The Review of International Organizations
https://doi.org/10.1007/s11558-019-09363-z

# Crisis and contract breach: The domestic and international determinants of expropriation

**Nathan M. Jensen**[1] · **Noel P. Johnston**[2] · **Chia-yi Lee**[3] · **Hadi Sahin**[4]

Published online: 13 July 2019


## Abstract

In this paper we address how external factors shape government decisions to break or uphold contracts, specifically focusing on how economic shocks and support from multilateral financial institutions shape leader decisions to expropriate from investors. Contrary to conventional wisdom and much of the existing scholarship, we argue that governments are less likely to expropriate from investors during periods of economic crisis since governments become more sensitive to the reputational costs of expropriating. We also argue that governments are sensitive to the levers other governments may use to punish for expropriation, such as withholding IMF and World Bank funding. We test these theories using a dataset of investment expropriations and case studies of thirty-four investment disputes that were resolved pre-claim. Our econometric analysis suggests that expropriations of foreign investment are less common during periods of crisis, and that countries under IMF agreements or borrowing from the World Bank are less likely to expropriate. Our thirty-four case studies, which substantiate the role of government reputation and multilateral pressure, support our statistical results.

**Keywords** Expropriations · Economic crisis · Multilateral financial institutions · Reputational costs · Retaliation costs

**JEL Classification** F53 · F69 · H13

Political science scholarship examining the political economy of foreign direct investment (FDI) has focused on how the political risks facing multinational enterprises affect investment location choice. Multinational enterprises operating in foreign

**Electronic supplementary material** The online version of this article (https://doi.org/10.1007/s11558-019-09363-z) contains supplementary material, which is available to authorized users.

✉ Nathan M. Jensen
natemjensen@austin.utexas.edu

Extended author information available on the last page of the article.

markets are exposed to many potential risks, ranging from outbursts of political violence, government restrictions on the repatriation of capital, and regulatory uncertainty.[1] While relatively rare, government choices to expropriate assets from investors or breach contracts with firms are often the most important risks for firms operating abroad (MIGA 2012). Firms either avoid countries with propensities to expropriate or are forced to engage in costly activities to insure their investments or limit the ability or incentive of governments to renege on contracts post-investment.[2]

Political science research has focused on how cross-national factors, such as the level of democracy, quality of courts, or international agreements, affect political risks for multinational enterprises and flows of FDI.[3] In the next section we briefly review this literature, but our main point is that despite this scholarly attention to FDI, we have a very limited understanding of the over-time factors influencing government decisions to break contracts with multinationals. What explains the waves of expropriations in the 1960s and 1970s and the new series of investment disputes in the past ten years?

Numerous scholars along with news accounts of expropriations point to economic crisis triggering investment disputes. Conversely, we argue that existing theoretical and empirical work on trade and investment liberalization actually supports the association between periods of crisis and market friendly policies. Rather than predicting expropriations of investment during crisis, we predict that expropriations are less likely during periods of crisis. While expropriations may offer tempting short-term benefits, the destabilizing effect of investment and financial repercussions make the reputational consequences even more concerning during a crisis.

We also argue that investors can directly or indirectly employ their home governments to pressure expropriating countries. This includes the suspension of World Bank and International Monetary Fund (IMF, or the Fund) loans. In consequence, economic downturns or changes in aid from multilateral institutions may impact the incidence, and thus pattern of expropriation behavior.

While our theory is general enough to link different types of crisis and foreign intervention to lower levels of expropriations, we focus specifically on how financial crisis and dependence on IMF lending and World Bank support affect expropriation behavior. We test this relationship using a dataset of all reported expropriation events from 1971 to 2006 that has been used by political scientists and management scholars. This dataset allows us to explore how crisis and dependence on multilaterals is associated with patterns of expropriations. Our results offer strong evidence for crisis limiting expropriation and show some evidence that dependence on multilaterals is associated with a major reduction in expropriation behavior.

Our other empirical contribution is the exploration of 34 cases of "pre-claims" from the Multilateral Investment Guarantee Agency (MIGA). Our case studies of these 34 World Bank insured projects are all events where host governments

[1] For an overview see Jensen (2006).

[2] One strategy is to engage in joint ventures with local firms. See Henisz (2000).

[3] For an overview see Jensen et al. (2012).

originally took positions that lead to concerns of potential expropriations of investments. In all 34 cases, an expropriation claim was avoided, usually through the government modifying their position towards the firm. We document that the majority of these cases were due to concerns about the reputation of government, or direct pressure from the IMF, World Bank, or powerful governments. These case studies also provide evidence of the effect of crisis and multilateral support on expropriation behavior.

Our findings fit into a broader literature in political science. Academics have long debated how international market forces shape domestic policy choice. For example, Rudra (2008) finds that the market disciplining effects of trade and capital mobility are especially prevalent in government social security programs. Others, such as Garrett (1998), argue that the disrupting influence of globalization can lead to greater levels of government intervention. While there is scant evidence for a "race to the bottom" in many policy areas across countries, our research suggests that economic crisis does have a disciplining effect on governments.[4] It also finds that leverage from international financial institutions can have a major impact on the propensity to expropriate.

Our paper proceeds as follows. The next section provides a general overview of the existing literature on political risks and expropriations of investment. We then introduce our theory on the relationship between economic crisis (and multilateral aid) and expropriations. In the following section we introduce our research design, data, estimation strategy and results of the statistical analysis. We present our MIGA pre-claims cases afterwards. The final section concludes.

## 1 Multinational corporations and investment expropriations

Research on the relationship between multinational corporations and domestic politics has seen a revitalization in recent years. This is partially driven by the explosion of investments by multinational enterprises and FDI (UNCTAD 2008). Much of this research has focused on government decisions to expropriate or nationalize the investments and income streams of multinational corporations. Government expropriations come in a number of forms. These events can be massive, country-wide expropriations that are coupled with regime changes such as the fall of the Shah in Iran and the nationalization of businesses in Cuba. Or these expropriations can be targeted at specific sectors or even individual firms. More and more, recent expropriations tend to fall under the banner of "creeping expropriation," where governments use selective enforcement of laws to expropriate the assets or income streams of firms (Kobrin, 1980, 1984; Jodice 1980; Jensen 2003; Graham et al. 2017).

Whatever the form of expropriations, academic interest in the political risks facing firms may also be due to the complex pattern of tensions between governments and business that have ebbed and flowed over time. Waves of government expropriations in the 1960s and 1970s, some as extreme as the mass nationalizations in Iran and Cuba, were followed by a period of calm in the 1980s (Vernon 1998). The warming

[4]For an overview see Rudra (2008).

of governments towards multinational corporations and the steep reductions in expropriations led some scholars to predict a permanent change in the patterns of government expropriations (Minor 1994).

This optimism has been shaken with recent expropriations of investments in Argentina, Bolivia and Venezuela, and major regulatory changes that breached contracts in Russia. In a survey of executives, MIGA (2012) finds that 37% and 9% of respondents had directly experienced a breach of contract or expropriations respectively in past three years. Executives also claimed that the potential for breach of contract and expropriations had a very high or high impact on firm operations in 57% and 34% respondents, respectively.

Thus, while rare, expropriations are extremely important to firms, and we only have a limited understanding of what triggers expropriation events. One common theme in political science scholarship is the role of democratic institutions in affecting political risks.[5] More recently, scholars have attempted to measure expropriation behavior more directly. Jensen (2008) uses political risk insurance pricing to examine how political institutions influence expropriation risk. He finds that constraints on the executive in democratic regimes are the key feature reducing political risks. Li (2009) examines expropriation events, showing that while democracies and authoritarian regimes both engage in expropriations, democracies have lower propensities to expropriate.

Democracy is not the only set of institutions capable of constraining elites. Staats and Biglaiser (2012) conduct an original survey of investors operating in Latin America, finding that judicial institutions have a major impact on political risks. Graham et al. (2017) show that political constraints from veto players reduce expropriation risks, but not transfer risks. The recent explosion of bilateral investment treaties (BITs) is partially attributed to their ability both to signal openness to FDI and to constrain governments from reneging on contracts.[6]

Scholars also argue that non-institutional factors may impact expropriation behavior, including a country's natural resource wealth (Jensen and Johnston 2011), degree of joint-ownership (Henisz 2000), how deeply investors are integrated into domestic supply chains (Johns and Wellhausen 2016), reputational consequences for global (Michael 2007; Jensen 2008) and co-national investors (Wellhausen 2015b), and whether a multilateral institution can apply pressure to the host country (Biglaiser et al. 2016). Our study adds to this literature by examining how economic shocks and support from international institutions affect a government's propensity to expropriate.

[5] Jensen (2003) and Li and Resnick (2003), for example, examine the impact of democratic institutions on FDI flows. While Jensen (2003) argues that democratic institutions increase FDI flows, Li and Resnick (2003) show that this increase is through democracies having a stronger rule of law. Other aspects of democracies, for example stronger anti-monopoly laws, reduce FDI flows.

[6] Kerner (2009) provides an excellent overview and empirical test of these signaling and constraining aspects of BITs. See Guzman (2006) on the diffusion of BITs. See Yackee (2008) and Allee and Peinhardt (2010) on the variation in dispute mechanisms across BITs. See UNCTAD (1998), Neumayer and Spess (2005), Salacuse and Sullivan (2005), and Kerner (2009), and Lee and Johnston (2016) for published studies of the impact of BITs on FDI.

## 2 Theory: International and financial constraints on investment expropriation

These previous studies are limited in their ability to explain the puzzles on the timing of expropriations. Why is it that some high risk countries offer protections to foreign investors, while at other times they choose to expropriate? What time-varying factor explains these decisions to expropriate or to uphold contracts?

A good starting point to address this question is a classic paper on expropriation by Cole and English (1991). In a formal model of government decision-making, they examine government decisions to expropriate based on a cost benefit analysis of the current benefits of expropriations minus the future investment losses. Their theoretical model does not provide a clear prediction. On the one hand, risk accepting governments will often expropriate investments when output prices are high. This is labeled "opportunistic" expropriations. On the other hand, certain levels of risk aversion can lead governments to expropriate when output prices are low. These are labeled "desperation" expropriations.[7]

Recent evidence has suggested that these "desperation" expropriations of FDI are common. Wells and Ahmed (2007) document a number of investment disputes, linking many of these disputes to economic crisis. In many cases, infrastructure investments become unviable in the wake of major financial crises. Petrova and Bates (2012) argue that economic shocks can trigger increased political risks, although this is pronounced in intermediate regimes (neither fully democratic nor fully autocratic).

One explanation for this increase in risk during economic downturns is that governments may be pressured to expropriate firms during a crisis. These links between economic crisis and increased investment disputes have been noted by non-academics. In a volume on political risk insurance, Hansen (2005, 12) notes: "Emerging markets, particularly Indonesia, Pakistan, Thailand, the Russian Federation and Argentina during their respective economic crises have been a rich source of troubled investments." A recent survey by MIGA finds that investors believe that crisis increases risk. When asked about the impact of a financial crisis on expropriation risk, 29% and 37% indicated that crisis leads to a major or minor increase in risk respectively. Only 10% of respondents thought that financial crisis leads to decreased (7% minor, 3% major) risk. Similar results hold for the impact of recession on expropriation risk. Fifteen percent of respondents indicated recession leads to a major increase in political risks and 44% indicated it leads to a minor increase in risk.

While this link between crisis and expropriations is plausible, it is at odds with broader work on the link between crisis and economic liberalization. Alternative arguments have emphasized the role of markets in tempering government decisions. In a highly contentious area of research, scholars have used similar arguments linking

[7]More recently, Tomz and Wright (2010) model both sovereign bond investment and FDI to examine governments' incentives to expropriate/default foreign investment. Consistent with Cole and English (1991), they argue that governments are more likely to expropriate during good economic times if they are risk neutral, and during bad times if they are risk averse. On the other hand, leaders are more likely to default during bad economic times, independent of their risk acceptance level.

economic crisis to neoliberal reforms. Haggard and Maxfield (1996) argue that governments often liberalize their capital account during periods of crisis, signaling a pro-market position of the government. Similar arguments have been made about the role of economic crisis in triggering neoliberal reform more generally (Abiad and Mody 2005; Biglaiser and DeRouen 2004).[8]

A series of empirical studies find only a weak relationship between crises and capital account liberalization. For example, Drazen and Easterly (2001) find a positive relationship between inflation and economic reform, but this does not hold for other measures of economic distress. In a recent study, Pepinsky (2012) finds that governments are more likely to close their capital account during crisis. Although the empirical debate remains unsettled, this literature provides clear guidance on the opposing empirical predictions of different theoretical arguments on the relationship between crisis and economic liberalization.

Much of the academic literature on investment expropriations has been divorced from these debates, despite the obvious parallels. While the fundamental features of FDI are quite different from other forms of capital in a number of important ways, government decisions to expropriate investments are also tempered by reputational costs. During periods of crisis, what choice does a government make?

In this paper, we argue that although there is a temptation for governments to use expropriation as a form of redistribution during crisis, the potential reaction of investors and international financial markets constrains this behavior. The same MIGA survey found that one of the biggest blows to government reputation is the expropriation of an investment. While this finding may seem obvious, the important point is that even a selective expropriation (for example, a single power provider or oil producer) sends a powerful signal to markets that has serious repercussions for the government's ability to attract capital. Equally powerful is the ability of important actors, such as home countries or multilateral institutions, to deter expropriations.

We outline our theory by first discussing the implications of an economic crisis. Economic crisis affects a country in a variety of ways, depending on the type of crisis (e.g. banking, currency, or debt). Often, credit markets tighten, unemployment rises, the capital-to-labor ratio and total factor productivity decrease, there is inflation, domestic foreclosures increase, and growth slows. For a government, crisis not only affects tax collection, it affects borrowing. Kindleberger (1996, 15) describes the point in a crisis where a government is faced with the possibility that it will not be able to meet its liabilities: bankruptcies increase, liquidation occurs, and "the realization spreads that there is only so much money." He lists this concern as the key argument for a lender of last resort, which may convince "the market that money will be made available in sufficient volume to meet the demand for cash." Reinhart and Rogoff (2009) also describe the key role of public debt during economic crisis: "government debt is...often the unifying problem across the wide range of financial crises we examine" (from their preface).

[8] If, for example, a government wishes to privatize after a crisis, they may be less likely to jeopardize future investment by expropriating.

This need to increase revenues, or reduce costs, can affect the incentives to expropriate from investors. Governments can attempt, for example, to capture revenue streams through the expropriation of natural resource investments, or engage in creeping expropriation through selectively increasing taxation on foreign firms. As we show in our case studies, governments may also expropriate from investors by rewriting power and water contracts during a crisis (e.g. if a government must choose between rising prices for domestic stakeholders already hard hit during a crisis, and renegotiating the terms of the contract). There clearly are financial incentives to expropriate during a crisis.

Yet despite the potential revenue advantages, the short and long term costs of expropriation can deter governments from expropriating from foreign investors. We argue that these costs are more formidable to pay during economic crisis. Four reasons explain why the costs of expropriation are more extreme during a crisis. First, in a crisis, governments face the same decision to expropriate, but often with significantly less revenue coming from domestic sources. Relative to this revenue, FDI may represent an even more valuable revenue stream, particularly when it delivers a stable flow of revenues or provide a social function, such as employment (generating tax revenues from domestic citizens). Expropriation contorts the flow of those streams. Moreover, governments taking control over foreign operations may result in efficiency loss, particularly if the investment requires significant technological and managerial inputs. Thus, overall expropriation can deprive governments from a valuable resource to smooth consumption during crisis.

Second, expropriation can also be costly during a crisis because it signals a government's unwillingness to uphold contracts and thus has a negative effect on a government's reputation. In the short and long-run, this could lead to loss of future foreign investment. In 2002, for example, amid fears of an Argentina-like fiscal crisis, the Philippine government expropriated Germany's largest foreign investment project: an international airport terminal that was jointly owned by the German company Fraport AG. Despite urgent need, the terminal languished unused for years as the government struggled to complete the terminal and courts debated the lawfulness of the expropriation. The reputational consequences were swift and lingered. As German Ambassador, Christian-Ludwig Weber-Lortsch, said, "[s]ince my arrival in August 2007 I have committed myself to bring business and jobs to the Philippines. Unfortunately, the largest impediment to this day remains the unresolved expropriation of the NAIA 3 terminal. Not only for German but also for European and other international investments."[9] Reputation can also trigger investor caution in subsequent economic slowdowns. In 2013, in the midst of economic slowdown, the Aquino government sought foreign investors for a $12 billion project to improve the country's infrastructure, including the construction of roads, rails, ports, and airports. The government struggled to attract investment: the widely publicized expropriation of

[9] "Washington Ruling Makes NAIA 3 Use Illegal," Inquirer.net 2011.

Fraport still reverberated across investors and across different projects within the economy.[10]

In the short run, expropriation can also sully a government's reputation in currency and bond markets. Specifically, a government expropriation of investments during a financial crisis can lead to a decreased demand for the local currency (leading to a run on reserves or a depreciation of the currency in a floating exchange rate system) and higher borrowing costs for the government via increased interest rates in sovereign bond markets. de Paoli et al. (2006) suggest that there are similar losses in a crisis, following sovereign default.[11]

Third, governments which choose to not pay creditors or expropriate investors during a crisis may be signaling the government type, or signaling the government's expectations of future economic performance based on private information. For example, Sandleris (2008) argues that government repayment decisions during an economic crisis reveal the government's private information about the state of the economy. By resorting to desperate measures, governments could convey a bleak picture of the economy. This would not only affect a government's borrowing costs, but also domestic firms' ability to borrow from foreign markets. Thus, it could further the contraction of the economy. One excellent empirical example from sovereign debt payments is Kaminsky and Schmukler (2002). They find that sovereign debt defaults have spillover effects on other financial markets, and that these effects are even more pronounced during an economic crisis. Thus, while the decreased access to revenue may make expropriations tempting, it is exactly this revenue deficit - and the threat of further revenue loss - that may compel constraint.

Finally, if crises are not managed with respect to long-term recovery, they can lead to recessions. The disruptive costs of expropriation may thus be especially concerning during a crisis. If a longer-term recession does follow, the economic cost may be severe, but so might the political consequences. The economic voting literature, for example, argues that voters care about their perceived economic situation (Lewis-Beck et al. 2007) perhaps even more than their ideological positions (Duch and Stevenson 2008). Singer (2010) argues that economic concerns are particularly likely to dominate voting behavior under bad economic conditions, such as recession. For Latin America, Remmer (1991) reveals that economic crisis undermines support

[10] Business scholars discuss numerous ways that avoiding expropriation can create financial market benefits. They find, for example, that protections against expropriations are associated with more investments (per investment opportunities) (Wurgler 2000), an expansion of the financial market (La et al. 2002), more valuable stock markets (La et al. 1997), and listed firms that are larger (Kumar et al. 1999), more numerous (La et al. 1999), more valuable (Claessens et al. 2002; La et al. 2002), pay greater dividend payments (La et al. 2000), and have lower private benefits of control (Zingales 1994; Nenova 1999). See Shleifer and Wolfenzon (2002) for a more comprehensive review. Given the capital scarcity during a crisis, expropriations may trigger multiple types of broader financial market costs.

[11] According to de Paoli et al. (2006), there are two costs of default: reduced access to future finance and output loss (because domestic firms are also unable to borrow). They argue that banking crises and currency crises exacerbate the output loss during default because domestic banks cannot function as intermediaries and provide credit as before and currency crises increase governments' fixed debt. They call this output loss broader financial costs.

for political incumbents. Kriesi (2012) finds the same severe punishment across 13 European countries. Lewis-Beck and Stegmaier (2000), in their comprehensive review of the literature, put it more simply: "Good times keep parties in office, bad times cast them out." And if a crisis leads to a recession, the chance of reelection may be meagre. Not all crises are like that, but some cross the threshold and either result in years to recovery or an ousted leader. And gambling with disrupting capital flows is risky, even if it promises some benefits. The simple logic is that seizing assets at a critical economic moment may offer a short-term boost, but may also risk a loss that is disproportionately damaging (and threatening to leader survival) in comparison to normal times.

In sum, we argue that the costs of expropriation are even higher in times of crisis, although we note in our research design that the overall impact of crisis on expropriation requires an empirical examination. Important calculations of politicians, shaped by their probability to survive in office during a crisis, and their time horizons shape the incentives to expropriate. Our work can not fully explain this decision calculus. Our goal is to examine the overall impact of these international factors in shaping expropriation decisions.

***Hypothesis 1:*** *During an economic crisis, host governments are less likely to expropriate from foreign investors.*[12]

Our first hypothesis focuses on the impact of crisis on the behavior of governments, and how crisis affects the incentives to expropriate. The decision to expropriate, however, not only has economic repercussions for governments, but it also often has diplomatic consequences: home governments can take a number of steps to support their investors abroad, including blocking financial support from international organizations to deter expropriating acts.

The literature on the IMF notes that some members of the Fund exert considerable influence over the IMF and sometimes use it as a political tool to support allies or punish enemies. Studies show that countries closely allied with powerful members of the Fund are more likely to receive loans; generally these loans are larger and they require fewer conditionalities (Thacker 1999; Copelovitch 2009; Stone 2011; Jensen 2004). Similarly, countries that owe a large amount of money to private creditors from the Fund's powerful members are more likely to receive preferential lending arrangements (Oatley and Yackee 2004; Broz and Hawes 2006). For international investment protection, this link goes beyond alliance. Countries have used international organizations as a vessel to discourage non-compliance, more generally. The

[12]For interested readers, in the Online Appendix we formalize this logic with a game theoretical model. The model makes three assumptions: 1) that revenue is more valuable in a crisis than in normal times, 2) that there is more uncertainty in the expected expropriation payoff than simply keeping the investment as is, and 3) that a government may face a further drop if additional market costs accompany a crisis-time expropriation. As stated on page 9 of the theoretical Appendix, the comparative statics analysis finds that the incidence of expropriation will decrease during a crisis due to: long- and short-term costs (e.g. from currency and bond markets), the chance of spillover effects, the prospect of future investment loss, and the possibility (even remote) of a larger downturn.

United States, for example, has created laws that require its President to curtail channels of foreign assistance from any foreign government that expropriates from an American firm and does not pay compensation within six months. The Hickenlooper Amendment to the Foreign Assistance Act of 1962, for example, suspends all bilateral foreign assistance. The 1971 González and 1994 Helms Amendments strengthened Hickenlooper, making it mandatory for the United States to vote against or stop multilateral bank loans, from agencies such as the World Bank and the IMF. As Carter et al. (2003, 760) explain, "Congress has adopted a number of measures designed to induce compliance with U.S. views of appropriate property guarantees...Congress has directed the president to vote against loans for those countries by international financial institutions, such as the World Bank." Northrup and Prange Turney (2003, 186) explain that the amendments have "effectively protected U.S. overseas investments...Although rarely invoked, the very existence of the legislation provides a powerful policy tool for deterrent to nations considering expropriation of U.S. assets." Many countries also use tools within multilateral organizations to trigger cessation of lending if contract breach occurs. The World Bank, for example, has a political risk insurer called the MIGA. A country can use this tool to stop assistance, if one of their investors is expropriated without compensation. Moran (1998) explains how, because of influence from fellow multilateral agencies (e.g. making loans conditional on compliance with MIGA), even a small amount of MIGA coverage can act as a "tripwire."

Academically, although the political and strategic considerations in IMF lending and World Bank allocations are well established in the literature, there are few studies that examine the link between multilateral economic support and expropriation acts. In a recent study, Wellhausen (2015b) argues that home governments defend their investors against expropriations by linking firms' property rights to aid and voting at international organizations. For instance, in the dispute between Argentine government and Aguas Argentinas, the French Minister of Economy, Francis Mer, reminded the Argentine government the importance of their support at the IMF to reach an agreement with the Fund (Olleta 2007; Wellhausen 2015b).[13]

On the other hand, a recent paper by Biglaiser et al. (2016) suggests a different causal mechanism from ours on the link between IMF involvement and expropriations. They argue that respect for international property rights is one of the core principals of the IMF and that the Fund would cut or withhold funding to countries that violate such an important norm. They find that countries under an IMF program and countries that have a long history with the Fund are less likely to expropriate. They also show that the Fund has more leverage over countries whose debts constitute a considerable share of their domestic output. As Kobrin (1980) notes, however, aside from mass expropriations in 1960s and 1970s, most expropriations have been very selective; countries have targeted only single industries or individual firms. Sometimes, countries single out investments from certain countries, respecting property

[13] Wellhausen (2015b) also notes that home governments do not always follow through these threats because high FDI national diversity in the host country reduces the home government's diplomatic leverage.

rights of investors from other nationalities (Wellhausen 2015b). Thus, the perception about governments' attitude towards property rights could be quite blurry. Response to expropriations from other investors, namely bondholders, may even be positive if they think expropriations generate revenue for the government (Wellhausen 2015a). Therefore, although Staats's argument is quite plausible, we argue that pressures from the major shareholders, and not merely the Fund's direct influence, deter countries from expropriations.

We believe that the study of multilaterals in parallel with economic crisis on expropriation behavior constructs a more complete picture on the international factors shaping expropriation decisions. During a crisis, governments are starved from badly needed capital and often have more restrictions in their ability to attract capital from abroad (FDI, portfolio investment, and debt). Governments are loath to further damage their reputations during periods of economic crisis. International financial institutions have a similar moderating effect, where the direct ability of the World Bank and the IMF or their stakeholders to limit a government's access to international finance is an even more obvious stick that constrains expropriation behavior. In some cases this is during times of crisis, such as IMF loans, although even during normal times, these important financial institutions are able to influence capital flows to countries expropriating from foreign investors.

The importance of external financial support to governments is well grounded in the literature and we provide a general hypothesis that encapsulates the role of external/multilateral financial support on the decision of governments to expropriate. This leads to our second empirically testable hypothesis:

> ***Hypothesis 2:*** *The more dependent the host government is on assets provided by foreign political actors, the less likely they will be to jeopardize those assets by expropriating.*[14]

Our simple logic tells a story not only about how regard for future investment interacts with economic duress, given the domestic resource constraints and the inflated costs of destabilization during a crisis, but also how the prospect of a costly response from foreign nations and international organizations can decrease the likelihood of expropriations, strengthening property rights abroad.

## 3 Analysis of expropriation events

To test our two hypotheses, we utilize existing expropriation events data that have been used by numerous scholars. Our dependent variable is the number of expropriations in a country in a given year. The data are from Li (2009) and Hajzler (2012) which include expropriations in 80 developing countries from 1971 to 2006.[15]

To examine the effect of economic crises on the timing of expropriations, we use the dataset from Laeven and Valencia (2008), which details three types of financial

[14] For interested readers, see the Online Appendix for a game theoretic derivation of this hypothesis.

[15] A list of these countries can be seen in the Online Appendix.

crises—banking crises, currency crises, and debt crises.[16] We calculate the number of financial crises in a country in a given year, from 0 to 3. One issue with the Laeven and Valencia (2008) dataset, however, is that it only reports the year in which a crisis started, and not for how long a crisis lasted. It also fails to capture the gradualness of economic recovery after a crisis, which may underestimate the duration over which expropriations are deterred. To deal with these two issues, we use a moving average of the crisis variable with proportionally decaying weights. We calculate the moving average over 8 years, as Reinhart and Rogoff (2014) show that historically on average the recovery period after financial crises is 8 years.[17] While we focus specifically on financial crisis, our results are not especially sensitive to different measures and codings of crisis or alternative lag structures.[18]

In Table 1, we present the frequencies of expropriation events across time periods and regions, and by whether they occurred in crisis or non-crisis years.[19] It shows that most of the expropriation events happened in the 1970s, as pointed out by Kobrin (1980). The number of expropriation events declined after 1980, but there is a resurgence after the 1990s, especially in Latin America and Asia. African countries, often in their first post-colonial governments, have expropriated many investments. The top five expropriative countries are Chile, Ethiopia, Peru, Algeria, and Madagascar, and they expropriated mostly before 1980.[20] Moreover, while in our data 7.6% of the country-years experienced financial crises, only 21 out of 439 expropriation events occurred in crisis years. This disproportionality provides preliminary evidence that governments are less likely to expropriate during crises.

To test our second hypothesis, we consider two forms of intervention that are usually associated with financial crisis—support from the IMF and lending from the World Bank, to examine how they affect expropriation propensity. The data on *IMF agreement* are from Dreher (2006), which provides information about four IMF arrangements.[21] We code this variable as 1 when a country is under at least one of these arrangements for at least five months in a particular year and 0 otherwise. While Biglaiser et al. (2016) focus on the IMF agreements, we believe that other

[16] Another often used database on financial crises is the Reinhart-Rogoff financial crises data. We choose the Laeven and Valencia data because the Reinhart-Rogoff data cover only 70 countries, including OECD countries which are not our focus.

[17] Thanks to an anonymous reviewer for this excellent suggestion. We also try numerous ways of calculating moving averages, including averaging from 3 to 10 years and using exponential weights, and the results remain largely unchanged.

[18] First, we operationalize crisis as a dichotomous indicator of financial crises. Second, as an alternative to a one-year lag, we test all models using a two-year lag. We also try another commonly used measure of economic crisis—an indicator of negative economic growth. The results remain robust when different measures or lags of crises are used.

[19] Here we only use the original crisis variable, and not the moving average for simplicity.

[20] For instance, in Ethiopia 1975 alone, there were 25 expropriation cases. To reduce the potential bias driven by these extreme cases, we also use a dichotomous measure indicating whether there was at least one expropriation event, and perform a logit model. The results remain unchanged, which can be seen in the supplemental files.

[21] These four arrangements are IMF Standby Arrangement, IMF Extended Fund Facility Arrangement, IMF Structural Adjustment Facility Arrangement, and IMF Poverty Reduction and Growth Facility Arrangement.

**Table 1** Distributions of investment expropriations

| Region\Years | 1971–74 | 1975–79 | 1980–89 | 1990–99 | 2000–06 | Total |
|---|---|---|---|---|---|---|
| Africa | 92 | 114 | 2 | 8 | 3 | 219 |
| Latin America | 81 | 35 | 11 | 3 | 15 | 145 |
| Asia & Middle East | 32 | 21 | 3 | 12 | 7 | 75 |
| In crisis years | 11 | 2 | 1 | 4 | 3 | 21 |
| In normal years | 194 | 168 | 15 | 19 | 22 | 418 |
| Total | 205 | 170 | 16 | 23 | 25 | 439 |

multilateral lending institutions also have a similar disciplining effect. So the other independent variable we use is *World Bank lending*, which is public debt extended by the World Bank Group, including the International Bank for Reconstruction and Development (IBRD) loans and the International Development Association (IDA) credits. We retrieve the data from the World Bank's World Development Indicators (WDI) database. The data are in current U.S. dollars (in millions), and we convert the data into constant dollars using the 2010 U.S. consumer price index. We also take a log transformation for this variable to remove skewness.[22]

We also include a battery of control variables. *GDP* is the logarithm of the gross domestic product (in constant 2010 million dollars), which measures the size of a country's economy. *FDI* is the total amount of inward FDI as a percentage of GDP. This variable measures a country's dependence on foreign capital. The logarithm of *GDP per capita* and its squared term are used to examine if the relationship between development and expropriations is curvilinear (Jodice 1980). *Economic growth* is the annual GDP growth rate. *Trade openness* is the total amount of import plus export as a percentage of GDP. *Resource rent* is natural resource rents as a percentage of GDP. Resource rich countries may be more likely to expropriate because they are less sensitive to reputational costs (Jensen and Johnston 2011). All the data for these variables are from the WDI database.

The level of *democracy*, measured by the standard 0-20 Polity index, is used to test whether democratic countries are less likely to expropriate. Examining nationalizations in the oil sector, Guriev et al. (2011) find that expropriations are more likely when oil prices are high. Duncan (2006) also shows that expropriations in the mineral sector are associated with mineral price booms. Therefore we include *oil prices* to control for the price effect, and use data from the BP's Historical Data Workbook. This variable is the difference between the oil price in a year and that in the previous year, as governments may expropriate when the oil price is rising. The oil price is constant in a given year, so we do not include year fixed effects to avoid the collinearity problem. Instead, we include a linear time trend to control for the temporal effect.

The dependent variable is a discrete and nonnegative count of the occurrence of expropriations; the data are time-series cross-sectional. We thus employ a negative

[22] We add a value of one to this variable before taking logs to avoid negative values.

binomial model and include country fixed effects to control for country heterogeneity.[23] The fixed-effects model is also a within-estimator, which enables us to examine how changes in the independent variables within countries affect the decision to expropriate. We also include a lagged dependent variable to control for a country's past tendency to expropriate. We report classical standard errors but note that the results are unchanged when robust standard errors are used, which indicates a good model fit (King and Roberts 2015). All the independent variables, except for *IMF agreement* and *oil prices*, are lagged one year behind the dependent variable to avoid simultaneity or reverse relations. The summary statistics are presented in the Online Appendix.

Table 2 presents the results. Model 1 is the baseline model, in which we include only control variables. In Model 2, we allow *financial crisis* to enter the model. As can be seen, the effect of crises on expropriations is negative and statistically significant at the 0.01 level, suggesting that governments are less likely to expropriate foreign assets following a financial crisis, supporting our first hypothesis. Other things being equal, a financial crisis in the previous year leads to a 54% reduction of expropriation acts.[24]

In Models 3-5 we examine how multilateral lending influences expropriations. In Model 3, *IMF agreement* enters the model, and the result shows that it has a negative and statistically significant effect on expropriations. This suggests that governments are less likely to expropriate when they are under IMF arrangements. Other things being equal, when a country is under at least one IMF agreement, the number of expropriations is reduced by 39%. The coefficient for *financial crisis* remains negative and statistically significant, although the effect becomes slightly weaker. This is probably because countries under economic crises are more likely to enter an IMF agreement, and the concern about the withdrawal of IMF support makes governments refrain from expropriating during crisis times.

In Model 4, we replace *IMF agreement* with *World Bank lending*. Due to missing data in the *World Bank lending* variable, eight countries are excluded in this model. The results show that World Bank lending also has a negative and statistically significant effect on expropriations. When a country has debt owed to the World Bank Group, including the IBRD and IDA, this country is less likely to expropriate. Other things being equal, a one unit increase in the World Bank lending variable leads to a 20% decrease in the number of expropriations. In Model 5, we allow *IMF agreement* and *World Bank lending* to enter the model simultaneously, and it shows that both have negative and statistically significant effects on expropriations. The coefficient for *financial crisis* remains negative and statistically significant as well.

[23] It is well-known that unconditional MLE fixed-effects models may have the incidental parameter problem. Allison and Waterman (2002), however, show that negative binomial models with fixed effects (by including dummy variables) do not suffer from this bias. When we use a fixed-effects Poisson model (which is free from the incidental parameter problem) and correct the standard errors, the results remain unchanged.

[24] To make the interpretation easier, we rescale the moving average for the crisis variable such that the value equals 1 when there is one crisis in the previous year (and none in the seven years before last year). This is simply done by multiplying the moving average by 4.5.

**Table 2** Determinants of investment expropriations, 1971–2006

| | Model 1 | Model 2 | Model 3 | Model 4 | Model 5 |
|---|---|---|---|---|---|
| Financial crisis | | − 0.781 | − 0.713 | − 0.787 | − 0.730 |
| | | (0.231)*** | (0.236)*** | (0.235)*** | (0.240)*** |
| IMF agreement | | | − 0.502 | | − 0.449 |
| | | | (0.242)** | | (0.245)* |
| World Bank lending | | | | − 0.220 | − 0.200 |
| | | | | (0.109)** | (0.107)* |
| log(GDP) | − 5.012 | − 4.846 | − 4.637 | − 5.966 | − 5.835 |
| | (1.675)*** | (1.618)*** | (1.599)*** | (2.028)*** | (2.020)*** |
| FDI (% GDP) | 0.004 | − 0.009 | − 0.006 | − 0.015 | − 0.013 |
| | (0.027) | (0.027) | (0.026) | (0.025) | (0.025) |
| log(GDP per capita) | 7.352 | 7.685 | 7.772 | 8.940 | 9.443 |
| | (3.996)* | (3.838)** | (3.804)** | (4.440)** | (4.394)** |
| log(GDP per capita) | − 0.259 | − 0.323 | − 0.345 | − 0.338 | − 0.385 |
| squared | (0.247) | (0.235) | (0.232) | (0.285) | (0.281) |
| Economic growth | 0.001 | − 0.009 | − 0.008 | − 0.019 | − 0.018 |
| | (0.016) | (0.017) | (0.016) | (0.017) | (0.017) |
| Trade openness | 0.018 | 0.020 | 0.021 | 0.017 | 0.019 |
| | (0.009)** | (0.009)** | (0.009)** | (0.009)* | (0.009)** |
| Resource rent (% GDP) | 0.020 | 0.021 | 0.016 | 0.036 | 0.029 |
| | (0.016) | (0.015) | (0.015) | (0.019)* | (0.019) |
| Democracy | − 0.049 | − 0.046 | − 0.043 | − 0.056 | − 0.053 |
| | (0.027)* | (0.027)* | (0.027) | (0.027)** | (0.027)* |
| Oil prices | 0.029 | 0.025 | 0.025 | 0.027 | 0.026 |
| | (0.005)*** | (0.005)*** | (0.005)*** | (0.005)*** | (0.005)*** |
| Time trend | 0.028 | 0.037 | 0.034 | 0.089 | 0.086 |
| | (0.041) | (0.039) | (0.039) | (0.050)* | (0.050)* |
| $\text{Expropriations}_{t-1}$ | 0.216 | 0.156 | 0.131 | 0.159 | 0.136 |
| | (0.071)*** | (0.069)** | (0.069)* | (0.070)** | (0.070)* |
| Number of observations | 2,192 | 2,186 | 2,186 | 1,976 | 1,976 |
| Number of countries | 79 | 79 | 79 | 71 | 71 |
| Log likelihood | − 479.4 | − 473.2 | − 471.1 | − 443.1 | − 441.5 |
| AIC | 1138.8 | 1128.4 | 1126.2 | 1054.2 | 1053.0 |
| BIC | 1656.8 | 1651.8 | 1655.3 | 1529.3 | 1533.6 |

Standard errors are in parentheses

$^{*}p < .1$; $^{**}p < .05$; $^{***}p < .01$

These findings provide support to our second hypothesis, showing that activities with international financial institutions have a disciplining effect on governments.

In addition to the main findings, Models 1 to 5 in Table 2 indicate some results that are worth mentioning. First, GDP has a negative effect on expropriations, suggesting that larger economies are less likely to expropriate foreign assets. Economic development has a positive effect on expropriations, but its quadratic term is not statistically significant. Trade openness is positively associated with expropriations, meaning that expropriations are more likely when a country's terms of trade increase. This is consistent with our main finding that expropriations are more common in boom times than in bad times.[25] Resource rents also have a positive effect on expropriations in Model 4, indicating that opportunistic governments are tempted to expropriate foreign assets following resource booms. Moreover, democratic governments are less likely to expropriate, consistent with the findings in previous research. Oil prices are positively related to expropriations, suggesting that expropriations are more likely when global oil prices rise. Finally, expropriation is a highly path-dependent behavior, as countries that expropriated in the previous year are more likely to expropriate again.[26]

Overall, our findings suggest that expropriations tend to be "opportunistic" rather than "desperate," as governments are more likely to expropriate during boom times (i.e., when terms of trade, resource rents, and oil prices are on the rise). Crisis and multilateral support both reduce a country's propensity to expropriate. Countries are less likely to expropriate during periods of financial crisis and the following recoveries, when they are under IMF programs, or are dependent on World Bank loans.[27]

### 3.1 Robustness analysis

We also conduct a number of robustness analyses. One may argue that our main analysis suffers from the endogeneity bias because, first, participation in the IMF and WB programs is not a random process. Countries select into these programs when they need relatively cheap financial resources or when they experience economic difficulties. Second, there can be some unobservable factors that affect both our main independent variables and dependent variable. For instance, a country's commitment to rule of law or property rights could affect both the likelihood of financial crisis and expropriative behavior. We control for several variables that might affect

[25] An alternative explanation is that countries that are more open to the global market may have more opportunities to expropriate foreign assets. This explanation, however, seems less plausible than the "opportunistic" explanation because long-term factors related to host-country property rights and trade policies, such as FDI and country fixed effects, are already controlled for in the model.

[26] In an earlier version of this paper, we also test the interactive effect between financial crisis and IMF support, but do not find any significant impact of their interaction.

[27] An earlier version of this paper included foreign aid as an independent variable to test the effect of another form of foreign support. Aid, however, is not a robust predictor of expropriation, probably because foreign aid is a more complex foreign policy tool that involves the donor country's strategic considerations. Also, the collinearity of aid with other control variables and the inconsistent results across specifications suggest caution is required in interpreting these results.

expropriation acts, but some of these factors are difficult to observe and measure. Therefore, we employ the control function (CF) approach, a variant of the instrumental variable approach, to deal with the potential endogeneity problem. The CF approach is better equipped to handle non-linear models, and is similar to the 2SLS models except for that it includes the predicted residuals from the first stage rather than the predicted endogenous variables in the second model.[28]

A valid instrument should be correlated with the endogenous independent variable, and also satisfy the exclusion restriction; namely, the instrument should influence the dependent variable only through the endogenous variable. It is always a challenge to find a good and valid instrument. We rely and build on the previous literature to construct instruments for our three main independent variables. Specifically, we use a newly developed method that interacts a country-variant variable with a time-variant one (Werker et al. 2009; Nunn and Qian 2014; Lang 2016).

For the *IMF agreement*, we replicate Lang (2016)'s measurement of a country's probability of signing an IMF agreement. This instrument interacts a time-variant variable, IMF liquidity ratio (logged), with a country-variant variable, namely the share of years a country has been under an IMF program (*IMF agreement likelihood*).

We apply the same method to create the other two instruments. For the *World Bank lending*, we interact *WB program likelihood* with *WB liquidity ratio (logged)*. We measure *WB program likelihood* using the total number of WB adjustment projects which are in effect for at least 5 months in a given year by the total number of years elapsed. The WB adjustment projects data are from Dreher (2006). For *WB liquidity ratio (logged)*, we divide total liquid assets by liquid liabilities. Liquid assets include unrestricted currencies, investments and total loans; liquid liabilities include any payables, borrowings, and undistributed loans. The data are from the World Bank annual reports from 1970 to 2007.[29]

To measure economic crisis, we interact the proportion of years a country experiences financial crisis with 3-month U.S. Treasury bill rate. The U.S. Treasury bill rate has been used in the literature to measure external shocks to the economy (Antzoulatos 2000; Min et al. 2003). We believe that an interaction between these two variables offers sufficient variation and represents a reasonable instrument for financial crisis. The summary statistics and description of these instrumental variables are given in the Online Appendix.

Regarding the exclusion criterion, compound instruments provide some advantages. First, to violate this criterion one should find a variable that affects the causal relationship between one of the interacting variables and the dependent variable given the level of the other interacting variable. In reality it is difficult to find such

[28] See Terza et al. (2008) and Wooldridge (2014) for a detailed discussion of the CF approach.

[29] The items included in the assets and liabilities categories change throughout this period. If the term of the borrowings was not defined, we took one tenth of the given amount to consider only short-term borrowings. We did the same for any charges accrued on debt. Starting in 1991 IDA did not provide a liabilities category. We construct it from payables and undistributed loans from statement of development resources tables. Dreher et al. (2017) use a similar strategy to create instruments for WB loans. They suggest using separate measurements for IBRD and IDA aid resources. In our main analysis we use a combined measurement of IBRD and IDA loans, and therefore we prefer to measure them similarly and create an aggregated WB measurement of aid resources.

a variable. Second, Nizalova and Murtazashvili (2016) and Bun and Harrison (2018) show that the interaction of an endogenous variable with an exogenous one can provide consistent and unbiased results. Thus, the exclusion criterion could be met if we show the exogeneity of one of the variables.

Lang (2016) provides extensive discussion of the excludibility of the IMF instrument. He shows that the variation in liquidity ratios is explained by the IMF quota reviews which happen in every five years. Thus, the IMF liquidity ratio is exogenously determined. Similarly, the financing of World Bank lending comes from its banking activities and donor contributions renewed every three years. Finally, the U.S. Treasury Bill rates are determined by the U.S. domestic economy and to some extent the developments in other major economies. Since our sample includes only developing countries, we do not expect the changes in these economies to have an effect on the U.S. Treasury Bill rates.

We include country fixed effects in both first and second stage regressions.[30] This allows us to control for the level of country-variant components of our instruments. We also include *IMF liquidity ratio*, *WB liquidity ratio* and *US Treasury bill rate* in both stages. Since we control for both levels, the models can also be interpreted as a difference-in-difference (DID) design. In the DID design, if low and high exposure groups have different trends and we observe a similar trend in the independent and dependent variables, we could have a spurious relationship (Christian and Barrett 2017). Therefore, we look at the effect of a time-variant regressor on the dependent variable in high and low exposure countries, be it *IMF agreement*, *World Bank lending*, or *financial crisis.* We plot the trends in financial crisis and expropriations in low and high exposure groups in the Online Appendix to identify such behavior. The figure does not suggest violation of the common trends assumption.

*World Bank lending* and *IMF agreement* are continuous and binary variables. To predict them in the first regression we use generalized linear model (GLM) with Gaussian family, and GLM with logit link, respectively. We use GLM with quasi-Poisson specification to predict *financial crises* in the first stage regressions and expropriations in the second stage regression as these are nonnegative count variables.[31] Results from the first-stage regressions are reported in Table 3.[32] The results show that there are strong relationships between the endogenous variables and their respective instruments. The F-statistics are above the conventional threshold of ten.

The results from second stage regressions are presented in Table 4.[33] We do not find support for our hypotheses. However, the residuals from the first stage regressions, $\hat{v}_1$, $\hat{v}_2$, and $\hat{v}_3$ also fail to achieve statistical significance. This suggests that

[30] We did not include country and year fixed effects in the first stage logit model due to the possible incidental parameter problem (Greene 2004).

[31] The alternatives for count data are Poisson and negative binomial models. Wooldridge (1999), however, argues that the Poisson model is too restrictive and the negative binomial model can be complicated and may produce inconsistent results if some aspects of the distribution is misspecified. He argues that the quasi-Poisson model is the more robust. We use the quasi-Poisson model in the CF analysis, in particular, because it provided more consistent results across 1000 bootstrapped samples.

[32] All models, except for the logit model, include country fixed effects. The full table is presented in the Online Appendix.

[33] We corrected the standard errors using 1,000 bootstrap samples.

**Table 3** Control function approach: first-stage regressions

| | Financial crisis | IMF agreement | WB lending |
|---|---|---|---|
| Financial crisis likelihood × | 1.695 | 0.578 | 0.003 |
| 3-month US T-bill rate | (0.091)** | (0.108)*** | (0.043) |
| IMF agreement likelihood × | 0.103 | 0.900 | 0.335 |
| log(IMF liquidity ratio) | (0.057)* | (0.064)*** | (0.037)*** |
| WB program likelihood × | 0.153 | 0.044 | 0.330 |
| log(WB liquidity ratio) | (0.151) | (0.040) | (0.067)*** |
| | | | |
| Weak identification test | | | |
| F-statistic | 432.1 | 198.8 | 21.4 |
| P-value | 0.000 | 0.000 | 0.000 |

Standard errors are in parentheses

*$p < .1$; **$p < .05$; ***$p < .01$

we cannot reject the null hypothesis that our three main independent variables do not cause endogeneity problem. In other words, non instrumental variable approaches are more efficient and produce more credible results. In Model 5, we add year fixed effects, and all coefficients fail to reach statistical significance, probably due to the temporal pattern of expropriations which is discussed below.

In addition to the CF analysis, we have four robustness checks. First, we use the OPIC data and a survival model to directly test the effects of economic crisis and multilateral support on expropriations of U.S. investments. The results of this analysis only provide partial support for our second hypothesis: We find a negative effect of IMF agreements on expropriations, but do not find statistically significant effects of crisis or World Bank lending.

Second, we use the Reinhart-Rogoff financial crises data and negative economic growth as alternative measures for economic crisis. Using these two measures leads to the same finding that economic crisis reduces expropriations. Third, we use a dichotomous indicator of at least one expropriation act and perform a logit model.[34] The results also remain substantially similar, except for that the World Bank lending variable turns statistically insignificant. Lastly, we include year fixed effects to replace the time trend variable in our model. In the year fixed-effects model, the coefficients for our three independent variables remain negative, although none of them achieves statistical significance. We suspect that this is because both our dependent and independent variables show some temporal patterns, and thus the inclusion of year fixed effects may absorb the explanatory power of our independent variables. All the results are reported in the Online Appendix.

[34]The results of the logit model also offer strong support for the main hypothesis. We choose to report the results of the negative binomial model because the count variable offers more information than the binary variable.

**Table 4** Determinants of investment expropriations: control function approach

| | Model 1 | Model 2 | Model 3 | Model 4 | Model 5 |
|---|---|---|---|---|---|
| Financial crisis | − 0.736 | − 0.775 | − 0.675 | − 0.648 | − 0.722 |
| | (0.472) | (0.618) | (0.501) | (0.585) | (0.996) |
| IMF agreement | | − 0.016 | | 0.456 | 3.615 |
| | | (2.984) | | (5.588) | (7.136) |
| World Bank lending | | | 0.583 | 0.983 | 0.050 |
| | | | (1.471) | (2.162) | (2.622) |
| log(GDP) | − 0.736 | 1.882 | − 0.373 | 0.084 | − 0.565 |
| | (5.332) | (5.403) | (5.744) | (5.723) | (7.060) |
| FDI (% GDP) | − 0.034 | − 0.047 | − 0.022 | − 0.032 | − 0.046 |
| | (0.112) | (0.115) | (0.125) | (0.130) | ( 0.199) |
| log(GDP per capita) | − 4.503 | − 5.050 | − 5.567 | − 7.207 | 1.360 |
| | (6.787) | (8.371) | (10.447) | (12.530) | (17.273) |
| log(GDP per capita) | 0.169 | 0.223 | 0.424 | 0.524 | − 0.118 |
| squared | (0.450) | ( 0.567) | (0.776) | (0.921) | (1.303) |
| Economic growth | − 0.063 | − 0.063 | − 0.075 | − 0.074 | − 0.076 |
| | (0.042) | (0.046) | (0.043)* | (0.046) | (0.070) |
| Trade openness | 0.025 | 0.024 | 0.020 | 0.019 | 0.017 |
| | (0.019) | (0.019) | (0.020) | (0.022) | (0.033) |
| Resource rent | 0.051 | 0.050 | 0.024 | 0.014 | 0.052 |
| (% GDP) | (0.047) | (0.053) | (0.047) | (0.055) | (0.090) |
| Democracy | − 0.066 | − 0.069 | − 0.083 | − 0.081 | − 0.090 |
| | (0.063) | (0.137) | (0.066) | (0.066) | (0.093) |
| Oil prices | 0.018 | 0.016 | 0.022 | 0.024 | |
| | (0.012) | (0.013) | (0.015) | (0.019) | |
| Time trend | − 0.067 | − 0.069 | − 0.054 | − 0.106 | |
| | (0.138) | (0.137) | (0.207) | (0.232) | |
| $\text{Expropriations}_{t-1}$ | − 0.241 | − 0.151 | − 0.142 | − 0.010 | − 0.065 |
| | (1.013) | (1.043) | (1.212) | (1.242) | (1.471) |
| 3-month US T-bill rate | 0.012 | − 0.015 | − 0.004 | − 0.006 | |
| | (0.155) | (0.169 ) | (0.161) | (0.229) | |
| log(IMF liquidity ratio) | − 1.178 | − 1.175 | − 1.454 | − 1.525 | |
| | (0.538)** | (0.578)** | (0.579)** | (0.659)** | |
| log(WB liquidity ratio) | 1.885 | 2.059 | 1.803 | 2.118 | |
| | (3.389) | (3.781) | (3.555) | (4.721) | |
| $\hat{v}_1$ | 0.218 | 0.148 | 0.210 | 0.174 | 0.397 |
| | (0.511) | (0.595) | (0.525) | (0.644) | (1.121) |
| $\hat{v}_2$ | | − 0.418 | | − 0.750 | − 4.050 |
| | | (2.935) | | (5.654) | (7.260) |
| $\hat{v}_3$ | | | − 0.824 | − 1.314 | − 0.245 |
| | | | (1.519) | (2.226) | (2.863) |

**Table 4** (continued)

| | Model 1 | Model 2 | Model 3 | Model 4 | Model 5 |
|---|---|---|---|---|---|
| Number of obs. | 1,620 | 1,620 | 1,544 | 1,544 | 1,544 |
| Number of countries | 72 | 72 | 67 | 67 | 67 |
| Pseudo $R^2$ | 0.410 | 0.420 | 0.420 | 0.428 | 0.475 |

Standard errors are in parentheses

$^*p < .1$; $^{**}p < .05$; $^{***}p < .01$

## 4 MIGA pre-claims cases

Our statistical analysis supports the argument that reputational concerns as well as the dependence on IMF and World Bank support largely shape expropriation behavior. Given the rarity of expropriations as well as limits to the analysis of observational data to identify the causal mechanism linking a government's reputation and the avoidance of costly expropriation, our research includes a qualitative analysis of contract disputes. This research design not only allows us to examine more closely the causal mechanisms through interviews, but our population of "near-expropriations" allows us to directly observe cases of disputes between firms and governments that did not result in expropriations.

In this section we examine investment disputes drawing on primary source materials from the World Bank's political risk insurance arm, the MIGA, to explore government decisions to expropriate or back down from a potential expropriation. MIGA has information on negotiations of disputes that helps shed light on both why governments want to expropriate from investors and what factors lead governments to reverse or moderate their demands. MIGA has collected details on 34 "pre-claims" of expropriation or breach of contract on MIGA insurance contracts from 1998 to 2010. We also briefly discuss the six realized claims that MIGA has paid out during the time period of our study. Although the methodology of how MIGA documents these pre-claims has changed over time, all of the documentation from this time period includes details on the sector of the investment, the nature of the potential claim, and the ultimate resolution.

We use these primary source documents along with interviews with MIGA staff to examine the relationship between financial crisis and expropriation behavior.[35] In Table 5 we provide a brief description of the cases.

Table 5 provides some examples of government incentives to renege on contracts during periods of crisis, although there are two important points. First, these are cases of pre-claims, where the government either ultimately backed down from the initial policy to a resolution with the investors or in a few cases the negotiation is still under way. Second, the crisis-triggered expropriations are quite uncommon. Only seven

[35] Interviews were facilitated by Daniel Villar, Former Lead Risk Management Specialist at MIGA and currently Principal Economist and Credit Risk Head at the World Bank. All interviews were conducted via phone in April and May 2013.

**Table 5** MIGA pre-claims (1998–2010)

| Country | Year | Sector | Issue |
|---|---|---|---|
| China | 1998 | Power | Tariff dispute |
| Indonesia | 1998 | Telecom | Right to operate during crisis |
| Guyana | 1998 | Mining | Environmental issues |
| Guatemala | 1998 | Power | Tariff Dispute |
| Costa Rica | 1998 | Tourism | Environmental issues |
| Pakistan | 1999 | Power | Tariff adjustment during crisis |
| Tanzania | 2000 | Mining | NGO pressure |
| Kazakhstan | 2001 | Telecom | Dispute over bandwidth |
| Argentina | 2002 | Oil and Gas | Tariff adjustment during crisis |
| Argentina | 2003 | Transport | Tariff adjustment during crisis |
| Moldova | 2003 | Power | Tariff dispute/Legality of privatization |
| Kyrgyzstan | 2003 | Transport | Revoking licenses |
| Dominican Republic | 2003 | Power | Tariff adjustment during crisis |
| Kenya | 2003 | Power | Tariff dispute |
| Dominican Republic | 2003 | Power | Tariff adjustment during crisis |
| Ecuador | 2003 | Water | Tariff dispute |
| Nicaragua | 2003 | Power | Tariff dispute |
| Argentina | 2004 | Oil and Gas | Inability to export |
| Guatemala | 2004 | Power | Contract dispute |
| Nigeria | 2004 | Service | Contract renegotiation |
| Azerbaijan | 2004 | Agribusiness | Inability to export |
| Egypt | 2004 | Service | Payment dispute |
| China | 2005 | Water | Joint venture dispute |
| Senegal | 2005 | Service | Contract cancellation |
| Afghanistan | 2007 | Agribusiness | Payment dispute |
| Benin | 2007 | Telecom | License fee dispute |
| DR Congo | 2008 | Mining | Tariff dispute/Legality of privatization |
| Benin | 2009 | Tourism | Environmental issues |
| Guinea | 2009 | Telecom | Contract cancelation |
| Guinea-Bissau | 2009 | Tourism | License fee and tax dispute |
| Uganda | 2009 | Power | Legality of privatization |
| Djibouti | 2010 | Transport | Inability to transfer capital |
| Sierra Leone | 2010 | Service | License fee dispute |
| Senegal | 2010 | Service | License fee dispute |

of the 34 cases are related to economic crisis, and three of these are related to the financial crisis in Argentina.

Other types of disputes are much more common. In some cases political change leads to an investment dispute, for example, a new minister of mines in Guatemala denying tariff adjustments or a regime change in Guinea leading to the canceling of

a telecommunications contract. Also common are reviews of privatization programs or the revising of contracts written by previous regimes. Examples include privatized natural resource investment in the Democratic Republic of the Congo (DR Congo) and Moldova.[36] Political change in Ecuador led to a review of all water concession contracts.[37] The most common pattern of these pre-claims is governments attempting to renegotiate terms of contracts, often on the tariffs that power and water providers can charge consumers or payments owed to firms from the government.

Interviews with MIGA staff point to unbalanced contracts as one potential trigger for expropriation threats. In a number of power contracts investors pushed much of the risk onto the host government which eventually led to major financial losses by the government. The contract on hydroelectric generation by AES in Uganda is a clear example of this pattern. AES negotiated favorable terms for a power generation contract, which became obvious during a period of low rainfall. The government attempted to renegotiate the contract, claiming that they were incurring major financial losses by making minimum payments to AES.[38] Similar examples include the 2003 geothermal dispute in Nicaragua, 2003 and 2004 power disputes in Kenya and Guatemala, and 2007 dispute over the investment in a cotton gin in Afghanistan.[39]

This wide variety of types of pre-claims provides evidence of exogenous shocks (crisis, environmental disasters, etc.), political change, and pricing disputes between firms and governments. There are also a number of cases that could be classified as "corruption," often where government officials either attempted to extract from a firm,[40] or where the government was attempting to force out the firm in order to help a competitor.[41] Given this wide range of triggers for the disputes, is there a common pattern to how these were successfully renegotiated? To answer this question we draw on a number of interviews with MIGA officials.

One of the major tools that can be used is to articulate how these claims, made public through MIGA, would have negative consequences for the country's reputation. Some of the clearest cases were the disputes in China, where in a couple of pre-claims local or provincial government officials took actions against a firm and MIGA contacted the central government to intervene. The conclusion of the 1998 dispute in China was literally a public ceremony signifying a conclusion of the dispute that included the company and government officials.

[36] We discuss these two cases later in this section.

[37] The election of Correa in Ecuador led to general calls for public ownership of water utilities. Although there was criticism of this operation by some local stakeholders, MIGA staff indicated that this dispute was less about the performance of the contract and more of an ideological commitment to public ownership in this sector.

[38] AES eventually agreed to renegotiate the power generation contract, but the highly favorable terms of the distribution contract are a potential future expropriation risk.

[39] The major issue with the cotton gin was that the company negotiated a contract that guaranteed minimum payments. Unfortunately, few farmers grew cotton (presumably growing opium instead) and the gin was largely unused. The government resisted providing payments to a company that was not producing cotton. Details on the project can be found here: http://www.miga.org/projects/index.cfm?pid=661.

[40] Interviews with MIGA suggest that disputes in China and Kazakhstan are examples of this.

[41] Interviews with MIGA suggest Benin, Egypt, Kyrgyzstan, and Moldova fit this pattern.

While different in nature, the role of reputation in the 1998 dispute in Guatemala was important in resolving the issues at stake. In essence, the energy minister was pushing for changes in a power contract. MIGA consulted with the Ministry of Finance, articulating the potential financial consequences of expropriation behavior. The political fight between these ministries is complicated, but the Minister of Finance eventually prevailed.

In many cases, powerful external actors also intervened. The clearest example was the heavy involvement of the President of the World Bank and the Prime Minister of Spain in the 2003 power dispute in Moldova. According to MIGA sources, the government was harassing a Spanish power provider to entice the company to sell to a Russian company. The President of the World Bank and the Prime Minister of Spain directly sent letters, including a direct threat of cutting off World Bank, International Finance Corporation (IFC), and European Bank for Reconstruction and Development financial support.

The World Bank was also active in adjudicating the 2009 power dispute in Uganda. But, as noted above, this was a relatively unbalanced contract in favor of the investor. While the World Bank pushed for the Ugandan government to moderate their claims, the World Bank was sympathetic to the government's concerns about the contract. The contract was eventually rewritten with the firm taking more of the risk in the electricity generation part of the contract, although the government took on a number of major risks at the distribution end of the contract.

Similar pressure was put on Benin by the Bank for their discriminatory treatment of a foreign cell phone provider. This foreign firm was threatened with a major up front fee for future taxes to continue their operations, despite domestic providers not being included in this new fee plan. The World Bank threatened to cut off future grants to Benin and the pressure on the foreign firm subsided. DR Congo is one of the more complicated cases of foreign involvement, where the IFC and MIGA had involvement in a mining operation. DR Congo was in the process of transforming their notoriously secretive mining contracts into a paradigm of transparency, signing onto the high profile Extractive Industries Transparency Initiative (EITI). But the problem was on how to deal with the previous contracts. Rather than providing a formal rule on how old mines would be treated, each mining operation engaged in one-on-one negotiations with the government. Ironically, this transition to a more transparent system was a process rife with potential corruption. The World Bank (IFC and MIGA) supported mine insisted on the highest EITI standard of transparency. This hard-line stance by the World Bank led to a major disagreement with the government. The Bank negotiated hard, although the number of important post-conflict World Bank programs in DR Congo actually made threats of cutting them off from funding less credible than in the cases of Benin and Uganda.

In some cases, international financial institutions not only provided the sticks, they provided carrots to help negotiate a settlement. The ill-fated cotton gin dispute in Afghanistan was solved with money from multilaterals, while the Inter-American Development Bank provided funds to help cover power contracts that were costing the Guatemalan and Nicaraguan governments scarce foreign currency.

The role of multilaterals is not a guarantee of stable relations between investors and governments. Ecuador's expelling of the World Bank from the country and

Argentina's tense relations with the IMF and the Bank provide evidence that multilateral involvement is not a panacea. But the evidence does suggest that these institutions wield carrots and sticks that can be used to avoid expropriation events, even in cases of contracts that were very unfavorable to host governments.

One potential concern is that by studying "pre-claims," we are ignoring the actual claims paid out. Fortunately for us (and MIGA), MIGA is exceptionally good at avoiding claims through negotiations. During this time period only six claims were paid out. These include two claims stemming from economic crises in Argentina and Indonesia. The other four cases were political violence claims during civil wars or domestic unrest (Afghanistan, Kenya, Madagascar and Nepal). Thus the patterns of claims are not significantly different from the pre-claims data. Argentina, the poster child for expropriations during crisis, is actually a pretty unique event. The majority of claims and pre-claims are not associated with economic crisis.

Our case studies of 34 "pre-claims" from MIGA compliment our statistical analyses in the previous section. We show that expropriation behavior is influenced by reputational concerns and that home governments and multilateral institutions put pressure on host governments to uphold contracts.

Our focus on MIGA claims, as an arm of the World Bank, is not necessarily representative of the total universe of disputes between governments. The experience of Luis Dodero-Jordan, General-Counsel for the Spanish political risk insurance agency and eventually the MIGA Vice-President and General Counsel who worked on most of these pre-claims prior to 2005 (when he retired), illustrates the additional leverage MIGA has over governments based on their relationship with the World Bank. According to our interview with Mr. Dodero-Jordan:

> I always mention, when I make a presentation, that my experience is as follows: When I was the General Counsel of CESCE (the Spanish equivalent of OPIC) many pre-claims became claims; in MIGA, most of the pre-claims were solved through negotiations. When in CESCE, if I wanted to meet with a minister to negotiate a pre-claim, the most probable outcome was: "the Minister will not be able to meet you"; –"but I represent the Spanish Government!"– "and so what." The ambassador of Spain had to be involved and he/she came to the meetings with me (usually at levels below the Minister). In MIGA in most cases the Minister will meet me the next day and, in some cases, members of the Government would be waiting for me at the airport and take me to the hotel in a limo.

The fact that MIGA may be less representative of all insurers, as pointed out in the comparison to CESCE, is an important illustration of our theory. The dependence of governments on foreign capital, private or multilateral, has a strong influence on behavior towards firms. While our statistical analyses focus on the role of the IMF and the World Bank, the case study of MIGA (a World Bank Agency) largely draws on carrots and sticks from the World Bank Group to push governments back to the negotiating table to avoid expropriations.

One issue we did not address in this paper is when governments and multilaterals use carrots or sticks to push governments into honoring contracts. While governments such as the United States are often quite active in pressuring host governments to

limit expropriations or provide fair compensation for breach of contract, this pressure is not automatic. Wellhausen (2015b) makes a compelling case that distribution of the country of origin of FDI in a country both shapes the incentives of a government to expropriate and affects the home country's decision to pressure a host government to uphold contracts. Our MIGA cases also illustrate that the willingness of multilaterals to pressure host government can be shaped by a number of factors, including the case of the DR Congo where the status of existing World Bank projects tempered the Bank's response to contract breach.

We believe our case studies also suggest avenues for future research beyond home government responses to expropriations. While our theory focuses on the role of crisis and support of multialerals in affecting expropriation behavior, these case studies provide rich evidence for other factors shaping expropriation behavior. Many of these factors are specific to an industry or even a single negotiated deal between an investor and the government. Some firm-government bargains, such as power contracts, may become untenable during a crisis. Thus while crisis may generally reduce the incentive to expropriate for most industries, there are clear counter-cases. We believe that future work should focus more on the specific relationship between firms and governments, along with political institutions and economic factors, to explain the behavior of host governments towards firms.

## 5 Conclusion

The choice of governments to break the rule of law is an under-explored topic in international political economy research. While numerous projects have examined how political institutions limit the ability of governments to expropriate from foreign investors, these, often time-invariant, factors cannot explain waves of expropriations over time. In this paper we directly address the timing of investment expropriations, arguing that external factors largely shape government decisions to expropriate from investors.

Contrary to existing work on the link between economic crisis and the breaking of contracts, we argue that governments are less likely to expropriate from investors during times of crisis. Cash strapped governments are less likely to renege on contracts during a crisis in ways that harm present and future investment flows. Thus international investment and financial markets discipline governments from expropriating foreign investment. We also argue that home governments have the ability to punish host governments that expropriate from investors through cutting off financial support, such as the blocking of IMF and World Bank allocations and the suspension of aid. While crisis may increase the benefits of expropriating from investors, and high levels of aid may provide substitute capital, the reputational costs and ability of home governments to impose costs on the expropriating governments may loom larger.

We test our hypotheses using a dataset of expropriations of foreign investment, and case studies of 34 "pre-claims." Our empirical results provide support for the link between crisis and decreased propensity to expropriate. Our case studies indicate that certain contracts, such as power generation and distribution, can become extremely costly to uphold during a crisis, increasing the incentive to expropriate. Our statistical

analysis also finds some evidence on the role of IMF and World Bank support on reducing expropriation behavior. Our case studies further highlight the important role of these institutions in providing carrots and sticks for governments to uphold contracts with investors and avoid expropriation behavior.

Our findings have broader implications for the literature on the relationship between markets and government sovereignty. Consistent with existing literature on economic liberalization and crisis, we find that economic crisis disciplines governments from the breaking of contracts. Yet market mechanisms may not be enough to stop investment expropriations. We show that dependence on the IMF and the World Bank has a strong disciplining effect on government behavior.

## References


Abiad, A., & Mody, A. (2005). Financial reform: What shakes it? What shapes it? *American Economic Review*, *95*(1), 66–88.

Allee, T., & Peinhardt, C. (2010). Delegating differences: Bilateral investment treaties and bargaining over dispute resolution provisions. *International Studies Quarterly*, *54*(1), 1–26.

Allison, P.D., & Waterman, R.P. (2002). Fixed-Effects Negative binomial regression models. *Sociological Methodology*, *32*(1), 247–265.

Antzoulatos, A.A. (2000). On the determinants and resilience of bond flows to LDCs, 1990–1995. *Journal of International Money and Finance*, *19*(3), 399–418.

Biglaiser, G., & DeRouen, Jr. K. (2004). The expansion of neoliberal economic reforms in Latin America. *International Studies Quarterly*, *48*(3), 561–578.

Biglaiser, G., Lee, H., Staats, J.L. (2016). The effects of the IMF on expropriation of foreign firms. *The Review of International Organizations*, *11*(1), 1–23.

Broz, J., & Hawes, M.B. (2006). Lawrence congressional politics of financing the international monetary fund. *International Organization*, *60*(2), 367–399.

Bun, M.J.G., & Harrison, T.D. (2018). OLS And IV estimation of regression models including endogenous interaction terms. *Econometric Reviews*, 1–14.

Carter, B.E., Trimble, P.R., Bradley, C.A. (2003). *International law*, 4th edn. New York: Aspen Publishers.

Christian, P., & Barrett, C.B. (2017). Revisiting the effect of food aid on conflict: A methodological caution. World Bank Policy Research Working Paper No. 8171. Washington, DC.

Claessens, S., Djankov, S., Fan, J.P.H., Lang, L.H.P. (2002). Disentangling the incentive and entrenchment effects of large shareholdings. *The Journal of Finance*, *57*(6), 2741–2771.

Cole, H.L., & English, W.B. (1991). Expropriation and direct investment. *Journal of International Economics*, *30*(3-4), 201–227.

Copelovitch, M.S. (2009). Master or Servant? Common Agency and the Political Economy of IMF Lending. *International Studies Quarterly*, *54*(1), 49–77.

de Paoli, B., Glenn, H., Saporta, V. (2006). Costs of sovereign default. *Bank of England Quarterly Bulletin*, *46*(3), 297–307.

Drazen, A., & Easterly, W. (2001). Do crises induce reform? Simple empirical tests of conventional wisdom. *Economics & Politics*, *13*(2), 129–157.

Dreher, A. (2006). IMF And economic growth: The effects of programs, loans, and compliance with conditionality. *World Development*, *34*(5), 769–788.

Dreher, A., Fuchs, A., Parks, B., Strange, A., Tierney, M.J. (2017). Aid, China, and Growth: Evidence from a New Global Development Finance Dataset. AidData Working Paper 46.

Duch, R.M., & Stevenson, R.T. (2008). *The economic vote: How political and economic institutions condition election results*. Cambridge: Cambridge University Press.

Duncan, R. (2006). Price or politics? an investigation of the causes of expropriation. *Australian Journal of Agricultural and Resource Economics*, *50*(1), 85–101.

Garrett, G. (1998). *Partisan politics in the global economy*. Cambridge: Cambridge University Press.

Graham, B.A.T., Johnston, N.P., Kingsley, A.F. (2017). Even Constrained Governments Take: The Domestic Politics of Transfer and Expropriation Risks. Journal of Conflict Resolution. Online First.

Greene, W. (2004). Fixed effects and bias due to the incidental parameters problem in the Tobit model. *Econometric reviews*, *23*(2), 125–147.

Guriev, S., Kolotilin, A., Sonin, K. (2011). Determinants of nationalization in the oil sector: A theory and evidence from panel data. *Journal of Law, Economics, and Organization*, *27*(2), 301–323.

Guzman, A.T. (2006). Competing for capital: the diffusion of bilateral investment treaties, 1960-2000. *International Organization*, *60*(4), 811–846.

Haggard, S., & Maxfield, S. (1996). The political economy of financial internationalization in the developing world. *International Organization*, *50*(1), 35–68.

Hajzler, C. (2012). Expropriation of foreign direct investments: sectoral patterns from 1993 to 2006. *Review of World Economics*, *148*(1), 119–149.

Hansen, K.W. (2005). Tales from the dark side: Lessons learned from troubled investments. In West, G.T., & Moran, T.H. (Eds.) *International Political Risk Management: Looking To The Future* (pp. 12–29). Washington: World Bank.

Henisz, W.J. (2000). The institutional environment for multinational investment. *Journal of Law, Economics, and Organization*, *16*(2), 334–364.

Jensen, N.M. (2003). Democratic governance and multinational corporations: Political regimes and inflows of foreign direct investment. *International Organization*, *57*(3), 587–616.

Jensen, N.M. (2004). Crisis, conditions, and capital: The effect of International Monetary Fund agreements on foreign direct investment inflows. *Journal of Conflict Resolution*, *48*(2), 194–210.

Jensen, N.M. (2006). *Nation-states and the Multinational Corporation: A Political Economy of Foreign Direct Investment*. Princeton: Princeton University Press.

Jensen, N.M. (2008). Political risk, democratic institutions, and foreign direct investment. *Journal of Politics*, *70*(4), 1042–1052.

Jensen, N.M., & Johnston, N.P. (2011). Political risk, reputation, and the resource curse. *Comparative Political Studies*, *44*(6), 662–688.

Jensen, N.M., Biglaiser, G., Li, Q., Malesky, E., Pinto, P.M., Pinto, S.M., Staats, J.L. (2012). *Politics and Foreign Direct Investment*. Ann Arbor: University of Michigan Press.

Jodice, D.A. (1980). Sources of change in Third World regimes for foreign direct investment, 1968–1976. *International Organization*, *34*(2), 177–206.

Johns, L., & Wellhausen, R.L. (2016). Under one roof: Supply chains and the protection of foreign investment. *American Political Science Review*, *110*(1), 31–51.

Kaminsky, G., & Schmukler, S.L. (2002). Emerging market instability: do sovereign ratings affect country risk and stock returns? *The World Bank Economic Review*, *16*(2), 171–195.

Kerner, A. (2009). Why should I believe you? The costs and consequences of bilateral investment treaties. *International Studies Quarterly*, *53*(1), 73–102.

Kindleberger, C.P. (1996). *Manias, Panics and Crashes: A History of Financial Crises*, 3rd edn. New York: Wiley.

King, G., & Roberts, M.E. (2015). How robust standard errors expose methodological problems they do not fix, and what to do about it. *Political Analysis*, *23*(2), 159–179.

Kobrin, S. (1979). Political risk: a review and reconsideration. *Journal of International Business Studies*, *10*(1), 67–80.

Kobrin, S.J. (1980). Foreign enterprise and forced divestment in LDCs. *International Organization*, *34*(1), 65–88.

Kobrin, S.J. (1984). Expropriation as an attempt to control foreign firms in LDCs: trends from 1960 to 1979. *International Studies Quarterly*, *28*(3), 329–348.

Kriesi, H. (2012). The political consequences of the financial and economic crisis in Europe: Electoral punishment and popular protest. *Swiss Political Science Review*, *18*(4), 518–522.

Kumar, K.B., Rajan, R.G., Zingales, L. (1999). What determines firm size? NBER working paper 7208 National Bureau of Economic Research.

La, P.R., Lopez-de Silanes, F., Shleifer, A., Vishny, R.W. (1997). Legal determinants of external finance. *The Journal of Finance*, *52*(3), 1131–1150.

La, P.R., Lopez-de Silanes, F., Shleifer, A. (1999). Corporate ownership around the world. *Journal of Finance*, *54*(2), 471–517.

La, P.R., Lopez-de Silanes, F., Shleifer, A., Vishny, R.W. (2000). Agency problems and dividend policies around the world. *The Journal of Finance*, *55*(1), 1–33.

La, P.R., Lopez-de Silanes, F., Shleifer, A., Vishny, R. (2002). Investor protection and corporate valuation. *The Journal of Finance*, *57*(3), 1147–1170.

Laeven, L., & Valencia, F. (2008). Systemic banking crises: a new database. *IMF Working Papers*, *8224*(200), 1–78.
Lang, V. (2016). The Economics of the Democratic Deficit: The Effect of IMF Programs on Inequality. Heidelberg University Discussion Paper.
Lee, C.-y., & Johnston, N.P. (2016). Improving reputation BIT by BIT: Bilateral investment treaties and foreign accountability. *International Interactions*, *42*(3), 429–451.
Lewis-Beck, M.S., & Stegmaier, M. (2000). Economic determinants of electoral outcomes. *Annual Review of Political Science*, *3*(1), 183–219.
Lewis-Beck, M.S., Stegmaier, M., Hans-Dieter, K. (2007). Economic Models of Voting. In Dalton, R.J. (Ed.) *Oxford Handbook of Political Behaviour* (pp. 519–537): Oxford University Press.
Li, Q. (2009). Democracy, autocracy, and expropriation of foreign direct investment. *Comparative Political Studies*, *42*(8), 1098–1127.
Li, Q., & Resnick, A. (2003). Reversal of fortunes: Democratic institutions and foreign direct investment inflows to developing countries. *International Organization*, *57*(1), 175–211.
Michael, T. (2007). *Reputation and international cooperation: Sovereign debt across three centuries princeton*. NJ: Princeton University Press.
MIGA (2012). 2012 Annual Report. Multilateral Investment Guarantee Agency.
Min, H.-G., Lee, D.-H., Nam, C., Park, M.-C., Nam, S.-H. (2003). Determinants of emerging-market bond spreads: Cross-country evidence. *Global Finance Journal*, *14*(3), 271–286.
Minor, M.S. (1994). The demise of expropriation as an instrument of LDC policy, 1980-1992. *Journal of International Business Studies*, *25*(1), 177–188.
Moran, T.H. (1998). *Managing International Political Risk*. Oxford: Blackwell.
Nenova, T. (1999). The value of a corporate vote and private benefits: A cross-country analysis. Department of Economics, Harvard University, Unpublished Working Paper.
Neumayer, E., & Spess, L. (2005). Do bilateral investment treaties increase foreign direct investment to developing countries? *World Development*, *33*(10), 1567–1585.
Nizalova, O.Y., & Murtazashvili, I. (2016). Exogenous treatment and endogenous factors: Vanishing of omitted variable bias on the interaction term. *Journal of Econometric Methods*, *5*(1), 71–77.
Northrup, C.C., & Prange Turney, E.C. (2003). *Encyclopedia of Tariffs and Trade in US History: The encyclopedia* Vol. 3. Westport: Greenwood Publishing Group.
Nunn, N., & Qian, N. (2014). US Food aid and civi
conflict. *American Economic Review*, *104*(6), 1630–66.
Oatley, T., & Yackee, J. (2004). American interests and IMF lending. *International Politics*, *41*(3), 415–429.
Olleta, A. (2007). The World Bank's Influence on Water Privatization in Argentina: The Experience of the City of Buenos Aries. IELRC Working Paper 2007-02 International Environmental Law Research Centre.
Pepinsky, T.B. (2012). Do Currency Crisis Cause Capital Account Liberalization? *International Studies Quarterly*, *56*(3), 544–559.
Petrova, M., & Bates, R. (2012). Evolution of risk and political regimes. *Economics & Politics*, *24*(2), 200–225.
Reinhart, C.M., & Rogoff, K. (2009). *This Time Is Different: Eight Centuries of Financial Folly*. Princeton: Princeton University Press.
Reinhart, C.M., & Rogoff, K.S. (2014). Recovery from financial crises: Evidence from 100 episodes. *American Economic Review*, *104*(5), 50–55.
Remmer, K.L. (1991). The political impact of economic crisis in Latin America in the 1980s. *American Political Science Review*, *85*(3), 777–800.
Rudra, N. (2008). *Globalization and the race to the bottom in developing countries: Who Really Gets Hurt?*. Cambridge: Cambridge University Press.
Salacuse, J.W., & Sullivan, N.P. (2005). Do BITs really work: An evaluation of bilateral investment treaties and their grand bargain. *Harv. Int'l LJ*, *46*, 67–130.
Sandleris, G. (2008). Sovereign defaults: information, investment and credit. *Journal of International Economics*, *76*(2), 267–275.
Shleifer, A., & Wolfenzon, D. (2002). Investor protection and equity markets. *Journal of Financial Economics*, *66*(1), 3–27.
Singer, M.M. (2010). Who says its the economy? Cross-national and cross-individual variation in the salience of economic performance. *Comparative Political Studies*, *44*(3), 284–312.

Staats, J.L., & Biglaiser, G. (2012). Foreign direct investment in latin america: The importance of judicial strength and rule of law. *International Studies Quarterly*, *56*(1), 193–202.
Stone, R.W. (2011). *Controlling institutions: International organizations and the global economy*. Cambridge: Cambridge University Press.
Terza, J.V., Basu, A., Rathouz, P.J. (2008). Two-stage residual inclusion estimation: addressing endogeneity in health econometric modeling. *Journal of Health Economics*, *27*(3), 531–543.
Thacker, S.C. (1999). The high politics of IMF lending. *World Politics*, *52*(1), 38–75.
Tomz, M., & Wright, M.L.J. (2010). Sovereign theft: Theory and evidence about sovereign default and expropriation. In Hogan, W., & Sturzenegger, F. (Eds.) *The natural resources trap: Private investment without public commitment* (pp. 69–110). Cambridge: MIT Press.
UNCTAD. (1998). *Bilateral Investment Treaties in the Mid-1990s*. United Nations: Geneva.
UNCTAD. (2008). *World investment report*. New York: United Nations Press.
Vernon, R. (1998). *In the Hurricane's Eye: The Troubled Prospects of Multinational Enterprises*. Cambridge: Harvard University Press.
Wellhausen, R.L. (2015a). Bondholders vs. Direct Investors? Competing Responses to Expropriation. *International Studies Quarterly*, *59*(4), 750–764.
Wellhausen, R.L. (2015b). Investor–state Disputes When Can Governments Break Contracts? *Journal of Conflict Resolution*, *59*(2), 239–261.
Wells, L.T., & Ahmed, R. (2007). *Making Foreign Investment Safe: Property Rights and National Sovereignty*. London: Oxford University Press.
Werker, E., Ahmed, F.Z., Cohen, C. (2009). How is foreign aid spent? Evidence from a natural experiment. *American Economic Journal: Macroeconomics*, *1*(2), 225–44.
Wooldridge, J.M. (1999). Quasi-likelihood methods for count data. In *Handbook of applied econometrics*, (Vol. 2 pp. 321–368). New York: Wiley Online Library.
Wooldridge, J.M. (2014). Control function methods in applied econometrics. *The Journal of Human Resources*, *50*(2), 420–445.
Wurgler, J. (2000). Financial markets and the allocation of capital. *Journal of Financial Economics*, *58*(1), 187–214.
Yackee, J.W. (2008). Conceptual difficulties in the empirical study of bilateral investment treaties. *Brooklyn Journal of International Law*, *33*(2), 405–462.
Zingales, L. (1994). The value of the voting right: A study of the Milan stock exchange experience. *Review of financial Studies*, *7*(1), 125–148.



## Affiliations

**Nathan M. Jensen[1] · Noel P. Johnston[2] · Chia-yi Lee[3] · Hadi Sahin[4]**

Noel P. Johnston
noel.pereyra-johnston@ucr.edu

Chia-yi Lee
iscylee@ntu.edu.sg

Hadi Sahin
hadi.sahin@gmail.com

[1] University of Texas at Austin, Austin, TX, USA

[2] University of California at Riverside, Riverside, CA, USA

[3] Nanyang Technological University, Singapore, Singapore

[4] Bursa, Turkey