	-1.072****	-1.741****	-1.741****
	(-7.66)	(-7.74)	(-22.15)	(-22.02)
Dummy oil exporting $_{t-1}$	-0.131	-0.0734	0.154*	0.156*
	(-0.76)	(-0.44)	(1.79)	(1.79)
Government expenditure $_{t-1}$	0.0115	0.00885		
	(1.26)	(1.01)		
Protestant religion $_{t-1}$	-0.0129***	-0.0121***		
	(-2.73)	(-2.69)		
Ethnolinguistic fractionalization $_{t-1}$			1.465****	1.414****
			(7.54)	(6.84)
Latitude $_{t-1}$			2.622****	2.561****
			(8.74)	(8.05)
Openness (log) $_{t-1}$			-0.374****	-0.383****
			(-3.48)	(-3.49)
Missing on FDI ratio US $_{t-1}$	-0.0128	-0.0253	-0.0180	-0.0186
	(-0.12)	(-0.25)	(-0.37)	(-0.38)
Missing on govn. exp. $_{t-1}$	-0.326*	-0.244		
	(-1.94)	(-1.45)		
Missing on			-1.409***	-1.390***

openness $_{t-1}$			(-3.17)	(-3.13)
Constant	-0.958	-1.017	4.581****	4.628****
	(-1.28)	(-1.43)	(4.59)	(4.62)
	Probability of having 'higher' FDI from the US (Selection equation)			
	(1)	(2)	(3)	(4)
Telephone lines (log) $_{t-1}$	0.537****	0.537****	0.300*	0.300*
	(3.52)	(3.52)	(1.73)	(1.73)
Degree of democracy $_{t-1}$	0.0137	0.0137	0.188***	0.188***
	(0.17)	(0.17)	(3.16)	(3.16)
Dummy for colonized by UK $_{t-1}$	-0.0135	-0.0135	2.249****	2.249****
	(-0.03)	(-0.03)	(4.59)	(4.59)
Population (log) $_{t-1}$	-0.382***	-0.382***	-0.0595	-0.0595
	(-2.70)	(-2.70)	(-0.45)	(-0.45)
GDP per capita (log) $_{t-1}$	1.198****	1.198****	0.740****	0.740****
	(4.80)	(4.80)	(3.45)	(3.45)
Gini $_{t-1}$	-0.298****	-0.298****	-0.150****	-0.150****
	(-7.35)	(-7.35)	(-5.20)	(-5.20)
Dummy landlocked countries $_{t-1}$	-0.262	-0.262	-0.306	-0.306
	(-0.53)	(-0.53)	(-0.72)	(-0.72)
Dummy oil expor-ting countries $_{t-1}$	2.165****	2.165****	1.472****	1.472****
	(4.84)	(4.84)	(4.10)	(4.10)
Government expenditure $_{t-1}$	0.0137	0.0137		
	(0.39)	(0.39)		
Share of Protestant religion $_{t-1}$	0.106****	0.106****		
	(7.25)	(7.25)		
Ethnolinguistic fractionalization $_{t-1}$			3.058***	3.058***
			(2.85)	(2.85)
Latitude $_{t-1}$			1.269	1.269
			(0.90)	(0.90)
Openness (log) $_{t-1}$			4.503****	4.503****
			(6.58)	(6.58)
Missing on govn. exp. $_{t-1}$	0.238	0.238	16.15****	16.15****
	(0.35)	(0.35)	(6.22)	(6.22)
Missing on openness $_{t-1}$				
Constant	4.653	4.653	-22.45****	-22.45****
	(1.57)	(1.57)	(-5.08)	(-5.08)
Lambda	-0.326****	-0.310****	-0.169***	-0.170***
	(-3.48)	(-3.47)	(-3.16)	(-3.15)
Observations	333	333	333	333
Wald test of independent equations (rho = 0)	chi2(12) = 401.66 Prob > chi2 = 0.00	chi2(13) = 446.99 Prob > chi2 = 0.00	chi2(13) = 2235.78 Prob > chi2 = 0.00	chi2(14) = 2213.09 Prob > chi2 = 0.00

Notes: the regressions are estimated on the data sample in which missing observations are filled in by their country mean over the period. t statistics are in parentheses. (****), (***), (**), (*) denote significance at 0.1%, 1%, 5%, and 10% levels, respectively. The dummy for missing observations on openness (log) is omitted because of a perfect correlation.

TABLE 38

Heckman FDI ratio WE, lagged independent variables

	(1) Control of Corruption$_t$ (Equation of Interest)	(2) Control of Corruption$_t$ (Equation of Interest)	(3) Rule of Law$_t$ (Equation of Interest)	(4) Rule of Law$_t$ (Equation of Interest)
FDI ratio WE $_{t-1}$	-0.00950**	-0.00963**	0.00203	0.00178
	(-2.25)	(-2.30)	(0.52)	(0.42)
Degree of democracy $_{t-1}$	0.0371***	0.0379***	0.0477****	0.0436***
	(2.59)	(2.62)	(3.43)	(2.82)
(FDI ratio WE * Democracy) $_{t-1}$		0.00364		-0.0142
		(0.32)		(-1.17)
Dummy colonized UK $_{t-1}$	0.613****	0.611****	0.354****	0.384****
	(5.01)	(5.03)	(3.82)	(3.69)
Population (log) $_{t-1}$	-0.141***	-0.140***	-0.103*	-0.0972*
	(-3.02)	(-3.02)	(-1.96)	(-1.69)
GDP per capita (log) $_{t-1}$	0.217***	0.212***	0.305****	0.336****
	(3.14)	(3.05)	(4.17)	(4.01)
Gini $_{t-1}$	0.0344****	0.0355****	0.00847	0.00499
	(4.18)	(4.01)	(1.51)	(0.73)
Dummy landlocked $_{t-1}$	-0.462****	-0.462****	-0.282**	-0.270**
	(-3.68)	(-3.72)	(-2.52)	(-2.22)
Dummy oil exporting $_{t-1}$	-0.573****	-0.571****	-0.630****	-0.663****
	(-5.18)	(-5.20)	(-5.69)	(-5.36)
Government expenditure $_{t-1}$	0.0147	0.0141		
	(1.30)	(1.24)		
Protestant religion $_{t-1}$	-0.00759***	-0.00779***		
	(-2.90)	(-2.93)		
Ethnolinguistic fractionalization $_{t-1}$			-0.431	-0.301
			(-1.49)	(-0.90)
Latitude $_{t-1}$			0.498*	0.630*
			(1.65)	(1.81)
Openness (log) $_{t-1}$			-0.283*	-0.205
			(-1.72)	(-1.08)
Missing on govn. exp. $_{t-1}$	-1.243****	-1.238****		
	(-3.89)	(-3.91)		
Constant	-1.515	-1.531	-0.271	-0.879
	(-1.44)	(-1.46)	(-0.14)	(-0.40)
Probability of having 'higher' FDI from WE (Selection equation)				
	(1)	(2)	(3)	(4)
Telephone lines (log) $_{t-1}$	0.666****	0.666****	0.560****	0.560****
	(5.51)	(5.51)	(4.36)	(4.36)
Degree of democracy $_{t-1}$	0.135****	0.135****	0.0668*	0.0668*
	(3.51)	(3.51)	(1.78)	(1.78)
Dummy for colonized by UK $_{t-1}$	-0.547**	-0.547**	-0.126	-0.126
	(-2.37)	(-2.37)	(-0.49)	(-0.49)
Population (log) $_{t-1}$	0.249**	0.249**	0.471****	0.471****
	(2.45)	(2.45)	(4.00)	(4.00)
GDP per capita (log) $_{t-1}$	0.369**	0.369**	0.413**	0.413**
	(2.36)	(2.36)	(2.56)	(2.56)
Gini $_{t-1}$	0.0435*	0.0435*	0.000379	0.000379
	(1.93)	(1.93)	(0.02)	(0.02)
Dummy land-locked countries $_{t-1}$	0.183	0.183	0.493*	0.493*
	(0.71)	(0.71)	(1.91)	(1.91)
Dummy oil expor-	0.182	0.182	-0.395	-0.395

ting countries $_{t-1}$	(0.61)	(0.61)	(-1.34)	(-1.34)
Government expenditure $_{t-1}$	0.0512**	0.0512**		
	(2.31)	(2.31)		
Share of Protestant religion $_{t-1}$	0.0382****	0.0382****		
	(5.91)	(5.91)		
Ethnolinguistic fractionalization $_{t-1}$			4.151****	4.151****
			(5.35)	(5.35)
Latitude $_{t-1}$			1.596	1.596
			(1.59)	(1.59)
Openness (log) $_{t-1}$			1.821****	1.821****
			(4.88)	(4.88)
Missing on govn. exp. $_{t-1}$	-2.416****	-2.416****		
	(-5.14)	(-5.14)		
Constant	-10.08****	-10.08****	-20.91****	-20.91****
	(-4.02)	(-4.02)	(-6.27)	(-6.27)
Lambda	0.531***	0.526***	0.469***	0.524***
	(3.14)	(3.13)	(2.80)	(2.80)
Observations	333	333	333	333
Wald test of independent equations (rho = 0)	chi2(11) = 204.83 Prob > chi2 = 0.00	chi2(12) = 208.90 Prob > chi2 = 0.00	chi2(11) = 288.92 Prob > chi2 = 0.00	chi2(12) = 245.86 Prob > chi2 = 0.00

Notes: the regressions are estimated on the data sample in which missing observations are filled in by their country mean over the period. t statistics are in parentheses. (****), (***), (**), (*) denote significance at 0.1%, 1%, 5%, and 10% levels, respectively. The dummy for missing observations on openness (log) is omitted because of a perfect correlation.

TABLE 39
Heckman FDI ratio China, lagged independent variables

	(1) Control of Corruption$_t$ (Equation of Interest)	(2) Control of Corruption$_t$ (Equation of Interest)	(3) Rule of Law$_t$ (Equation of Interest)	(4) Rule of Law$_t$ (Equation of Interest)
FDI ratio China $_{t-1}$	-0.0360	-0.0111	0.0216	0.0683
	(-1.63)	(-0.40)	(0.48)	(1.16)
Degree of democracy $_{t-1}$	0.0729****	0.0763****	0.0525***	0.0578***
	(6.20)	(6.39)	(2.62)	(2.80)
(FDI ratio China * Democracy) $_{t-1}$		-0.0106		-0.0172
		(-1.39)		(-1.24)
Dummy colonized UK $_{t-1}$	-0.344****	-0.342****	-0.505***	-0.486***
	(-5.00)	(-5.01)	(-2.86)	(-2.70)
Population (log) $_{t-1}$	0.0276	0.0237	-0.176*	-0.195**
	(0.50)	(0.43)	(-1.85)	(-1.98)
GDP per capita (log) $_{t-1}$	0.384****	0.384****	0.490****	0.482****
	(7.20)	(7.22)	(4.35)	(4.21)
Gini $_{t-1}$	0.0135**	0.0130**	-0.0112	-0.0106
	(2.26)	(2.19)	(-1.05)	(-0.99)
Dummy landlocked $_{t-1}$	-0.184**	-0.204**	-0.228	-0.260
	(-2.20)	(-2.40)	(-1.36)	(-1.52)
Dummy oil exporting $_{t-1}$	-0.717****	-0.715****	-0.776****	-0.768****
	(-7.94)	(-7.95)	(-4.52)	(-4.41)
Government expenditure $_{t-1}$	0.0166*	0.0174**		
	(1.92)	(2.02)		
Protestant	-0.00406***	-0.00397***		

religion $_{t-1}$	(-2.80)	(-2.74)		
Ethnolinguistic fractionalization $_{t-1}$			0.638	0.594
			(0.75)	(0.69)
Latitude $_{t-1}$			1.879	1.687
			(1.14)	(1.01)
Openness (log) $_{t-1}$			-0.272	-0.278
			(-1.36)	(-1.37)
Missing on govn. exp. $_{t-1}$	0.457****	0.483****		
	(3.81)	(3.99)		
Missing on openness $_{t-1}$			0.118	0.201
			(0.15)	(0.26)
Constant	-4.372****	-4.328****	-0.337	-0.00474
	(-3.65)	(-3.63)	(-0.17)	(-0.00)
	Probability of having 'higher' FDI from China (Selection equation)			
	(1)	(2)	(3)	(4)
Export share with China $_{t-1}$	0.0981****	0.0981****	0.0862****	0.0862****
	(6.51)	(6.51)	(5.66)	(5.66)
Degree of democracy $_{t-1}$	0.0608*	0.0608*	0.0446	0.0446
	(1.83)	(1.83)	(1.36)	(1.36)
Dummy colonized UK $_{t-1}$	0.280	0.280	0.372*	0.372*
	(1.37)	(1.37)	(1.70)	(1.70)
Population (log) $_{t-1}$	-1.678****	-1.678****	-1.403****	-1.403****
	(-8.38)	(-8.38)	(-6.70)	(-6.70)
GDP per capita (log) $_{t-1}$	-1.839****	-1.839****	-1.670****	-1.670****
	(-8.09)	(-8.09)	(-7.92)	(-7.92)
Gini $_{t-1}$	0.0254	0.0254	-0.00282	-0.00282
	(1.15)	(1.15)	(-0.19)	(-0.19)
Dummy landlocked $_{t-1}$	0.880****	0.880****	1.117****	1.117****
	(3.32)	(3.32)	(4.14)	(4.14)
Dummy oil exporting $_{t-1}$	1.160****	1.160****	1.150****	1.150****
	(3.82)	(3.82)	(3.86)	(3.86)
Government expenditure $_{t-1}$	-0.0589***	-0.0589***		
	(-2.77)	(-2.77)		
Protestant religion $_{t-1}$	-0.00516	-0.00516		
	(-0.86)	(-0.86)		
Ethnolinguistic fractionalization $_{t-1}$			0.453	0.453
			(0.79)	(0.79)
Latitude $_{t-1}$			-0.0756	-0.0756
			(-0.09)	(-0.09)
Openness (log) $_{t-1}$			0.842**	0.842**
			(2.54)	(2.54)
Missing on govn. exp. $_{t-1}$	0.945**	0.945**		
	(2.46)	(2.46)		
Missing on openness $_{t-1}$			3.546***	3.546***
			(2.95)	(2.95)
Constant	35.99****	35.99****	27.04****	27.04****
	(8.84)	(8.84)	(5.85)	(5.85)
Lamnda	0.318***	0.319***	0.653****	0.662****
	(2.96)	(3.00)	(3.30)	(3.29)
Observations	333	333	333	333

Wald test of independent equations (rho = 0)	chi2(11) = 418.03 Prob > chi2 = 0.00	chi2(12) = 422.91 Prob > chi2 = 0.00	chi2(12) = 169.98 Prob > chi2 = 0.00	chi2(13) = 167.29 Prob > chi2 = 0.00

Notes: the regressions are estimated on the data sample in which missing observations are filled in by their country mean over the period. t statistics are in parentheses. (****), (***), (**), (*) denote significance at 0.1%, 1%, 5%, and 10% levels, respectively.

Appendix I. Sensitivity analysis – data sample with missing observations

TABLE 40
RE model, with missing observations

	(1) Control of Corruption	(2) Control of Corruption	(3) Rule of Law	(4) Rule of Law
FDI ratio US	0.00311*	-0.00617	-0.00321**	-0.0140****
	(1.68)	(-1.51)	(-2.00)	(-4.17)
FDI ratio WE	-0.00440**	-0.00391*	-0.000724	0.000199
	(-2.43)	(-1.87)	(-0.45)	(0.11)
FDI ratio China	0.0145	0.00838	0.0251**	0.0216
	(0.99)	(0.48)	(2.13)	(1.44)
Degree of democracy	0.0365****	0.0402****	0.0490****	0.0534****
	(4.28)	(4.59)	(6.50)	(6.89)
FDI ratio US * democracy		0.00178***		0.00207****
		(2.66)		(3.80)
FDI ratio WE * democracy		-0.0000172		-0.000149
		(-0.04)		(-0.40)
FDI ratio China * democracy		-0.00152		-0.00176
		(-0.35)		(-0.49)
Dummy colonized by UK	0.130	0.119	0.307**	0.307**
	(0.93)	(0.88)	(2.02)	(1.97)
Population (log)	-0.0858*	-0.107**	-0.0996*	-0.126**
	(-1.67)	(-2.10)	(-1.73)	(-2.13)
GDP per capita (log)	0.0692**	0.0627**	0.0199	0.0111
	(2.30)	(2.07)	(0.73)	(0.40)
Gini	0.00195	0.00112	0.00248	0.00268
	(0.31)	(0.18)	(0.50)	(0.55)
Dummy for landlocked Countries	0.170	0.156	0.138	0.122
	(1.07)	(1.01)	(0.80)	(0.69)
Dummy for oil exporting countries	-0.0811	-0.0777	-0.101**	-0.0873*
	(-1.53)	(-1.47)	(-2.15)	(-1.90)
Government expenditure	0.0133****	0.0110***		
	(3.85)	(3.03)		
Protestant religion	0.0000504	0.000689		
	(0.02)	(0.24)		
Ethnolinguistic fractionalization			-0.640*	-0.687*
			(-1.72)	(-1.80)
Latitude			1.011*	0.935
			(1.74)	(1.57)
Openness (log)			0.129***	0.134***
			(2.77)	(2.89)
Constant	-0.187	0.265	0.0929	0.599
	(-0.20)	(0.28)	(0.09)	(0.59)

Observations	312	312	323	323
R^2 within	0.118	0.135	0.167	0.204
R^2 between	0.425	0.468	0.434	0.458

Notes: the regressions are estimated on the data sample in which missing observations are filled in by their country mean over the period. t statistics are in parentheses. (****), (***), (**), (*) denote significance at 0.1%, 1%, 5%, and 10% levels, respectively.

TABLE 41
Heckman FDI ratio US, with missing observations

	(1) Control of Corruption (Equation of Interest)	(2) Control of Corruption (Equation of Interest)	(3) Rule of Law (Equation of Interest)	(4) Rule of Law (Equation of Interest)
FDI ratio US	-0.000685	-0.0103*	-0.00402***	-0.00972****
	(-0.18)	(-1.77)	(-2.98)	(-4.05)
Degree of democracy	0.124****	0.115****	0.0240**	0.0377****
	(4.48)	(4.63)	(2.34)	(3.42)
FDI ratio US * democracy		0.00212**		0.00123***
		(2.08)		(2.72)
Dummy for colonized UK	0.200	0.219	1.176****	1.085****
	(1.01)	(1.24)	(18.31)	(15.39)
Population (log)	0.0295	0.0316	-0.308****	-0.298****
	(0.59)	(0.71)	(-11.80)	(-11.70)
GDP per capita (log)	-0.295**	-0.231*	-0.0245	-0.0438
	(-2.15)	(-1.83)	(-0.68)	(-1.23)
Gini	0.0441**	0.0352*	-0.0320****	-0.0254****
	(2.07)	(1.79)	(-8.05)	(-5.58)
Dummy landlocked	-0.850***	-0.880****	-1.851****	-1.875****
	(-3.12)	(-3.62)	(-18.18)	(-19.09)
Dummy oil exporting	-0.154	-0.117	0.144**	0.134*
	(-0.67)	(-0.57)	(2.00)	(1.92)
Government expenditure	0.00608	-0.000674		
	(0.39)	(-0.05)		
Protestant religion	-0.0166**	-0.0126*		
	(-2.40)	(-1.93)		
Ethnolinguistic fractionalization			1.396****	0.973****
			(8.40)	(4.38)
Latitude			2.845****	2.321****
			(11.02)	(7.38)
Openness (log)			-0.455****	-0.491****
			(-4.12)	(-4.55)
Constant	-0.349	-0.532	6.148****	6.374****
	(-0.32)	(-0.55)	(6.06)	(6.48)
Probability of having 'higher' FDI from the US (Selection equation)				
	(1)	(2)	(3)	(4)
Telephone lines (log)	0.445***	0.445***	0.480***	0.480***
	(3.01)	(3.01)	(2.62)	(2.62)
Degree of democracy	-0.0232	-0.0232	0.118*	0.118*
	(-0.32)	(-0.32)	(1.92)	(1.92)
Dummy for colonized by UK	0.293	0.293	2.101****	2.101****
	(0.65)	(0.65)	(3.87)	(3.87)
Population (log)	-0.303**	-0.303**	0.252	0.252
	(-2.30)	(-2.30)	(1.55)	(1.55)
GDP per capita	1.192****	1.192****	0.964****	0.964****

(log)	(5.15)	(5.15)	(4.35)	(4.35)
Gini	-0.254****	-0.254****	-0.149****	-0.149****
	(-6.90)	(-6.90)	(-4.78)	(-4.78)
Dummy landlocked countries	-0.710	-0.710	-0.197	-0.197
	(-1.29)	(-1.29)	(-0.36)	(-0.36)
Dummy oil exporting countries	1.799****	1.799****	1.297****	1.297****
	(4.42)	(4.42)	(3.59)	(3.59)
Government expenditure	0.0320	0.0320		
	(0.89)	(0.89)		
Share of Protestant religion	0.0904****	0.0904****		
	(6.57)	(6.57)		
Ethnolinguistic fractionalization			4.004***	4.004***
			(3.19)	(3.19)
Latitude			0.707	0.707
			(0.46)	(0.46)
Openness (log)			4.980****	4.980****
			(5.87)	(5.87)
Constant	1.892	1.892	-31.82****	-31.82****
	(0.68)	(0.68)	(-5.17)	(-5.17)
Lambda	-0.482***	-0.429***	-0.0839	-0.0835
	(-3.04)	(-2.98)	(-1.33)	(-1.37)
Observations	331	331	342	342
Wald test of independent equations (rho = 0)	chi2(10) = 156.31 Prob > chi2 = 0.00	chi2(11) = 200.96 Prob > chi2 = 0.00	chi2(11) = 2568.73 Prob > chi2 = 0.00	chi2(12) = 2752.35 Prob > chi2 = 0.00

Notes: the regressions are estimated on the data sample in which missing observations are filled in by their country mean over the period. t statistics are in parentheses. (****), (***), (**), (*) denote significance at 0.1%, 1%, 5%, and 10% levels, respectively.

TABLE 42
Heckman FDI ratio WE, with missing observations

	(1) Control of Corruption (Equation of Interest)	(2) Control of Corruption (Equation of Interest)	(3) Rule of Law (Equation of Interest)	(4) Rule of Law (Equation of Interest)
FDI ratio WE	-0.00938***	-0.00815**	0.00502	0.00197
	(-2.72)	(-2.36)	(1.47)	(0.55)
Degree of democracy	0.0377***	0.0414***	0.0465****	0.0408***
	(2.88)	(3.02)	(3.48)	(2.80)
FDI ratio WE * Democracy		-0.000662		0.00148*
		(-0.94)		(1.94)
Dummy colonized UK	0.663****	0.697****	0.360****	0.316***
	(5.84)	(5.74)	(3.92)	(3.09)
Population (log)	-0.154****	-0.160****	-0.146***	-0.136***
	(-3.65)	(-3.71)	(-3.01)	(-2.61)
GDP per capita (log)	0.192****	0.190***	0.246****	0.227***
	(3.32)	(3.29)	(3.78)	(3.21)
Gini	0.0381****	0.0380****	0.0129**	0.0177***
	(5.22)	(5.18)	(2.35)	(2.70)
Dummy landlocked	-0.453****	-0.466****	-0.349***	-0.338***
	(-3.95)	(-4.00)	(-3.26)	(-2.93)
Dummy oil exporting	-0.533****	-0.537****	-0.581****	-0.540****
	(-5.29)	(-5.30)	(-5.66)	(-4.78)

Government expenditure	0.0156	0.0161		
	(1.48)	(1.52)		
Protestant religion	-0.00946****	-0.0101****		
	(-4.01)	(-4.07)		
Ethnolinguistic fractionalization			-0.641**	-0.724**
			(-2.43)	(-2.50)
Latitude			0.435	0.287
			(1.49)	(0.89)
Openness (log)			-0.432***	-0.411**
			(-2.69)	(-2.40)
Constant	-1.273	-1.183	1.426	1.207
	(-1.34)	(-1.23)	(0.82)	(0.65)
	Probability of having 'higher' FDI from WE (Selection equation)			
	(1)	(2)	(3)	(4)
Telephone lines (log)	0.637****	0.637****	0.612****	0.612****
	(5.68)	(5.68)	(4.98)	(4.98)
Degree of democracy	0.144****	0.144****	0.0714**	0.0714**
	(4.01)	(4.01)	(2.04)	(2.04)
Dummy for colonized by UK	-0.347	-0.347	-0.140	-0.140
	(-1.59)	(-1.59)	(-0.58)	(-0.58)
Population (log)	0.293***	0.293***	0.463****	0.463****
	(3.01)	(3.01)	(4.13)	(4.13)
GDP per capita (log)	0.373**	0.373**	0.384***	0.384***
	(2.55)	(2.55)	(2.58)	(2.58)
Gini	0.0649***	0.0649***	0.0130	0.0130
	(2.93)	(2.93)	(0.63)	(0.63)
Dummy land-locked countries	0.292	0.292	0.460*	0.460*
	(1.19)	(1.19)	(1.90)	(1.90)
Dummy oil exporting countries	0.220	0.220	-0.261	-0.261
	(0.79)	(0.79)	(-0.95)	(-0.95)
Government expenditure	0.0579***	0.0579***		
	(2.72)	(2.72)		
Share of Protestant religion	0.0325****	0.0325****		
	(5.11)	(5.11)		
Ethnolinguistic fractionalization			3.915****	3.915****
			(5.34)	(5.34)
Latitude			1.403	1.403
			(1.47)	(1.47)
Openness (log)			1.636****	1.636****
			(4.41)	(4.41)
Constant	-11.86****	-11.86****	-20.25****	-20.25****
	(-4.71)	(-4.71)	(-6.31)	(-6.31)
Lambda	0.507****	0.509****	0.492***	0.527***
	(3.54)	(3.54)	(3.22)	(3.23)
Observations	343	343	355	355
Wald test of independent equations (rho = 0)	chi2(10) = 245.70 Prob > chi2 = 0.00	chi2(11) = 244.10 Prob > chi2 = 0.00	chi2(11) = 306.84 Prob > chi2 = 0.00	chi2(12) = 270.41 Prob > chi2 = 0.00

Notes: the regressions are estimated on the data sample in which missing observations are filled in by their country mean over the period. t statistics are in parentheses. (****), (***), (**), (*) denote significance at 0.1%, 1%, 5%, and 10% levels, respectively.

TABLE 43
Heckman FDI ratio China, with missing observations

	(1) Control of Corruption (Equation of Interest)	(2) Control of Corruption (Equation of Interest)	(3) Rule of Law (Equation of Interest)	(4) Rule of Law (Equation of Interest)
FDI ratio China	-0.0233	-0.00550	-0.000501	0.0256
	(-1.11)	(-0.20)	(-0.01)	(0.52)
Degree of democracy	0.0699****	0.0726****	0.0555***	0.0596***
	(6.07)	(6.10)	(2.82)	(2.90)
FDI ratio China * Democracy		-0.00619		-0.00927
		(-0.97)		(-0.81)
Dummy colonized UK	-0.313****	-0.304****	-0.504***	-0.494***
	(-4.17)	(-3.98)	(-3.03)	(-2.91)
Population (log)	-0.0201	-0.0287	-0.179*	-0.191*
	(-0.33)	(-0.47)	(-1.82)	(-1.89)
GDP per capita (log)	0.349****	0.344****	0.492****	0.487****
	(5.97)	(5.80)	(4.47)	(4.34)
Gini	0.0255****	0.0254****	-0.00834	-0.00857
	(4.05)	(4.01)	(-0.87)	(-0.87)
Dummy landlocked	-0.324****	-0.338****	-0.282*	-0.297*
	(-3.92)	(-4.02)	(-1.85)	(-1.90)
Dummy oil exporting	-0.723****	-0.719****	-0.833****	-0.830****
	(-7.88)	(-7.78)	(-5.00)	(-4.90)
Government expenditure	0.0168**	0.0168**		
	(1.98)	(1.98)		
Protestant religion	-0.00577****	-0.00576****		
	(-3.91)	(-3.87)		
Ethnolinguistic fractionalization			0.336	0.337
			(0.42)	(0.41)
Latitude			1.579	1.529
			(1.00)	(0.95)
Openness (log)			-0.292	-0.296
			(-1.50)	(-1.50)
Constant	-3.843***	-3.701***	-0.103	0.106
	(-3.00)	(-2.87)	(-0.05)	(0.05)
	Probability of having 'higher' FDI from China (Selection equation)			
	(1)	(2)	(3)	(4)
Export share with China	0.0913****	0.0913****	0.0807****	0.0807****
	(6.45)	(6.45)	(5.76)	(5.76)
Degree of democracy	0.0486	0.0486	0.0431	0.0431
	(1.55)	(1.55)	(1.39)	(1.39)
Dummy colonized UK	0.339*	0.339*	0.368*	0.368*
	(1.71)	(1.71)	(1.81)	(1.81)
Population (log)	-1.679****	-1.679****	-1.389****	-1.389****
	(-8.72)	(-8.72)	(-7.11)	(-7.11)
GDP per capita (log)	-1.731****	-1.731****	-1.556****	-1.556****
	(-8.26)	(-8.26)	(-8.21)	(-8.21)
Gini	0.0266	0.0266	-0.00334	-0.00334
	(1.27)	(1.27)	(-0.24)	(-0.24)
Dummy landlocked	0.721***	0.721***	0.977****	0.977****
	(2.85)	(2.85)	(3.86)	(3.86)
Dummy oil exporting	1.077****	1.077****	1.077****	1.077****
	(3.84)	(3.84)	(3.92)	(3.92)

Government expenditure	-0.0701****	-0.0701****		
	(-3.39)	(-3.39)		
Protestant religion	-0.00709	-0.00709		
	(-1.26)	(-1.26)		
Ethnolinguistic fractionalization			0.238	0.238
			(0.44)	(0.44)
Latitude			-0.298	-0.298
			(-0.40)	(-0.40)
Openness (log)			0.570*	0.570*
			(1.83)	(1.83)
Constant	35.73****	35.73****	27.58****	27.58****
	(9.14)	(9.14)	(6.32)	(6.32)
Lamnda	0.364****	0.375****	0.673***	0.685***
	(3.34)	(3.45)	(3.21)	(3.20)
Observations	347	347	359	359
Wald test of independent equations (rho = 0)	chi2(10) = 458.75 Prob > chi2 = 0.00	chi2(11) = 453.09 Prob > chi2 = 0.00	chi2(11) = 186.75 Prob > chi2 = 0.00	chi2(12) = 181.56 Prob > chi2 = 0.00

Notes: the regressions are estimated on the data sample in which missing observations are filled in by their country mean over the period. t statistics are in parentheses. (****), (***), (**), (*) denote significance at 0.1%, 1%, 5%, and 10% levels, respectively.

Appendix J. Sensitivity analysis – without influential cases

TABLE 44
RE model, without influential cases

	(1) Control of Corruption	(2) Control of Corruption	(3) Rule of Law	(4) Rule of Law
FDI ratio US	0.00319	-0.00414	-0.00292	-0.00832**
	(0.97)	(-1.07)	(-1.29)	(-2.40)
FDI ratio WE	-0.00728*	-0.00598	0.00344	0.00327
	(-1.84)	(-1.49)	(0.97)	(0.89)
FDI ratio China	-0.0151	-0.0267	-0.0219	-0.0179
	(-0.90)	(-1.54)	(-1.51)	(-1.12)
Degree of democracy	0.0327****	0.0372****	0.0434****	0.0493****
	(4.45)	(4.84)	(6.28)	(6.81)
FDI ratio US * democracy		0.00248****		0.00151**
		(3.57)		(2.46)
FDI ratio WE * democracy		0.0000639		-0.000341
		(0.06)		(-0.38)
FDI ratio China * democracy		0.00187		-0.00504
		(0.42)		(-1.22)
Dummy colonized by UK	0.166	0.152	0.394****	0.386****
	(1.30)	(1.17)	(3.79)	(3.79)
Population (log)	-0.0733	-0.0849*	-0.0774*	-0.0844**
	(-1.55)	(-1.77)	(-1.91)	(-2.13)
GDP per capita (log)	0.0758***	0.0697***	0.0540**	0.0490*
	(2.86)	(2.64)	(2.15)	(1.94)
Gini	0.00420	0.00427	0.00410	0.00476
	(0.82)	(0.84)	(0.95)	(1.11)
Dummy for landlocked countries	0.138	0.138	0.383***	0.359***
	(0.94)	(0.94)	(3.14)	(3.05)

Dummy for oil exporting countries	-0.151***	-0.136***	-0.143***	-0.143***
	(-2.96)	(-2.69)	(-3.20)	(-3.21)
Government expenditure	0.0154****	0.0140****		
	(4.06)	(3.69)		
Protestant religion	-0.0000218	0.000163		
	(-0.01)	(0.06)		
Ethnolinguistic fractionalization			-0.637**	-0.711***
			(-2.50)	(-2.87)
Latitude			1.115***	1.057***
			(2.85)	(2.79)
Openness (log)			0.164****	0.158****
			(3.45)	(3.30)
Dummy for missing obs. on FDI ratio US	0.0295	0.0405	-0.0249	-0.0230
	(0.83)	(1.16)	(-0.76)	(-0.70)
Dummy for missing obs. on government expenditure	-0.121**	-0.116**		
	(-2.19)	(-2.13)		
Constant	-0.497	-0.257	-0.743	-0.544
	(-0.59)	(-0.30)	(-0.97)	(-0.71)
Observations	332	332	328	328
R^2 within	0.127	0.159	0.134	0.150
R^2 between	0.489	0.539	0.690	0.712

Notes: the regressions are estimated on the data sample in which missing observations are filled in by their country mean over the period. t statistics are in parentheses. (****), (***), (**), (*) denote significance at 0.1%, 1%, 5%, and 10% levels, respectively. In the ROL estimation, the dummy for missing observations on openness (log) is omitted because of a perfect correlation.

TABLE 45
Heckman FDI ratio US, without influential cases

	(1) Control of Corruption (Equation of Interest)	(2) Control of Corruption (Equation of Interest)	(3) Rule of Law (Equation of Interest)	(4) Rule of Law (Equation of Interest)
FDI ratio US	0.00922**	0.0102*	-0.00793****	-0.0123****
	(2.44)	(1.70)	(-4.98)	(-5.33)
Degree of democracy	0.0314****	0.0309****	0.0352****	0.0450****
	(3.88)	(3.59)	(3.54)	(4.34)
FDI ratio US * democracy		-0.000271		0.00130**
		(-0.20)		(2.45)
Dummy for colonized UK	0.535****	0.535****	1.091****	1.018****
	(7.46)	(7.47)	(18.00)	(15.56)
Population (log)	-0.0675***	-0.0680***	-0.315****	-0.303****
	(-2.66)	(-2.67)	(-12.79)	(-12.39)
GDP per capita (log)	0.180****	0.180****	-0.0297	-0.0389
	(4.85)	(4.86)	(-0.81)	(-1.09)
Gini	0.0401****	0.0403****	-0.0309****	-0.0247****
	(6.47)	(6.42)	(-8.94)	(-5.91)
Dummy landlocked	-0.130*	-0.130*	(omitted)	(omitted)
	(-1.70)	(-1.71)		
Dummy oil exporting	-0.520****	-0.522****	0.125*	0.119*
	(-8.48)	(-8.36)	(1.88)	(1.84)
Government expenditure	0.0231***	0.0228***		
	(3.26)	(3.13)		

Protestant religion	-0.0102**** (-5.58)	-0.0102**** (-5.51)		
Ethnolinguistic fractionalization			1.257**** (7.74)	0.883**** (4.07)
Latitude			2.678**** (11.30)	2.177**** (7.10)
Openness (log)			-0.508**** (-5.12)	-0.558**** (-5.65)
Missing on FDI ratio US	-0.117 (-1.35)	-0.118 (-1.35)	0.0312 (0.55)	0.0118 (0.21)
Missing on govn. exp.	-0.831**** (-4.49)	-0.835**** (-4.49)		
Constant	-2.722**** (-4.66)	-2.714**** (-4.64)	6.610**** (6.84)	6.760**** (7.19)
	Probability of having 'higher' FDI from the US (Selection equation)			
	(1)	(2)	(3)	(4)
Telephone lines (log)	0.673**** (5.78)	0.673**** (5.78)	0.217 (1.01)	0.217 (1.01)
Degree of democracy	0.127**** (3.40)	0.127**** (3.40)	0.201*** (2.70)	0.201*** (2.70)
Dummy for colonized by UK	-0.442* (-1.93)	-0.442* (-1.93)	2.352**** (3.88)	2.352**** (3.88)
Population (log)	0.289*** (2.93)	0.289*** (2.93)	0.166 (0.83)	0.166 (0.83)
GDP per capita (log)	0.376** (2.55)	0.376** (2.55)	1.649**** (5.23)	1.649**** (5.23)
Gini	0.0718*** (3.15)	0.0718*** (3.15)	-0.147**** (-3.98)	-0.147**** (-3.98)
Dummy landlocked countries	0.387 (1.53)	0.387 (1.53)	-8.410 (.)	-8.410 (.)
Dummy oil exporting countries	0.197 (0.69)	0.197 (0.69)	1.355*** (3.18)	1.355*** (3.18)
Government expenditure	0.0558** (2.31)	0.0558** (2.31)		
Share of Protestant religion	0.0315**** (4.81)	0.0315**** (4.81)		
Ethnolinguistic fractionalization			3.589** (2.18)	3.589** (2.18)
Latitude			0.766 (0.35)	0.766 (0.35)
Openness (log)			5.274**** (5.27)	5.274**** (5.27)
Missing on govn. exp.	-2.393**** (-4.99)	-2.393**** (-4.99)		
Constant	-11.93**** (-4.83)	-11.93**** (-4.83)	-36.97**** (-4.86)	-36.97**** (-4.86)
Lambda	0.188* (1.87)	0.185* (1.84)	-0.0765 (-1.44)	-0.0801 (-1.56)
Observations	332	332	328	328
Wald test of independent equations (rho = 0)	chi2(12) = 581.97 Prob > chi2 = 0.00	chi2(13) = 583.91 Prob > chi2 = 0.00	chi2(11) = 2482.98 Prob > chi2 = 0.00	chi2(12) = 2623.75 Prob > chi2 = 0.00

Notes: the regressions are estimated on the data sample in which missing observations are filled in by their country

mean over the period. t statistics are in parentheses. (****), (***), (**), (*) denote significance at 0.1%, 1%, 5%, and 10% levels, respectively. In the ROL estimation, the dummy for missing observations on openness (log) is omitted because of a perfect correlation.

TABLE 46
Heckman FDI ratio WE, without influential cases

	(1) Control of Corruption (Equation of Interest)	(2) Control of Corruption (Equation of Interest)	(3) Rule of Law (Equation of Interest)	(4) Rule of Law (Equation of Interest)
FDI ratio WE	-0.00961***	-0.00963**	0.0140****	0.0132****
	(-2.64)	(-2.41)	(4.79)	(4.53)
Degree of democracy	0.0357****	0.0439****	0.0496****	0.0453****
	(4.05)	(4.33)	(6.68)	(5.91)
FDI ratio WE * Democracy		-0.00228**		0.00135**
		(-2.47)		(2.05)
Dummy colonized UK	0.613****	0.713****	0.374****	0.339****
	(7.61)	(7.31)	(7.36)	(6.40)
Population (log)	-0.109****	-0.131****	-0.132****	-0.125****
	(-3.61)	(-3.80)	(-5.21)	(-4.92)
GDP per capita (log)	0.209****	0.207****	0.0790**	0.0643
	(5.26)	(4.76)	(2.02)	(1.64)
Gini	0.0326****	0.0343****	0.0125****	0.0157****
	(5.55)	(5.29)	(4.16)	(4.67)
Dummy landlocked	-0.271****	-0.330****	0.0911	0.103*
	(-3.37)	(-3.59)	(1.49)	(1.69)
Dummy oil exporting	-0.508****	-0.509****	-0.473****	-0.453****
	(-7.45)	(-6.81)	(-8.18)	(-7.80)
Government expenditure	0.0265****	0.0263***		
	(3.53)	(3.20)		
Protestant religion	-0.00875****	-0.0106****		
	(-4.93)	(-5.09)		
Ethnolinguistic fractionalization			-0.996****	-1.061****
			(-6.48)	(-6.83)
Latitude			0.590****	0.481***
			(4.04)	(3.12)
Openness (log)			-0.234***	-0.231***
			(-2.72)	(-2.70)
Missing on govn. exp.	-1.028****	-1.057****		
	(-5.35)	(-5.02)		
Constant	-2.015***	-1.730**	1.800*	1.717*
	(-2.98)	(-2.30)	(1.95)	(1.87)
Probability of having 'higher' FDI from WE (Selection equation)				
	(1)	(2)	(3)	(4)
Telephone lines (log)	0.673****	0.673****	0.553****	0.553****
	(5.78)	(5.78)	(4.36)	(4.36)
Degree of democracy	0.127****	0.127****	0.0850**	0.0850**
	(3.40)	(3.40)	(2.34)	(2.34)
Dummy for colonized by UK	-0.442*	-0.442*	-0.328	-0.328
	(-1.93)	(-1.93)	(-1.26)	(-1.26)
Population (log)	0.289***	0.289***	0.475****	0.475****
	(2.93)	(2.93)	(4.04)	(4.04)
GDP per capita (log)	0.376**	0.376**	0.541****	0.541****
	(2.55)	(2.55)	(3.36)	(3.36)

Gini	0.0718***	0.0718***	0.0159	0.0159
	(3.15)	(3.15)	(0.73)	(0.73)
Dummy land-locked countries	0.387	0.387	0.446*	0.446*
	(1.53)	(1.53)	(1.70)	(1.70)
Dummy oil exporting countries	0.197	0.197	-0.447	-0.447
	(0.69)	(0.69)	(-1.56)	(-1.56)
Government expenditure	0.0558**	0.0558**		
	(2.31)	(2.31)		
Share of Protestant religion	0.0315****	0.0315****		
	(4.81)	(4.81)		
Ethnolinguistic fractionalization			4.091****	4.091****
			(5.40)	(5.40)
Latitude			1.389	1.389
			(1.34)	(1.34)
Openness (log)			1.414****	1.414****
			(3.40)	(3.40)
Missing on govn. exp.	-2.393****	-2.393****		
	(-4.99)	(-4.99)		
Constant	-11.93****	-11.93****	-20.77****	-20.77****
	(-4.83)	(-4.83)	(-6.04)	(-6.04)
Lambda	0.331****	0.363****	0.0244	0.0327
	(3.41)	(3.39)	(0.27)	(0.36)
Observations	332	332	328	328
Wald test of independent equations (rho = 0)	chi2(11) = 440.37 Prob > chi2 = 0.00	chi2(12) = 371.94 Prob > chi2 = 0.00	chi2(11) = 1246.73 Prob > chi2 = 0.00	chi2(12) = 1273.22 Prob > chi2 = 0.00

Notes: the regressions are estimated on the data sample in which missing observations are filled in by their country mean over the period. t statistics are in parentheses. (****), (***), (**), (*) denote significance at 0.1%, 1%, 5%, and 10% levels, respectively. In the ROL estimation, the dummy for missing observations on openness (log) is omitted because of a perfect correlation.

TABLE 47
Heckman FDI ratio China, without influential cases

	(1) Control of Corruption (Equation of Interest)	(2) Control of Corruption (Equation of Interest)	(3) Rule of Law (Equation of Interest)	(4) Rule of Law (Equation of Interest)
FDI ratio China	-0.0872*	-0.0840	-0.105****	-0.100****
	(-1.67)	(-1.47)	(-4.73)	(-3.64)
Degree of democracy	0.0942****	0.0946****	0.0479****	0.0485****
	(3.42)	(3.45)	(6.02)	(5.91)
FDI ratio China * Democracy		-0.00235		-0.00202
		(-0.13)		(-0.31)
Dummy colonized UK	-0.0938	-0.0942	0.0244	0.0246
	(-0.55)	(-0.56)	(0.29)	(0.29)
Population (log)	-0.0499	-0.0489	0.0620	0.0581
	(-0.37)	(-0.36)	(1.35)	(1.23)
GDP per capita (log)	0.0951	0.0965	0.386****	0.383****
	(0.47)	(0.48)	(7.21)	(7.07)
Gini	0.00640	0.00633	-0.00962**	-0.00961**
	(0.44)	(0.44)	(-2.31)	(-2.30)
Dummy	-0.322	-0.321	0.0979	0.0951

landlocked	(-1.47)	(-1.48)	(1.36)	(1.31)
Dummy oil exporting	-0.550***	-0.551***	-0.832****	-0.830****
	(-2.62)	(-2.65)	(-12.09)	(-11.98)
Government expenditure	0.0253	0.0258		
	(1.31)	(1.31)		
Protestant religion	-0.0000494	0.0000299		
	(-0.01)	(0.01)		
Ethnolinguistic fractionalization			-0.434	-0.429
			(-1.16)	(-1.14)
Latitude			0.923	0.908
			(1.28)	(1.26)
Openness (log)			0.242**	0.241**
			(2.23)	(2.22)
Missing on govn. exp.	0.888**	0.885**		
	(2.02)	(2.03)		
Constant	-1.695	-1.725	-4.717****	-4.649****
	(-0.52)	(-0.53)	(-5.02)	(-4.81)
	Probability of having 'higher' FDI from China (Selection equation)			
	(1)	(2)	(3)	(4)
Export share with China	-0.309***	-0.309***	0.0761****	0.0761****
	(-3.02)	(-3.02)	(5.33)	(5.33)
Degree of democracy	0.0456	0.0456	0.0408	0.0408
	(1.43)	(1.43)	(1.28)	(1.28)
Dummy colonized UK	0.706****	0.706****	0.374*	0.374*
	(3.34)	(3.34)	(1.74)	(1.74)
Population (log)	-0.644****	-0.644****	-1.306****	-1.306****
	(-6.27)	(-6.27)	(-6.56)	(-6.56)
GDP per capita (log)	-0.576****	-0.576****	-1.502****	-1.502****
	(-3.91)	(-3.91)	(-7.85)	(-7.85)
Gini	-0.00219	-0.00219	0.00158	0.00158
	(-0.09)	(-0.09)	(0.11)	(0.11)
Dummy landlocked	-0.360	-0.360	0.807***	0.807***
	(-1.61)	(-1.61)	(3.02)	(3.02)
Dummy oil exporting	0.175	0.175	1.098****	1.098****
	(0.63)	(0.63)	(3.91)	(3.91)
Government expenditure	-0.0629***	-0.0629***		
	(-2.94)	(-2.94)		
Protestant religion	-0.00733	-0.00733		
	(-1.12)	(-1.12)		
Ethnolinguistic fractionalization			0.0765	0.0765
			(0.13)	(0.13)
Latitude			-0.503	-0.503
			(-0.65)	(-0.65)
Openness (log)			0.450	0.450
			(1.35)	(1.35)
Missing on govn. exp.	2.057****	2.057****		
	(4.22)	(4.22)		
Constant	14.89****	14.89****	26.43****	26.43****
	(6.10)	(6.10)	(5.96)	(5.96)
Lambda	0.787**	0.779**	0.216**	0.221**
	(2.02)	(1.99)	(2.04)	(2.07)
Observations	332	332	328	328
Wald test of				

independent equations (rho = 0)	chi2(11) = 65.38 Prob > chi2 = 0.00	chi2(12) = 66.68 Prob > chi2 = 0.00	chi2(11) = 932.03 Prob > chi2 = 0.00	chi2(12) = 919.26 Prob > chi2 = 0.00

Notes: the regressions are estimated on the data sample in which missing observations are filled in by their country mean over the period. t statistics are in parentheses. (****), (***), (**), (*) denote significance at 0.1%, 1%, 5%, and 10% levels, respectively. In the ROL estimation, the dummy for missing observations on openness (log) is omitted because of a perfect correlation.