

# **Double Jeopardy? The Use of Investment Arbitration in Times of Crisis**

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## **Abstract**

Investment arbitration is increasingly making the headlines because of both its potential to overly restrict the policy space of states and its significant costs for parties. Against this background of negative side-effects, it is worth asking whether it is used predominantly in situations that at least appear legitimate. We focus on the hypothesis that investment arbitration is used as a response to the effects of two types of shocks on investors – shocks caused by severely dysfunctional governance at the national level and shocks caused by economic crisis. Whereas investment arbitration could gain legitimacy if used to redress or mitigate severe governance deficiencies, its use in the context of economic crisis could be viewed as putting the countries' economy in double jeopardy. Investment arbitration would further hurt countries already in great difficulty and would thus be used in a situation that does not appear plainly legitimate. We test links between governance, economic crises and investment arbitration using an original dataset that includes investment claims filed under the rules of all arbitration institutions as well as ad hoc arbitrations. We find that bad governance, understood as corruption and lack of rule of law (using the WGI Corruption and WGI Rule of Law indexes), has a statistically significant relation with investment arbitration claims, but economic crises do not when considered separately. Yet, bad governance and economic crises considered together are a good predictor of when countries get hit by investment arbitration claims.

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## Introduction

Since the mid-nineties, international investment arbitration has become a regular tool used by investors to settle disputes with host countries. Whereas its use remained almost absent from the radar from the first case in 1972 to 1995, it has since then quickly risen to an average of nearly 62 known cases a year during the last decade, according to the United Nations Conference on Trade and Development.<sup>1</sup> It has even reached a record number in 2015 with 83 known cases.<sup>2</sup> According to our own data, 1098 investment arbitration claims have been filed up to December 2018. Furthermore, the number of countries that have been targeted by arbitration is on the rise, both in the developing and developed worlds, to reach 117 countries.<sup>3</sup>

Filing an investment arbitration is a big decision to make. It has potentially large financial implications for the host state of the investment: in three closely related awards, an investment arbitral tribunal ordered Russia to pay over US\$50 billion in compensation to the former shareholders of the Yukos Oil Company.<sup>4</sup> It has significant economic consequences for the investor too: on average an investment arbitration costs the investor US\$6 million in fees, and quite often US\$30 million.<sup>5</sup> In the aforesaid Yukos case, the claimants indicated that their costs for legal representation actually exceeded US\$ 80 million, while the cost of the arbitration itself (arbitrator fees, fees of the institution and other attendant costs) amounted to nearly €8.5 million. And this does not include lost profits from the investor's future economic activity in the host state, which is typically discontinued or strongly reduced after the arbitration. As an internationally renowned investment arbitration lawyer put it in an anonymous interview, "no-one in their right mind would want to arbitrate."<sup>6</sup> In sum, investment arbitration has significant negative side effects: these costs and its documented effect in restricting the policy space of states.<sup>7</sup>

In that sense, investment arbitration should be considered at best a means of last resort

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<sup>1</sup> UNCTAD, Investment Dispute Settlement Navigator, <http://investmentpolicyhub.unctad.org> > Investment Dispute Settlement.

<sup>2</sup> Ibid.

<sup>3</sup> Ibid.

<sup>4</sup> Occidental Petroleum Corporation v The Republic of Ecuador, Award, ICSID Case No. ARB/06/11 (Oct. 5, 2012)

<sup>5</sup> Matthew Hodgson and Alastair Campbell, 'Damages and Costs in Investment Treaty Arbitration Revisited' *Global Arbitration Review*, 14 December 2017; D. Gaukroger and K. Gordon, *OECD Working Papers on International Investment: Investor-State Dispute Settlement: A Scoping Paper for the Investment Policy Community*. Paris: OECD, 2012; W. von Kumberg, J. Lack & M. Leathes, Enabling Early Settlement in Investor-State Arbitration, *ICSID Review*, 29: 133, 2014.

<sup>6</sup> Interview quoted in Katharina Luz, *Bringing the Firm Back In – Investors' Choice for International Investment Arbitration*, PhD Graduate Institute of International and Development Studies, Geneva, 2016, p. 3.

<sup>7</sup> Gus Van Harten and Dayna Nadine Scott, 'Investment Treaties and the Internal Vetting of Regulatory Proposals: A Case Study from Canada' *J Int Disp Settlement* (2016) 7 (1): 92-116.

in the set of tools to remedy investment disputes. It should be used only when other means have either failed to prevent harmful state policies and decisions or to obtain compensation for them. Its use should be condoned only in patently legitimate situations. As a matter of fact, given the costs mentioned above, investment arbitration may look more like a means of destruction with potential large collateral damage. Then again, not everything is destroyed; these costs are not detrimental to everyone: in a rough estimate, investment arbitration must have generated over US\$10 billion in fees for the international bar (the lawyers and law firms who run the regime by acting as counsel and arbitrators) and probably generates nearly three quarters of a billion each year.<sup>8</sup> The question this poses, of course, is whether the international bar may be inclined to favor the use of investment arbitration even in situations that might be considered less than straightforwardly legitimate. To take a simple example, on which this chapter eventually focuses, a pro-cyclical use of investment arbitration would not necessarily appear legitimate: that is, when it is used to hit countries that already suffer from severe economic difficulties, causing additional economic bleeding.

In this chapter, we focus on the hypothesis that investment arbitration is used as a response to the effects of two types of shocks on investors – shocks caused by severely dysfunctional governance at the national level and shocks caused by economic crisis. The first type of situations, where it serves to redress or mitigate severe governance deficiencies, would be an archetype of a legitimate use. Its use in the context of economic crises, by contrast, could be viewed as a double jeopardy, in the sense that the countries' economy would be put in jeopardy twice. Investment arbitration would certainly not gain in legitimacy if it were shown that it is used in a way to hurt countries already in great difficulties. We investigate this hypothesis by testing links between governance, economic crises and investment arbitration using an original dataset. We find that bad governance, understood as corruption and lack of rule of law, has a statistically significant relation with investment arbitration claims, but economic crises do not when considered separately. Yet, bad governance and economic crises considered together are a good predictor of when countries get hit by investment arbitration claims.

The chapter is structured as follows: we begin with a brief illustration of arbitration as a response to two generically different contexts. Drawing from these cases and the literature, we develop theoretical propositions linking those two types of situations and the use of investment arbitration. We then discuss our research design, present the empirical results and conclude.

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<sup>8</sup> The calculation is based on the following figures: average party costs of US\$6,019,000 for claimants and US\$4,855,000 for respondents, thus a total of US\$10,874,000; 1098 cases in total (which would give a total of US\$11,939,652,000 in party costs, but this figure was roughly rounded down in the text above to account for cases that settled early); and an average of 70 new cases per year (which gives an average of US\$ 761,180,000). The figures for average party costs are from a study by investment arbitration counsel themselves: Matthew Hodgson and Alastair Campbell, 'Damages and Costs in Investment Treaty Arbitration Revisited', above.

## The legitimacy of arbitration: two generically different contexts

Context 1. In the 1990s, Banro, a Canadian company, was doing gold and tin mining in the Democratic Republic of Congo (DRC). Towards the end of the decade, the government of the DRC decided to increase the share of revenues it earned from these raw materials. This decision was implemented with a series of measures that significantly reduced the value of Banro's interests in the country. Banro attempted to fight against the government through international legal channels, one of its key advisors being a lawyer named Patrick Mitchell, a US citizen working with a small legal counsel firm in Mitchell & Associates in Congo. The problem was that Mitchell & Associates were successful in advising Banro. This was not good for them. The Congolese government, upset by the presence of such competent lawyers within its territory defending foreign interests, arrested two employees of the firm with the claim that they were posing a threat to state security. Congolese authorities ransacked and sealed Mr. Mitchell's offices, effectively destroying his business. Mr. Mitchell, in response, filed an investment arbitration against the DRC under the aegis of the World Bank's International Center for Settlement of Investment Disputes (ICSID) in 1999. He claimed that he had been expropriated of his investment in the law firm. His employees were released after 8 months of imprisonment. The use of investment arbitration in response to such a situation seemed straightforwardly legitimate – it responded to a blatant disregard for the rule of law.<sup>9</sup>

Context 2. After Argentina experienced eight major currency crises between the early 1970s and 1991, it introduced a radical economic plan involving reduction of trade barriers, privatization of state-owned enterprises (including those functioning in certain public utility sectors), deregulation of industries, and pegging of the Argentine peso to the US dollar. As part of this effort, the 1992 Gas Law was passed, allowing the privatization of Gas del Estado S.E., with its eight distribution and two transportation companies. Part of the shareholdings was acquired by CMS Gas Transmission, incorporated in the USA. For many years, it had a good collaboration with the Argentine government. But then a severe economic crisis hit Argentina in January 2002: the government defaulted on its foreign debt of US\$80 billion. One measure taken by Argentina to alleviate the crisis was to unpeg the peso from the US dollar: the value of the peso dropped

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<sup>9</sup> *Patrick Mitchell v The Democratic Republic of the Congo*, ICSID Case No. ARB/99/7. Patrick Mitchell won the initial arbitration, but the decision was subsequently annulled. Its annulment, though, doesn't change our argument, which relates to the contexts in which investment arbitration is used.

by 70 percent compared to the US dollar within five months. The government further froze all utility rates by putting into effect an "economic emergency law" that disallowed privatized gas transport and distribution companies to charge tariffs calculated in US dollars, and required renegotiation of agreements under the new exchange rate regime. This resulted in CMS's filing of an investment arbitration against Argentina, invoking the provisions of the US–Argentina Bilateral Investment Treaty (BIT), just like many other foreign investors.<sup>10</sup> In this case, it is not quite obvious that the use of investment arbitration was legitimate: when a country is pushed by an economic crisis to default on its foreign debt, when mostly everyone suffers from the crisis, should foreign investors like CMS get a special treatment, one that further harms an already seriously jeopardized economy? The question probably deserves an intricate moral-political analysis, which is beyond the scope of this article, but our point is this: is this situation in fact typical or is it rather an exception, while the norm is the filing of investment arbitrations because of bad national governance?

## **Governance, economic crisis and investment arbitration: conditional legitimacy?**

Properly canvassing the legitimacy of investment arbitration, in all its many dimensions, would be a Herculean task. In this chapter, we choose to take a liberal normative viewpoint and consider that investment arbitration serves to protect parties against the vagaries of states. Specifically, we posit that its purpose is to strengthen or impose the domestic rule of law in the host state of the investment.<sup>11</sup> Investment arbitration is meant to guard against situations in which governments run roughshod over treaty or contract obligations, over international law or their own domestic law. Put differently, these are circumstances in which public powers are exercised by states in a way that unduly interferes with a foreign investment in plain, blunt disregard of legal obligations. Such situations correspond to a weak rule of law, in the sense that "the rule of law is distinguished from regimes of administrative command and control, where 'arbitrary' state action prevails. Law is the instrument that gives the individual power to resist the state."<sup>12</sup> Investment arbitration

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<sup>10</sup> *CMS Gas Transmission Company v. The Republic of Argentina*, ICSID Case No. ARB/01/8. The arbitral tribunal considered that Argentina had not met the requirements of the defense of necessity. Annulment proceedings were unsuccessful.

<sup>11</sup> This is further discussed in Thomas Schultz and Cédric Dupont, (2014). "Investment Arbitration: Promoting the rule of law or over-empowering investors? A Quantitative Empirical Study," *European Journal of International Law*, 25(4): 1147-1168.

<sup>12</sup> Kerry Rittich, *Recharacterizing Restructuring: Law, Distribution and Gender in Market Reform*, Kluwer, 2002, 67. A longer discussion of our understanding of the rule of law can be found in Thomas Schultz, *Transnational*

would, then, be used to stimulate or react to the absence of “good and orderly state administration and the protection of rights and other deserving interests”, as is often claimed in the law literature.<sup>13</sup>

We envisage two main types of disregard of legal obligations: first, carelessness strictly speaking, where the authority of law is simply ignored; second, simple administrative or governmental disarray, where a government is unable to enforce respect to the rule of law in its country.

We consider that such situations typically translate as poor institutional conditions. If arbitration turns out to be more likely to target states with such conditions, it would score at least decently on legitimacy from both political and economic liberal viewpoints.

Guarding against the policy vagaries of states in economic crisis is a more controversial issue. Indeed, in hard economic times, governments have to react quickly in adopting policy responses that appropriately address core concerns of a large range of domestic actors who use all available institutionalized channels, and oftentimes manifest themselves in the protest arena, in order to push for the adoption of immediate, and sometimes radical, policy responses to the crisis.

Policy responses by governments have varied significantly across time and space both regarding the choices of measures and regarding their relative success in meeting domestic demands. Regarding the latter, economic crises have led to episodes of government change,<sup>14</sup> even to political regime change.<sup>15</sup> Regarding measures adopted, one type of reaction traverses most fault lines: market intervention.<sup>16</sup> Whereas such an intervention may be warranted in times

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*Legality: Stateless Law and International Arbitration*, Oxford University Press, 2014.

<sup>13</sup> Benedict Kingsbury & Stephan Schill, “Investor-State Arbitration as Governance: Fair and Equitable Treatment, Proportionality, and the Emerging Global Administrative Law”, Institute for International Law and Justice, NYU Law School, Working Paper 2009/6 (Global Administrative Law Series), p. 8, <http://www.iilj.org/publications/documents/2009-6.KingsburySchill.pdf>.

<sup>14</sup> Recent work on the Great Recession shows that electoral processes in 30 European countries since 2008 strongly confirm the major finding of the literature on economic voting that incumbents are voted out in elections in times of economic recessions. Given that the recession is particularly severe, and in most countries clearly attributed to governments, the effect on incumbents has been particularly strong and fast. In countries with more than one electoral process since 2008 and ongoing acute economic slump, the interesting result is the tendency to choose outside of main parties, including radical, "anti-parties" or to abstain (Kriesi, Hanspeter. The Political Consequences of the Financial and Economic Crisis in Europe: Electoral Punishment and Popular Protest *Swiss Political Science Review*, 18(4) 2012).

<sup>15</sup> Gasiorowski, Mark J. Economic Crisis and Political Regime Change: An Event History Analysis. *American Political Science Review*, 89 (4): 882-897 (1995); MacIntyre, Andrew. "The Politics of the Economic Crisis in Southeast Asia." *International Organization* 55(1): 81-122 (2001); Pepinsky, Thomas B. "The Global Economic Crisis and the Politics of Non-Transitions," *Government and Opposition* 47(2): 135-161 (2012); Remmmer, Karen L. "Democracy and Economic Crisis: the Latin American Experience." *World Politics* 42(3): 315-335 (1990).

<sup>16</sup> See Gourevitch (1986) and more recently Nancy Bermeo and Jonas Pontusson, eds. *Coping with Crisis: Government Reactions to the Great Recession*. New York: Russel Sage Foundation (2012).

of economic distress, it often amounts to helping domestic interest at the expense, directly or indirectly and intentionally or inadvertently, of foreign investors.<sup>17</sup> Furthermore, given the political dynamics that follows severe economic crises, governments have a hard time quickly reverting to "normal" behavior, thus continuing market intervention for too long and harming private interests, domestic and foreign.

Accordingly, in times of economic crisis investment arbitration can be seen either as a legitimate instrument when it limits the time span and the discriminatory bias of policy reactions or as an illegitimate tool when it prevents governments from addressing justifiable domestic concerns, particularly when they are of a social nature. As a corollary, to the extent that both investors and arbitrators are likely to differentiate among the nature and type of policy reactions, we should not expect in the first place any clear-cut and strong relationship between the use of arbitration and the economic situation of host countries.

One plausible hypothesis, that we will explore empirically, could be, however, that investors are inclined to attack countries during hard economic times if they have very low confidence in the type or the scope of policy reactions adopted. This is more likely to be the case when countries have a bad governance record. From this perspective, arbitration should not be merely seen as a "vulture" instrument hurting those in a weak situation but as an instrument used to redress poor institutional conditions and policy reactions in times when it hurts the most.

## Research design

### *Dataset and variables*

We first run an ordinal logistic regression in order to investigate the relationship between arbitration claims against a given country and its economic and governance conditions. The models analyze the likelihood of a variation in the frequency of the number of arbitration claims per country per year. We then employ a negative binomial regression to test the same hypotheses with a count model.

The current study draws on a dataset of 1098 investment arbitration claims, filed between 1972 (year the first investment claim was filed with ICSID<sup>18</sup>) and 2018.<sup>19</sup> Our unit of analysis

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<sup>17</sup> 2012–2013 Cypriot financial crisis is a case in point: the government bail-in measures explicitly targeted foreign, in that case Russian, bank depositors.

<sup>18</sup> *Holiday Inns S.A. and others v. Morocco* (ICSID Case No. ARB/72/1).

<sup>19</sup> Our statistical analysis takes a subset of this dataset and analyzes claims filed between 1972–2012, as explained later in the chapter.

here is ‘claims’ – not ‘arbitral awards’ since certain claims end in a negotiated agreement or are withdrawn, and not ‘cases’ since the meaning of that word is too imprecise.<sup>20</sup>

Our study relates to investment arbitration in general, also called investor-state arbitration or investor-state dispute settlement (ISDS). We thus go beyond investment *treaty* arbitration, which encompasses only investment arbitration based on an international treaty (typically a bilateral investment treaty). Our dataset therefore includes arbitration claims based on a treaty (bilateral or multilateral), or a contract between the host state and the investor, or the domestic investment law of the host state of the investment.

The study is further concerned with all types of investment arbitration in the sense that the dataset covers claims filed under the rules of all relevant arbitration institutions (mainly the World Bank’s ICSID, the Permanent Court of Arbitration (PCA), the International Chamber of Commerce (ICC), the Stockholm Chamber of Commerce (SCC)) as well as ad hoc arbitrations (primarily conducted under the rules of the United Nations Commission for International Trade Law (UNCITRAL)).

Finally, the collection of our data was not limited to official sources, such as the website of the relevant arbitration institutions. We thus went beyond the ‘officially known’ arbitration claims. The sources of the data collected were, instead, as broad as possible. The dataset includes all cases about which information was found either directly in an award, or indirectly in other datasets and reports of law firms and of specialized journalists.<sup>21</sup> We thus decided to focus on scope and statistical relevance, accepting a small loss in reliability and accuracy due to the use of secondary sources. Our sources of information are described in the annex to this chapter.

Based on the experience of the second author and on informal consultations with other researchers and practitioners, this universe of claims appears to be close to a complete picture of all investment arbitrations filed during that period. It seems reasonable to estimate that no more than 10 percent of the existing investment claims are missing in our dataset, given that few arbitration cases remain entirely secret and no information about them ever leaks somehow to the public.

These 1098 claims were encoded in the dataset according to the year in which they were filed (see Annex I for a short description of dimensions that are encoded per claim).<sup>22</sup> Figure 1 shows the evolution of claims filed between 1972 and 2018. It is noteworthy that the number of

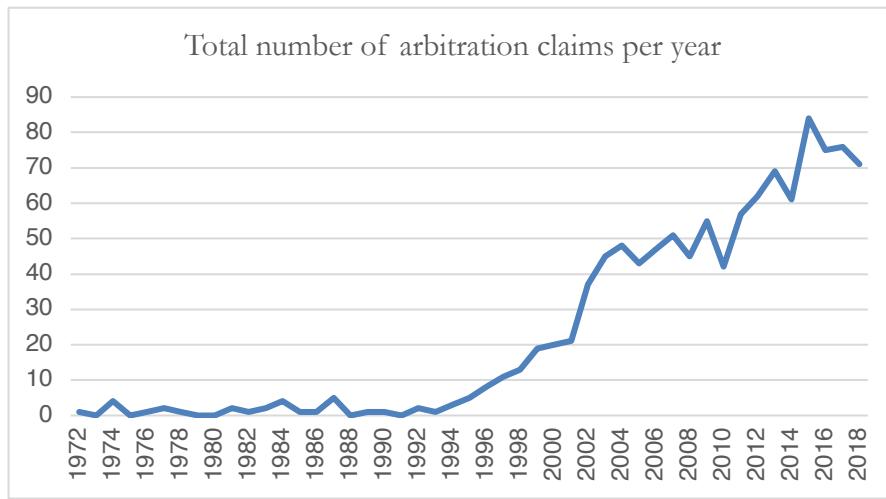
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<sup>20</sup> A “claim” is a request for arbitration filed by a claimant with an arbitration institution (such as ICSID), or a notification of the initiation of an arbitration sent to the respondent if no arbitration institution is involved (in ad hoc arbitrations). A “case” is a loose term, typically designating two specific parties and a broad set of facts. A “case” may include more than one “claim”, possibly filed with different arbitration institutions.

<sup>21</sup> For more details on the specific sources, see Annex I and Schultz and Dupont (2014).

<sup>22</sup> Encoding of 1098 claims does not mean, however, that we have been able to code fully all dimensions of those claims.

claims filed annually significantly increased starting in the mid-to-late nineties – a period during which the investment arbitration system “shifted gears”, which is correlated, as we will see, to a number of significant systemic changes in investment arbitration.



**Fig. 1: Number of investment arbitrations claims filed per year**

Given our interest in investigating factors influencing the likelihood of arbitration claims against any given country, our choice of a dependent variable is the number of arbitration claims per country per year. It is derived directly from our dataset. To make it more operational, for the logistic regression, we transform it into a categorical variable that scores 0 if either (a) there is no claim in a given year or if (b) there is only one isolated claim. An isolated claim is defined as single country/year claim without any claim in the preceding and following four years. The variable scores 1 for country/year observations with either one non-isolated claim or two claims. It scores 2 for country/year observations with 3 or more claims, meaning that 3 or more claims were filed that year against a given country.

This choice of a categorical variable both captures some variation in the magnitude of the number of claims while controlling for the long tail in the distribution of the number of claims per country/year.<sup>23</sup>

Another specificity of the data, clearly visible in Figure 1, is the high concentration of claims in the period 1995-2018. Given that the preceding period includes only 34 claims over 23 years and is generally considered to be the dormant period of investment arbitration, we restrict our empirical analysis to the period 1995-2012 (the analysis does not include the years 2013-2018 as we have data for ICRG scores until 2012, thus for consistency purposes the regressions are run

<sup>23</sup> The number of claims per country/year observation is mostly one (260) with a quick decrease for two claims a year (66), three claims a year (19), four claims (15) to then drop to one or two cases of 5, 6, 7, 8, 9 and 10 claims a year. Up to 2012, there was only one observation with more claims, that is, Argentina with the record 22 claims in 2003.

for the other independent variables with the same time frame). The total number of observations is 2034 with a distribution of 1720/270/44 in the zero, one and two category respectively. We also use a further restricted dataset that gets rid of countries targeted only once during the whole period. In such cases, the informational asymmetry noted by Elkins, Guzman, and Simmons<sup>24</sup> may indeed be valid, as well as many other idiosyncratic factors. In other words, for a state to become a respondent in an arbitration once in eighteen years is something that may well just happen, just as an average driver occasionally gets a ticket, without the event telling us anything about the behavior of the state, or the driver. This reduced dataset includes 1368 observations. The number of countries included in the base dataset is 113 and drops to 76 in the reduced dataset. This already tends to suggest that there are only 76 countries in which something out of the plainly ordinary happened in the 1995-2012 period that triggered a reaction by investors.

### *Independent variables*

#### **Independent variables for governance**

As mentioned earlier, our first hypothesis suggests that investment arbitration is more likely to target countries with poor institutional conditions. We conceptualize this variable by relying on three composite indices of the Worldwide Governance Indicators (WGI).

We first assess the quality of domestic legal and judicial institutions through the WGI Rule of Law index, which ‘captures perceptions of the extent to which agents have confidence in and abide by the rules of society, and in particular the quality of contract enforcement, property rights, the police and the courts.’<sup>25</sup> In other words, we take it to measure to what extent domestic legal institutions are able or willing to provide an independent and fair assessment, and potentially a remedy, for an interference with an investment. The index measures the perception of the quality of domestic legal institutions, rather than their objective quality. Yet, an investor that merely perceives these institutions to be deficient may also be more likely to seek remedy for any interference with his investment by presenting a claim to an international investment tribunal.

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<sup>24</sup> Z. Elkins, A.T. Guzman & B.A. Simmons, ‘Competing for capital: The diffusion of bilateral investment treaties, 1960–2000’, *International Organization* 60: 811, 2006. In this study, the authors studied the factors that cause investment arbitrations to happen. They posited the following hypothetical: “Why do these formal dispute settlement mechanisms actually come into play [...]? Theoretically, we should expect such arbitrations to be rare, because fully informed parties should be able to settle ‘out of court’ and avoid litigation costs.” In other words, fully informed parties would not let investment arbitration happen. And the fact that they do happen ‘often’, Elkins, Guzman, and Simmons argued, shows that the parties were not fully informed: it “indicates information asymmetries”, they submitted. Importantly, they thought it was more likely that – an indication of information asymmetries – than an indication of “the seriousness of the case[s]”.

<sup>25</sup> WGI Methodology, <<http://info.worldbank.org/governance/wgi/nl.pdf>> (last accessed on 10 March 2015).

Secondly, we consider whether domestic institutions may interfere with an investment by design. We assess this scenario by looking at the WGI Regulatory Quality index, a business-friendliness measure that captures ‘the ability of the government to formulate and implement sound policies and regulations that permit and promote private sector development.’<sup>26</sup> Rather than measuring the capacity of domestic institutions to adequately respond to an investment interference, this index would point out the likelihood of the interference itself.

Thirdly, we look at the WGI Corruption index, which captures “perceptions of the extent to which public power is exercised for private gain, including both petty and grand forms of corruption, as well as “capture” of the state by elites and private interests.”<sup>27</sup> We use all indicators without lagging their effects. We decided not to lag their effects, despite our argument that investment arbitration is the result of serious governmental misconduct in preceding years, for two reasons. First, the indicators are fairly stable. Lagging their effect do not produce any significant difference for the descriptive type of analysis performed here. Second, it is unclear to which extent past and current domestic institutional conditions respectively affect the decisions of investors to give up alternative ways to settle a dispute and use arbitration. Although poor institutional conditions in the past might have led to the dispute, ongoing poor institutional conditions are likely to continue to indicate that any deal with the government is risky.

Apart from the abovementioned indices, we also consider other prominent indicators to compare our results. The ICRG Law and Order score is a widely recognized proxy for the strength of the rule of law. It is a combination of two factors – namely, “Law”, which is an “assessment of the strength and impartiality of the legal system”, and “Order”, which is an “assessment of popular observance of the law.”<sup>28</sup> The Law and Order variable ranges from 0 to 6 with lower scores indicating a less established legal system. The use of the Polity IV score (scale -10 to 10) brings a different perspective on the institutional situation in host countries. In a more authoritarian country, policy and legal changes can clearly be more sudden and swifter. This translates into potential high political risk.<sup>29</sup>

### **Independent variables for economic crises**

Our second hypothesis posits that investment arbitration is more likely to target countries that have gone through severe economic hardship. In this context we use the “Systemic Banking Crises

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<sup>26</sup> Ibid.

<sup>27</sup> Ibid.

<sup>28</sup> International Country Risk Guide, Researcher Dataset (ICRG T3B - Political Risk, ICRG Methodology, [http://www.prsgroup.com/ICRG\\_Methodology.aspx](http://www.prsgroup.com/ICRG_Methodology.aspx)).

<sup>29</sup> Monty G. Marshall, Polity IV Project: Political Regime Characteristics and Transitions, 1800-2012, <http://www.systemicpeace.org/polity/polity4.htm>.

Database” of Laeven and Valencia (2012)<sup>30</sup>, which features three types of financial crises: systemic banking crises, currency crises, and sovereign debt crises, in order to conceptualize the economic crisis variable. Accordingly, our index is the tally of these three indicators, meaning a country facing all three types of financial crises scores 3, whereas if there is systemic banking crisis and sovereign debt crisis it takes the value of 2, for instance.<sup>31</sup> Reinhart and Rogoff’s prominent crisis dataset that gives us a tally measure ranging from 0 to 6 could clearly be the first candidate for measuring the scope of the economic crisis, however, it leaves us with too many missing values, unlike Laeven and Valencia’s database.

Following Simmons’ 2014 study that found a positive correlation between inflation and litigation, we also consider inflation rate as a measure of economic hardship. According to the results of a random-effects generalized least squares regression employed, she concludes that “the higher the (log of) inflation, the greater the probability of arbitration is two years later.”<sup>32</sup> In this context, we look at percentage change in consumer price index (International Financial Statistics data) between 1995-2012.

#### *Control strategy*

We also control for a vector of conditions or factors that may affect the relationship between our dependent and independent variables. First, we use a dummy variable to control for the existence of an ongoing International Monetary Fund (IMF) program in the investment host country. Such programs come with conditions that tend to severely limit the discretion of governments and tend to act as seals of guarantee of sound, market friendly behavior. From this perspective, one could expect that international investors may be less tempted to resort to international arbitration against countries that have ongoing IMF programs. It seems reasonably plausible that countries suffering from an economic slowdown are on average softer on foreign investors if they are in an IMF program than if they are not, because of constraints imposed by the IMF. Besides, as Broz points out “[e]xternal monitoring by the IMF might create the transparency necessary to make a monetary commitment credible,”<sup>33</sup> As a matter of fact, the IMF monitoring has significant impacts regarding credible commitments. Even if a country has severe domestic economic problems, the implementation of a stability program led and engineered by the IMF may render the country

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<sup>30</sup> For more details, see Luc Laeven and Fabian Valencia, (2012). “Systemic Banking Crises: An Update,” IMF Working Paper No. 12/163.

<sup>31</sup> See Table 1 in Annex II.

<sup>32</sup> Beth A. Simmons, (2014). “Bargaining over BITs, Arbitrating Awards: The Regime for Protection and Promotion of International Investment,” *World Politics*, 66(1): 30.

<sup>33</sup> Lawrence Broz, “Political System Transparency and Monetary Commitment Regimes,” *International Organization* 56, no. 4 (2002): 884.

credible, as it is usually perceived as a sign that the country is on the right track, which usually avoids speculative attacks on its currency as well. The dummy variable takes the value of one if the country is borrowing from the Fund.<sup>34</sup>

Second, we address the issue of the alleged tendency in arbitration to target poorer countries by controlling for the level of economic development.<sup>35</sup> As highlighted in previous work using only descriptive statistics,<sup>36</sup> there is no evidence that states with low levels of economic development have been more frequently targeted than states with higher levels of economic development. In absolute numbers, states on the higher end of economic development have been respondents in more arbitrations than states on the lower end of economic development. Nevertheless, we remain to investigate whether there is some evidence of the curvilinear relationship between expropriation and the level of development, as would be suggested by earlier work on foreign direct investment. Indeed, a study examining expropriations in the 1970s found that the highest number of expropriations took place in countries with medium scores of economic development.<sup>37</sup> Hence, we may expect the greatest number of arbitrations to take place against states in this range of economic development. We use the World Bank income level four-fold classification: low income, lower-middle income, upper-middle income and high-income countries.<sup>38</sup> It is based mainly on gross national income (earlier gross national product) per capita.

Third, given the large number of claims targeting Latin American and Caribbean countries, we control for a possible regional effect specific to that part of the world. We use a binary dummy variable scoring one for Latin American and Caribbean host countries, and zero for countries from the rest of world. One possible interpretation for a regional specific pattern would be a stronger influence of economic ideology on governments' reactions to economic difficulties, leading to severe strains with foreign investors. Given the high number of claims against the Bolivarian Republic of Venezuela, but also against Ecuador, Bolivia and Argentina, the economic ideology factor should be investigated and controlled for (there are 15 Latin American or Caribbean countries in our data). But this would properly require a fuller investigation, which is beyond the scope of this chapter.

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<sup>34</sup> Information, accessible on the website <http://www.imf.org/external/country/index.htm>, together with the Fund's MONA (Monitoring of Fund Arrangements) database.

<sup>35</sup> Muthucumaraswamy Sornarajah, "Toward Normlessness: The Ravage and Retreat of Neo-Liberalism in International Investment Law" 2 *Yearbook of International Investment Law & Policy* 595 (2010), 618ff

<sup>36</sup> Schultz and Dupont, 'Investment Arbitration: Promoting the rule of law or over-empowering investors?'

<sup>37</sup> See Jodice (1980). The level of economic development no longer features prominently in recent work on expropriation. For instance, Hajzler (2012) focuses on output price levels and Wellhausen (2013) on FDI national diversity (Christopher Hajzler, "Expropriation of foreign direct investments: sectoral patterns from 1993 to 2006," *Review of World Economy*, 148:119-149 (2012); Rachel Wellhausen, "Expropriation, Nationality and Diplomacy," Paper presented at the Annual ISA Meeting, San Francisco, April 2013).

<sup>38</sup> The distinction between lower-middle and upper-middle income was introduced in 1983; until then there was just one "middle income" category.

Fourth, we control for a possible effect of the sector of activity of the investment to which the arbitration relates. Given recent evidence that foreign firms seem to be more vulnerable to expropriation in resource-based sectors,<sup>39</sup> we use a binary dummy variable that scores one for investment in the primary sector (agriculture, mining, oil, gas and petroleum).

Fifth, and last, given the high number of claims filed by investors with US nationality, we control for a possible effect of US nationality. The theoretical proposition could be that investors with US nationality may have a particularly broad set of options available to address a concern with foreign governments, given the economic power supremacy of the US. It would then seem to follow that one could expect arbitration to be less likely to be used by investors with US nationality. This may particularly be true for host countries that do not belong to the high-income category, because they are comparatively weaker against the US economic power.

## Results

In this section of our chapter, we summarize the statistical findings derived by testing our two hypotheses. As mentioned earlier, first an ordinal logistic regression with a categorical dependent variable (consisting three categories for the number of arbitration claims per country per year) is employed, essentially using maximum likelihood estimation (MLE). We proceed with a baseline model regressing the primary predictor variables, and then re-run our analyses with the controls for the income, and IMF loan and Latin America dummy variables (see Table 2 in Annex II). We again run the same models while excluding the host countries with only one arbitration claim over the whole period. The same regressions are run once again for all countries, excluding first the cases with US investors and then Primary sector. We then run the regressions excluding the host countries with only one claim.

The degree of bias is strongly dependent on the number of cases in the less frequent category in maximum likelihood estimation, and since 1720 of our 2034 observations are coded as 0, we acknowledge the possibility of some bias. In this regard, we then employ a negative binomial regression, where the dependent variable is the total number arbitration claims a country faces, and the independent variables stay the same<sup>40</sup> (see Table 3, 4 and 5). We first run a negative binomial regression for all countries, and then re-run the regressions this time first excluding the cases with US investors, and later the cases excluding primary sector (Table 4 and 5 respectively).

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<sup>39</sup> Hajzler (2012).

<sup>40</sup> We employ a standard negative binomial regression model that allows for overdispersion, instead of a zero inflated Poisson (ZIP), as it fits much better than a ZIP model.

Overall, we find no strong evidence that poor institutional conditions, when measured by *Polity*, are significantly associated with investment arbitration claims. Economic crisis does have a positive relation with the dependent variable, as expected, but the coefficient stays statistically insignificant in most of the models. Inflation does not have a statistically significant relation with the dependent variable either. However, all WGI indicators, as well as ICRG Law & Order, are statistically significant, and they all have a negative relation with investment arbitration claims, as expected.

As discussed previously, we are controlling for certain variables, and in order to see if we actually get statistically significant results consistent with the literature on our control variables, we also run a basic model with regressing the control variables on our dependent variable. Consistent with our discussion, countries receiving IMF loans have a lower probability of facing investment arbitration (the indicator is statistically significant in all models when logistic regression is employed, it loses significance in some of the negative binomial count models), whereas the *Income* and *Latin America* variables have a positive relation with investment arbitration claims, as expected, and they also are statistically significant in nearly all of the models.

Re-running the regressions after excluding the cases with US investors and then Primary sector does not lead to a substantial change for the models with all countries, however, unsurprisingly the restricted models decrease statistical significance considerably.

As mentioned earlier, economic crisis has a positive sign, though not statistically significant. However, once we add the variables measuring institutional conditions, the coefficient of economic crisis becomes negative (stays statistically insignificant). This gives us reason to believe that the institutional condition variable is acting as a moderator variable. In order to analyze the relations between the dependent variable and these two indicators, we add an interaction term of economic crisis and variables measuring institutional conditions, which in all of the models except the one with ICRG Law & Order, yields a statistically significance coefficient with a negative sign, meaning the positive correlation between economic crisis and arbitration gets stronger when institutional conditions are poorer. This is a noteworthy finding as it implies that the countries facing a severe economic crisis face arbitration more often if they have poor institutional conditions, which might actually hurt the legitimacy of arbitration.

## Conclusion

In this chapter, we investigated to which extent investment arbitration claims are related to the materialization of two types of sources of high political risk, namely severe economic situations and poor institutional conditions in host countries. We do so while explicitly keeping the predictors simple, even simplistic, and restricting the set of observations to those countries that

have been targeted by investment claims more than once in the period 1995-2012. The result of our analysis is that one leg of our conceptual depiction of political risk and arbitration – namely corruption and lack of rule of law-making dissuasion fail and thus leading to arbitrations – seems to have statistical significance. In contrast, we do not find any statistically significant link between economic crises and investment arbitration claims. Yet, when one considers countries with poor institutional conditions, economic crises tend to reinforce the likelihood for countries to be hit by arbitration claims. As discussed earlier, this implies that the countries confronting a severe economic crisis face arbitration more often if they have poor institutional conditions. Therefore, we conclude that bad governance and economic crises considered together are a good predictor of when countries get hit by investment arbitration claims. From this perspective, investment arbitration could be viewed in relatively positive terms as it is used to address worst-case scenarios: situations in which bad governance has the most adverse consequences for investors. From that perspective specifically, investment arbitration is not as illegitimate as it is sometimes said to be.

## ANNEX I: A FEW FACTS ABOUT OUR DATABASE

This study is based on a data set with the following characteristics:

- Period covered: 1972-2018
- Includes 1098 investment claims (662 until the end of 2012)
- Includes investment claims regardless of the jurisdictional basis of the arbitration:
  - o investment arbitrations based on a treaty (typically a BIT, but not on multilateral treaties);
  - o investment arbitrations based on a contract between the host state and the investor,
  - o investment arbitrations based on the domestic legislation of the host state, when such legislation unilaterally allows the investor to file an arbitration against the government.
- Includes institutional investment arbitration (ICSID mainly, but also Stockholm Chamber of Commerce, International Chamber of Commerce, etc) and ad hoc investment arbitration (mainly under the arbitration rules of UNCITRAL).
- Encodes the following aspects of the arbitrations:
  - o parties; case number; case status (pending/concluded/never commenced); composition of the arbitral tribunal (names of arbitrators); name of host state and home state of investor; region of the world of host state and home state of investor; year of filing; in favor of whom the initial award was rendered; arbitration rules governing the procedure; sector of the economy invested in (Agriculture, Banking and Finance, Construction, Electricity generation and distribution, Forestry, Hotels/Tourism/Recreation, Industry (chemicals), Industry (food), Industry (metals), Industry (other light), Industry (textiles), Industry (transport and machinery), Industry (weapons), Insurance, Media and Broadcasting, Mining, Oil/gas/petroleum, Pharmaceuticals, Real Estate Development, Sales and Trade, Services, Telecom, Transportation and infrastructure, Waste Management and Utilities, Water and Sewer); type of host country action attacked; amount claimed; most recent procedural position; year of conclusion of case if applicable; years pending; if settled, phase of the proceedings when the settlement has taken place/reason; damages awarded; percentage of the claim ultimately awarded; polity score of host state and home state (year of filing) (Polity IV Country Reports 2009); development status of host state (year of filing) (World Bank World Development Reports); number of arbitrators; nationalities of arbitrators; region of origin of arbitrators; development status of arbitrators' state of nationality; annulment proceedings (ICSID only): outcome, duration, committee members.
- Sources of information:
  - o For claims submitted to ICSID: ICSID website and ICSID Reports.
  - o For other claims, sources include: italaw.com website; UNCTAD reports; Investment Arbitration Reporter website; Oxford University Press's Investment Claims website; Kluwerarbitration.com; Westlaw database; Global Arbitration Review; NAFTA Secretariat's database; naftaclaims.com; ICC Dispute Resolution library; website of the Stockholm Chamber of Commerce; website of the Energy Charter Treaty secretariat; general newspapers; portfolios of law firms and arbitrators.

## ANNEX II

**Table 1: Economic Crisis Variable**

Systemic banking crisis	Currency crisis	Sovereign debt crises	Tally of Financial crisis
-	-	-	0
✓	-	-	1
-	✓	-	1
-	-	✓	1
✓	✓	-	2
-	✓	✓	2
✓	-	✓	2
✓	✓	✓	3

**Table 2: Ordinal Logistic Regression Results for all Countries**

Model	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9	Model 10
<b>Variable</b>										
Economic crisis		0.153 (0.232)	-0.007 (0.272)	-0.524 (0.465)	-0.008 (0.272)	-0.239 (0.333)	0 (0.272)	-0.486 (0.434)	0.232 (0.233)	0.694 (0.697)
WGI Corruption			-0.237** (0.101)	-0.21** (0.102)						
Economic crisis*WGI Corruption				-0.887* (0.496)						
WGI Rule of Law							-0.244** (0.105)	-0.211** (0.106)		
Economic crisis*WGI Rule of Law								-0.874** (0.443)		
WGI Regulatory Quality					-0.18* (0.101)	-0.151* (0.103)				
Economic crisis*WGI Regulatory Qual						-0.73* (0.383)				
ICRG Law & Order									-0.223*** (0.074)	-0.214*** (0.075)
Economic crisis* ICRG Law & Order										-0.136 (0.198)
Income	0.206*** (0.064)	0.236*** (0.065)	0.345*** (0.093)	0.345*** (0.093)	0.319*** (0.097)	0.317*** (0.097)	0.356*** (0.097)	0.354*** (0.097)	0.431*** (0.091)	0.429*** (0.091)
IMF loan	-0.394*** (0.155)	-0.42*** (0.156)	-0.411*** (0.168)	-0.407** 0.168	-0.388** (0.168)	-0.379** (0.169)	-0.416*** (0.168)	-0.409** (0.168)	-0.441*** (0.176)	-0.44*** (0.176)
Latin America	0.251* (0.149)	0.334** (0.151)	0.336** (0.162)	0.33** 0.162	0.357** (0.161)	0.354** (0.161)	0.296* (0.161)	0.293* (0.164)	0.124 (0.164)	0.121 (0.172)
<b>Summary statistics</b>										
Number of observations	2034	2034	1473	1473	1472	1472	1472	1472	1570	1570
Pseudo R <sup>2</sup>	0.024	0.031	0.034	0.038	0.031	0.035	0.033	0.038	0.043	0.043

Note: Numbers in parentheses represent standard errors; \*p < 0.10, \*\*p < 0.05, \*\*\*p < 0.01.

**Table 3: Negative Binomial Regressions Results for all Countries**

Model	Model 1		Model 2		Model 3		Model 4		Model 5	
Variable	Coefficient	IRR	Coefficient	IRR	Coefficient	IRR	Coefficient	IRR	Coefficient	IRR
Economic crisis	0.14 (0.174)	1.15	-0.012 (0.208)	0.988	-0.533 (0.371)	0.587	-0.019 (0.208)	0.981	-0.549* (0.361)	0.578
WGI Corruption			-0.274*** (0.08)	0.761	-0.25** (0.08)	0.779				
Economic crisis*WGI Corruption					-0.829** (0.398)	0.437				
WGI Rule of Law							-0.34*** (0.081)	0.712	-0.311*** (0.082)	0.733
Economic crisis*WGI Rule of Law									-0.805** (0.362)	0.447
Income	0.269*** (0.052)	1.309	0.417*** (0.074)	1.518	0.417*** (0.075)	1.517	0.467*** (0.077)	1.596	0.464*** (0.077)	1.591
IMF loan	-0.183* (0.116)	0.833	-0.176 (0.126)	0.839	-0.17 (0.126)	0.844	-0.181 (0.126)	0.834	-0.167 (0.126)	0.846
Latin America	0.7*** (0.108)	2.014	0.66*** (0.118)	1.934	0.655*** (0.118)	1.925	0.561*** (0.123)	1.753	0.553** (0.123)	1.739
<b>Summary statistics</b>										
Log-likelihood	-1319.939		-1112.537		-1109.513		-1109.509		-1106.166	
Pearson $\chi^2$	3328.503		2448.004		2424.394		2417.709		2406.079	
Number of observations	1926		1473		1473		1472		1472	

Note: Numbers in parentheses represent standard errors; \*p < 0.10, \*\*p < 0.05, \*\*\*p < 0.01.

**Table 3: Negative Binomial Regressions Results for all Countries**

Model	Model 6		Model 7		Model 8		Model 9	
<b>Variable</b>	Coefficient	IRR	Coefficient	IRR	Coefficient	IRR	Coefficient	IRR
Economic crisis	-0.052 (0.21)	0.95	-0.391 (0.29)	0.676	0.210 (0.179)	1.234	0.238 (0.558)	1.269
WGI Regulatory Quality	-0.343*** (0.077)	0.709	-0.315*** (0.078)	0.73				
Economic crisis*WGI Regulatory Quality			-0.733** (0.334)	0.48				
ICRG Law & Order					-0.274*** (0.055)	0.76	-0.273*** (0.056)	0.761
Economic crisis*ICRG Law & Order							-0.008 (0.152)	0.992
Income	0.478*** (0.077)	1.612	0.475*** (0.077)	1.608	0.503*** (0.071)	1.653	0.503*** (0.071)	1.653
IMF loan	-0.134 (0.126)	0.874	-0.118 (0.126)	0.889	-0.141 (0.128)	0.868	-0.141 (0.129)	0.869
Latin America	0.621*** (0.119)	1.86	0.608*** (0.119)	1.836	0.401*** (0.128)	1.493	0.401*** (0.128)	1.493
<b>Summary statistics</b>								
Log-likelihood	-1108.48		-1105.572		-1135.101		-1135.1	
Pearson $\chi^2$	2345.49		2333.231		2502.092		2502.611	
Number of observations	1472		1472		1570		1570	

Note: Numbers in parentheses represent standard errors; \*p < 0.10, \*\*p < 0.05, \*\*\*p < 0.01.

**Table 4: Negative Binomial Regressions Results for all Countries Excluding the Cases with US Investors**

Model	Model 1		Model 2		Model 3		Model 4		Model 5	
<b>Variable</b>	Coefficient	IRR	Coefficient	IRR	Coefficient	IRR	Coefficient	IRR	Coefficient	IRR
Economic crisis	-0.254 (0.256)	0.776	-0.225 (0.264)	0.799	-0.572 (0.418)	0.564	-0.223 (0.264)	0.801	-0.599* (0.408)	0.55
WGI Corruption			-0.421*** (0.091)	0.656	-0.404*** (0.091)	0.668				
Economic crisis*WGI Corruption					-0.584 (0.45)	0.558				
WGI Rule of Law							-0.426*** (0.09)	0.653	-0.403*** (0.091)	0.668
Economic crisis*WGI Rule of Law									-0.595* (0.398)	0.551
Income	0.206*** (0.058)	1.229	0.459*** (0.081)	1.582	0.468*** (0.081)	1.58	0.477*** (0.084)	1.612	0.474*** (0.084)	1.606
IMF loan	-0.28** (0.132)	0.756	-0.242* (0.141)	0.785	-0.237* (0.141)	0.789	-0.251* (0.141)	0.778	-0.241* (0.142)	0.786
Latin America	0.582*** (0.123)	1.79	0.509*** (0.133)	1.664	0.502*** (0.133)	1.651	0.405*** (0.137)	1.5	0.396*** (0.138)	1.486
<b>Summary statistics</b>										
Log-likelihood	-1083.658		-928.496		-927.441		-928.22		-926.845	
Pearson $\chi^2$	3425.333		2465.235		2444.505		2465.935		2457.135	
Number of observations	1926		1473		1473		1472		1472	

Note: Numbers in parentheses represent standard errors; \*p < 0.10, \*\*p < 0.05, \*\*\*p < 0.01.

**Table 4: Negative Binomial Regressions Results for all Countries Excluding the Cases with US Investors**

Model	Model 6		Model 7		Model 8		Model 9	
<b>Variable</b>	Coefficient	IRR	Coefficient	IRR	Coefficient	IRR	Coefficient	IRR
Economic crisis	-0.269 (0.267)	0.764	-0.515 (0.349)	0.598	-0.212 (0.253)	0.809	0.431 (0.673)	1.539
WGI Regulatory Quality	-0.433*** (0.084)	0.648	-0.413*** (0.085)	0.662				
Economic crisis*WGI Regulatory Quality			-0.526 (0.364)	0.591				
ICRG Law & Order					-0.304*** (0.063)	0.738	-0.293*** (0.064)	0.746
Economic crisis*ICRG Law & Order							-0.205 (0.206)	0.814
Income	0.497*** (0.084)	1.643	0.493*** (0.084)	1.638	0.445*** (0.079)	1.561	0.442*** (0.079)	1.333
IMF loan	-0.188 (0.142)	0.829	-0.177 (0.142)	0.838	-0.221* (0.147)	0.802	-0.213 (0.147)	0.808
Latin America	0.485*** (0.133)	1.625	0.475*** (0.134)	1.608	0.267* (0.147)	1.28	0.244* (0.147)	1.276
<b>Summary statistics</b>								
Log-likelihood	-926.37		-925.195		-933.178		-932.664	
Pearson $\chi^2$	2345.418		2339.269		2690.235		2722.206	
Number of observations	1472		1472		1570		1570	

Note: Numbers in parentheses represent standard errors; \*p < 0.10, \*\*p < 0.05, \*\*\*p < 0.01.

**Table 5: Negative Binomial Regressions Results for all Countries Excluding the Cases with Primary Sector**

Model	Model 1		Model 2		Model 3		Model 4		Model 5	
<b>Variable</b>	Coefficient	IRR	Coefficient	IRR	Coefficient	IRR	Coefficient	IRR	Coefficient	IRR
Economic crisis	-0.115 (0.225)	0.891	-0.294 (0.273)	0.799	-0.821* (0.465)	0.44	-0.291 (0.273)	0.748	-0.757* (0.426)	0.469
WGI Corruption			-0.214*** (0.087)	0.656	-0.194** (0.087)	0.824				
Economic crisis*WGI Corruption					-0.876* (0.484)	0.416				
WGI Rule of Law							-0.224*** (0.09)	0.799	-0.199** (0.091)	0.82
Economic crisis*WGI Rule of Law									-0.789* (0.421)	0.454
Income	0.413*** (0.059)	1.511	0.527*** (0.084)	1.582	0.527*** (0.085)	1.694	0.538*** (0.087)	1.712	0.535*** (0.088)	1.707
IMF loan	-0.109 (0.134)	0.897	-0.091 (0.141)	0.785	-0.085 (0.144)	0.918	-0.095 (0.144)	0.909	-0.085 (0.144)	0.92
Latin America	0.563*** (0.124)	1.756	0.549*** (0.134)	1.664	0.544*** (0.134)	1.722	0.498*** (0.138)	1.645	0.492*** (0.139)	1.635
<b>Summary statistics</b>										
Log-likelihood	-1072.266		-911.394		-909.116		-911.235		-908.927	
Pearson $\chi^2$	3407.501		2391.339		2379.696		2396.854		2390.61	
Number of observations	1926		1473		1473		1472		1472	

Note: Numbers in parentheses represent standard errors; \*p < 0.10, \*\*p < 0.05, \*\*\*p < 0.01.

**Table 5: Negative Binomial Regressions Results for all Countries Excluding the Cases with Primary Sector**

Model	Model 6		Model 7		Model 8		Model 9	
<b>Variable</b>	Coefficient	IRR	Coefficient	IRR	Coefficient	IRR	Coefficient	IRR
Economic crisis	-0.319 (0.275)	0.727	-0.568* (0.344)	0.567	-0.075 (0.227)	0.928	0.213 (0.665)	1.237
WGI Regulatory Quality	-0.252*** (0.087)	0.777	-0.229*** (0.088)	0.795				
Economic crisis*WGI Regulatory Quality			-0.644* (0.378)	0.525				
ICRG Law & Order					-0.255*** (0.062)	0.775	-0.25*** (0.063)	0.779
Economic crisis*ICRG Law & Order							-0.085 (0.187)	0.918
Income	0.56*** (0.087)	1.751	0.557*** (0.087)	1.746	0.63*** (0.081)	1.877	0.628*** (0.081)	1.874
IMF loan	-0.064 (0.144)	0.938	-0.053 (0.144)	0.949	-0.031 (0.146)	0.969	-0.028 (0.146)	0.973
Latin America	0.535*** (0.134)	1.707	0.527*** (0.134)	1.694	0.262* (0.146)	1.3	0.262* (0.146)	1.299
<b>Summary statistics</b>								
Log-likelihood	-910.14		-908.494		-938.7		-938.246	
Pearson $\chi^2$	2327.49		2322.438		2683.318		2487.169	
Number of observations	1472		1472		1570		1570	

Note: Numbers in parentheses represent standard errors; \*p < 0.10, \*\*p < 0.05, \*\*\*p < 0.01.