Crime and Punishment in Development Banks: The Politics of Procurement Rule Violations and Sanctions Stringency

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Abstract

The World Bank and regional development banks design procurement rules to prevent companies and individuals from engaging in fraud and other corrupt practices while providing goods and services for projects funded by these international financial institutions. Yet, international procurement is not immune from the problem of non-compliance. For instance, since 2001, the World Bank has investigated thousands of complaints and imposed sanctions against more than 700 companies and individuals after determining that there is sufficient evidence of sanctionable behavior. Penalties range from a simple letter of reprimand to restitution and debarment for varying periods of time, including indefinitely. Although previous research has examined the politics of procurement at the international level (McLean 2017) and in individual countries (e.g., Bauhr et al. 2020; Dahlström et al. 2021), there is no research on the politics of enforcement of international procurement rules. We argue that suppliers have more opportunities to engage in fraudulent and corrupt practices when contracts are allocated domestically due to these suppliers' greater country knowledge and when suppliers' countries experience significant domestic corruption. The World Bank Sanctions System, in turn, should impose heavier penalties on suppliers from more corrupt countries and countries that allocate more contracts domestically. To test these expectations, we draw on original data collected from the World Bank's reports on cases of fraud and other sanctionable practices investigated by the World Bank. We combine information from decisions issued by the World Bank's Office of Suspension and Debarment for uncontested cases and the World Bank Sanctions Board for contested cases, as well as data on World Bank-funded contracts awarded during the same time period (2003-2023). Our analysis provides evidence in support of the hypothesized relationships. Specifically, we find a positive relationship between contract allocation to domestic suppliers and domestic corruption levels, on the one hand, and procurement rule violations, on the other. Also, we find that the World Bank imposes more severe punishment (specifically, longer debarment terms) on entities from countries that award more contracts domestically and that experience greater corruption.

1. Introduction

Contract allocation is an essential stage of international development assistance. To ensure transparency, predictability, efficiency and fairness of the process, international development organizations (IDOs), such as the World Bank, adopt procurement rules. Yet, violations of these rules occur: non-state participants of development assistance projects – i.e., suppliers of goods and services – can break IDOs' procurement rules by engaging in a variety of unauthorized practices, including fraud, coercion and collusion. While governments' non-compliance with international rules has been a focus of numerous studies in the area of international cooperation, non-compliance by non-state actors has received less attention. Moreover, the political economy of procurement remains a largely overlooked area in research on international development. In this paper, we aim to analyze patterns of procurement rule violations and answer the following question: when are such violations more likely to occur?

When violations take place, IDOs need to respond to punish non-compliance and prevent future violations. IDOs' primary punishment instrument in procurement is sanctions, which limit companies' and individuals' ability to bid on aid-funded contracts for varying periods of time. In addition to debarment (conditional or unconditional), the World Bank can impose lighter but far less common penalties, such as a conditional non-debarment, a public letter of reprimand, and restitution. The overwhelming majority of penalties comes in the form of conditional debarment for a fixed amount of time – this type of sanctions accounted for almost 98% of sanctions imposed during the most recent 5-year period (World Bank 2023b: 51). The stringency of this type of punishment can range substantially, from less than a year in duration to permanent disbarment. Our second research question in this paper centers on the stringency of punishment for procurement rule violations: when does the World Bank choose to punish rule-breakers more harshly? We are specifically interested in connecting the factors that explain violation propensity to the stringency of punishment imposed by the World Bank.

We draw on existing research on corruption to explain patterns of violations and punishment in contract allocation funded by development aid. Previous studies of corruption in developing countries suggest that, although measurement of corruption is inherently difficult and resulting metrics suffer from significant uncertainty, corruption levels tend to be high in these countries. Effects of corruption are unambiguously negative: corruption imposes significant costs on economies and societies, including lower levels of economic activity, less efficient government provision of goods and services to their populations and negative distributional consequences for individuals and households (Olken and Pande 2012; De Vries and Solaz 2017). In addition to public officials' misuse of their office for private gain, existing research suggests that resource misallocation can result from capture, or the diversion of resources for private benefit or the government's political benefit (Winters 2014). Given a variety of ways in which development funds can serve purposes

other than those specified in the agreement between recipient governments and IDOs, the World Bank and other IDOs have sought to shield their development programs from resource misuse and misallocation by implementing procurement rules and creating structures for identifying, investigating and punishing cases of non-compliance by suppliers.

We argue that suppliers' ability to obtain World Bank-funded contracts in violation of the Bank's procurement rules is facilitated by two domestic-level factors. The first is the level of political corruption. In the environment where bribes and kickback payments are common methods of currying government officials' favors, suppliers should find it more acceptable to seek contract opportunities by such means and have more experience with these practices. The second is the recipient country's propensity to allocate more contracts domestically. Although the national preference does not violate World Bank procurement policies, a greater proportion of such contracts remaining in the recipient country offers more opportunities for domestic suppliers to sway contract allocation in their favor. Such opportunities emerge due to domestic companies and individual service providers' greater local knowledge, including informal channels to secure contracts. Public officials in recipient countries, in turn, will likely trust local companies more than foreign business representatives when they approach the officials with an offer to divert development aid. In sum, we expect to observe more violations in countries with higher corruption levels and greater share of domestically allocated contracts.

We also expect the World Bank to focus on these two factors when choosing how severely it should punish a given procurement rule violation. The length of punishment should be systematically greater when a violation occurs in a country with more corrupt political institutionsor in a country that awards more aid-funded contracts to home suppliers. The World Bank should use penalties imposed in these cases to single out countries with greater rates of non-compliance. Although the Bank cannot force governments to fight domestic corruption, it appears to be imposing more severe penalties on their constituents.

We test these theoretical expectations using original data collected from the World Bank's reports on cases of fraud and other types of sanctionable behavior. Our empirical findings provide evidence of the hypothesized relationships. Namely, the analyses of violation patterns indicate that there is a positive relationship between contract allocation to domestic suppliers and domestic corruption levels, on the one hand, and procurement rule violations, on the other. In addition, we show that the World Bank tends to impose more lengthy debarment terms on non-compliant companies and individuals from countries that award more contracts domestically and that have more corrupt domestic political institutions.

2. Describing the World Bank's Sanctions Process

The World Bank's sanctions system aims to detect, prevent, and punish corruption, fraud, and misconduct in projects that are sponsored by the World Bank. The World Bank imposes administrative sanctions on firms or individuals that are engaged in fraud, corruption, coercion, collusion or obstruction with World Bank-financed projects. The goal of monitoring, preventing, and punishing is to maintain good governance so that the World Bank could attract investment from donor countries, reduce poverty and seek sustainable development in recipient countries (World Bank 2011b; 2024a).

The World Bank's Integrity Vice Presidency (INT) investigates allegations on whether a firm or an individual is engaged in a sanctionable practice. If INT believes that there is sufficient evidence to substantiate the allegations, INT refers the case to the Office of Suspension and Debarment (OSD). The OSD constitutes the first tier of the World Bank's two-tier administrative sanctions process.

There are four officers that oversee suspension and debarment decisions at the first tier and they are as follows: the IBRD/IDA (World Bank) Suspension and Debarment Officer (SDO); the Evaluation and Suspension Officer (EO) for International Finance Corporation (IFC); the EO for Multilateral Investment Guarantee Agency (MIGA); and the EO for investment projects guaranteed by the World Bank (known as partial risk guarantees or PRGs). The Suspension and Debarment Officer (SDO) reviews the evidence submitted by INT and determines whether the evidence is sufficient to support a finding that the alleged Sanctionable Practice occurred. If it is sufficient, the SDO issues a Notice of Sanctions Proceedings to the Respondent. Respondent indicates a firm or an individual that is alleged for engaging in Sanctionable Practice. The Notice includes allegations and recommended sanctions. Upon issuance of the Notice, the respondent temporarily becomes ineligible for signing new World Bank-financed contracts. When the respondent chooses not to contest the allegations or the recommended sanction, it faces the sanction recommended by the SDO. If the respondent contests the allegation or the recommended sanction, the case is referred to the World Bank Sanctions Board. The World Bank Sanctions Board constitutes the second tier of the World Bank's two-tier administrative sanctions process.

The Statute stipulates that the World Bank Sanctions Board consists of seven members that are all external to the World Bank. The Executive Directors appoint three members who are familiar with procurement matters and dispute resolution mechanisms. The Executive Directors appoint two members of International Finance Corporation (IFC) who are familiar with equity investment and cross-border lending. The Executive Directors appoint two members of Multilateral Investment Guarantee Agency (MIGA) who are familiar with non-commercial guarantee operations. All seven members must not currently hold any staff position of the World Bank. The Sanctions Board carries out a full de novo review in each contested case. The Sanctions Board collectively considers INT's

allegations and evidence, the respondent's arguments and evidence that respond to INT's allegation, and INT's reply. After completing its review, the Sanctions Board determines whether the respondent is engaged in a sanctionable practice. If it is so, the Sanctions Board imposes one or more of the aforementioned sanctions. This could extend to a respondent's affiliates, successors and assigns. The Sanctions Board's decisions are final and cannot be appealed (World Bank 2024a).

The World Bank addresses misconduct by imposing various penalties on individuals or firms. Its sanctions are designed to encourage corrective actions. According to the document 'The World Bank's Sanctions Regime: Information Note' by the World Bank Group, the five types of sanctions are as follows:

1. *Debarment with Conditional Release*: This general sanction requires a minimum debarment period of three years during which individuals or firms are barred from participating in the World Bank projects. To be eligible for reinstatement, they must meet specific conditions and provide the evidence that they have met the required conditions, such as implementing a satisfactory integrity compliance program. The Bank Group's Integrity Compliance Officer assesses if the conditions have been fulfilled, with an option for individuals/firms to appeal to the Sanctions Board.

2. *Debarment for a Fixed Term*: This sanction excludes firms or individuals from the World Bank financed activities for a particular period, after which it is reinstated without further conditions. This is generally used when the entity already has strong compliance systems, or misconduct was limited to specific individual(s). In the case of severe misconduct where the entity is unlikely to reform, debarment can be permanent, preventing any future involvement with the World Bank projects.

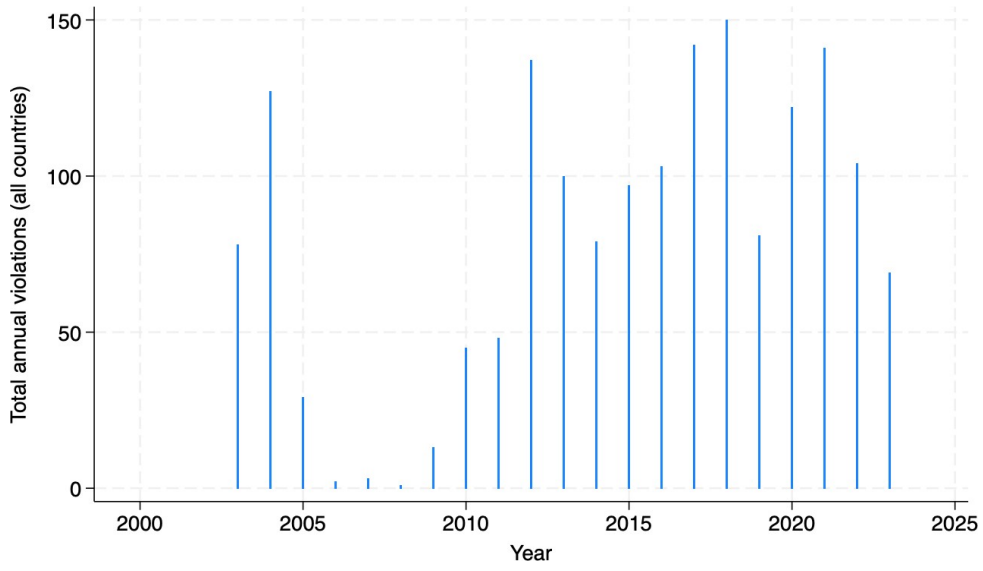
3. *Conditional Non-Debarment*: This sanction allows an individual or firm to avoid debarment by fulfilling specific conditions within a given period. If the entity fails to meet these conditions, it will be debarred for a specified period. This sanction is used, when the entity has made significant voluntary corrections or it demonstrates its commitment to compliance.

4. *Letter of Reprimand*: A letter of reprimand is sent, as debarment or conditional non-debarment is too severe. It is appropriate for the cases that misconduct is minimal or the misconduct stemmed from a mistake rather than deliberate wrongdoing. The letter formally gives a warning for future conduct.

5. *Restitution*: This sanction askes firms or individuals to compensate for the borrower, the World Bank, or the public. Additionally, they can be required to correct any related issues (World Bank Group, 2011b).

Regional development banks established similar institutional structures to sanction violations of procurement rules and ensure integrity and transparency in their procurement processes. For instance, the Inter-American Development Bank's Sanctions System consists of the Office of Institutional Integrity, the Sanctions Officer, and the Sanctions Committee and follows procedures that parallel those of the World Bank (IDB 2023). In 2010, regional development banks (Asian Development Bank, African Development Bank, European Bank for Reconstruction and Development, and Inter-American Development Bank) and the World Bank adopted an agreement to ensure that a supplier penalized by one IDO for sanctionable conduct is banned from the internationally funded procurement process by all signatory IDOs for the same period. As Figure 1 shows, the Agreement for Mutual Enforcement of Debarment Decisions is associated with an increased number of recorded procurement violations because of cross-debarment cases where the World Bank imposes punishment on firms or individuals, honoring the sanctions imposed by the other development banks (World Bank Group, 2011b).

Figure 1: Total annual violations of the World Bank's procurement rules



Note: The figure is based on the authors' data.

3. Explaining Compliance with Procurement Rules and Punishment for Non-Compliance

Existing literature on compliance with international agreements primarily focuses on states' decision to comply. Similarly, enforcement efforts typically aim to impose costs on governments for reneging on their commitments. Recent studies in the area of international investment shed light on non-state actors' compliance with bilateral investment treaties (e.g., Ma 2023), although most violations are committed by governments of host

countries. Non-state actors can also serve as compliance constituencies for international agreements: for instance, environmental groups can exert electoral leverage and provide information to put pressure on national governments, thereby facilitating their countries' compliance indirectly (Dai 2005).

We view non-state entities as primary compliance agents in the process of international procurement. The World Bank's sanctions system monitors compliance and identifies violations by individuals and companies participating in its procurement process, which is a key step for converting World Bank assistance into goods and services necessary for project implementation. The IDO adopts procurement rules to protect the integrity of World Bank-funded procurement, ensure efficient and fair allocation of multilateral resources, and demonstrate to member states its competence as an actor in international development. While national authorities control the procurement process at the national level, the World Bank reviews contract allocation and investigates tips regarding potential rule violations.

Companies and individuals' preferences stem from the main motivation: they are interested in securing business opportunities funded by multilateral project assistance. Given this, compliance with procurement rules is the preferred strategy if it enhances the likelihood of winning a contract and compliance costs are not too high. Otherwise, non-compliance would be a rational choice, especially when a supplier expects minimal costs. Two actors can impose costs for non- compliance: the national government and the IDO. The national government can also affect the likelihood of contract award and costs of compliance with the IDO's procurement rules.

Given national governments' ability to shape suppliers' incentives, we start by considering how governments can affect the likelihood of non-compliance. Suppliers may conclude that they are not sufficiently competitive to win a Bank-funded contract due to their insufficient experience, the lack of required expertise or another failure to meet specific procurement criteria. Alternatively, companies or individuals may view contracts simply as an opportunity to enrich themselves. In either case, their likelihood of securing a contract in a fair and unbiased competitive bidding process is low. Under certain conditions, this assessment may lead suppliers to try to circumvent the competitive bidding process required by the Bank's procurement rules.

Such conditions can arise in two primary ways. First, suppliers should be more likely to attempt to violate procurement rules in environments where such methods of conducting business with the government are regularized and even expected. Bribing public officials or offering them kickbacks has to be sufficiently normalized so that company representatives or individuals would not fear legal repercussions when approaching the officials with such proposals. Therefore, we expect existing corruption levels to be conducive to corruption in World Bank-funded procurement.

Second, recipient governments may use their control over the contract allocation process to provide benefits to certain individuals or companies. This political capture of

the procurement process operates through the mechanism of familiarity. Previous studies describe the effect of familiarity as an informational shortcut (e.g., Leblang 2010). Companies and individuals that are based in the recipient country have better knowledge of local regulations and procedures, as well as familiarity with informal networks that can facilitate both legal and illegal activities. Research on cross-border investment provides evidence consistent with the familiarity effect: for instance, Ferreira et al. (2010) and Marra et al. (2024) argue that foreign-born CEOs are more likely to make cross-national investments in their countries of birth due to such CEOs' significant knowledge and connections in these countries and hence an information advantage.

Although this does not mean that contract allocation to domestic suppliers is always or even frequently associated with rule violations, we argue that among suppliers that would be willing to break rules, domestic companies and individuals should enjoy an informational advantage and lower transaction costs. Foreign suppliers could also identify such opportunities. However, they are at a disadvantage since they may not know the local language and customs and attract less trust as foreigners. These considerations should be particularly salient given that government officials understand potential ramifications of breaking procurement rules and engaging in bribery or any other illegal activities.

Companies and consultants can offer bribes to public officials in charge of contract allocation or provide fraudulent documentation in support of their bids. We argue that bidders will find it easier to engage in these practices when the contracts are allocated by their home governments. Bidders should have more local knowledge and more local connections to be able to identify and approach appropriate public officials. Since they reside in the same countries where procurement officials live, they will find it easier to meet with these officials in person and will not experience a language barrier during contract discussions. In sum, we expect home country suppliers to have more opportunities to secure World Bank-funded contracts by breaking procurement rules, and as the number of domestically allocated contracts increases, the likelihood of procurement violations should also increase. Two testable hypotheses follow from our discussion of irregularities in the procurement process:

Hypothesis 1: *Procurement violations should be more likely in countries with higher corruption levels.*

Hypothesis 2: *Procurement violations should be more likely in countries that allocate more contracts domestically.*

When the World Bank – or more specifically the Integrity Vice Presidency (INT) – receives information regarding alleged violations of procurement rules, it conducts an investigation. Results of the investigation serve multiple purposes. Specifically, the WB uses its findings to impose a sanction when the INT uncovers sufficient evidence of sanc-

tionable behavior. The objective is to impose a cost on the supplier for non-compliance and to prevent future non-compliance. In addition, the World Bank's investigation and corrective action serve as instruments of strengthening compliance with procurement rules more broadly.

The Suspension and Debarment Officer (SDO) recommends the stringency of sanction that should be imposed on entities that engaged in sanctionable behavior. Given that all companies and individuals under investigation have the option of negotiating a settlement agreement with the World Bank, cases that reach the final sanction stage result from the respondent's unwillingness to settle and/or the INT's rejection of the respondent's attempt to settle. This suggests that these respondents may be accustomed to engaging in wrongdoing with impunity and are less likely to pursue necessary corrective action. Alternatively, the INT may determine that continuing to investigate a case and imposing the most stringent punishment possible could have value beyond the benefit of penalizing a respondent's non-compliance.

Another important consideration for sending certain cases through the regular proceedings and imposing more severe penalties for non-compliance with procurement policies is that the World Bank does not sanction governments or individual government officials, even when there is clear evidence of wrongdoing. Therefore, sanctions imposed against these countries' suppliers can serve as a signal of the Bank's concern regarding domestic conditions leading to these violations. This suggests that sanctions stringency should reflect not only the specifics of each case, but also add a 'premium' for countries where violations are more likely, i.e., countries with significant corruption in its political institutions and countries that award more aid-funded contracts domestically. We summarize these expectations in the following hypotheses:

Hypothesis 3: *Suppliers from countries with higher corruption levels should receive longer debarment periods.*

Hypothesis 4: *Suppliers from countries which allocate more contracts domestically should receive longer debarment periods.*

4. Research Design

Our dataset relies on information disclosed by the World Bank's sanctions system to identify violations of procurement rules. We refer to the World Bank's annual reports from 2004 to 2023 for collecting data on debarred entities and the duration of sanctions.[1] Based on available information in the annual reports, our dataset covers 1,670 sanctioned entities that were targets of World Bank enforcement during the period between the fiscal

[1]We do not have data on debarment cases for the fiscal year 2008: the 2008 Annual Report does not provide information on any debarred entities and the duration of sanctions or cross-debarment.

years of 2003 and 2023.[2] In the first stage of our analysis, we use this information to study the occurrence of violations. The second stage centers on the stringency of the punishment imposed by the World Bank when there is sufficient evidence "to establish that it is more likely than not that the Respondent engaged in a Sanctionable Practice" (World Bank 2023a: 12).

Violation Stage: Key Variables

We analyze the likelihood and frequency of rule violations in the first stage. The unit of analysis is country-year. We construct two dependent variables using violation data. The first is the annual count of violations recorded in a given country (*Violation count*), while the second is a binary indicator which takes the value of one if at least one violation occurred and zero otherwise (*Violation dummy*). For most country-year observations, the dummy takes the value of zero, with only 468 cases of non-zero values, which represents approximately 10% of the dataset. Entities from Indonesia accounted for the highest number of violations – 105 cases were recorded in 2004.

The main explanatory variables are *Home contracts* and *Corruption*. The former represents the annual number of contracts allocated by a country to its home suppliers. For all non-recipient countries, the number of contracts always equals 0, given that these countries do not receive World Bank-funded projects and, hence, do not allocate aid-funded contracts. *Corruption* is the political corruption indicator that we obtain from the V-Dem Dataset (Coppedge et al. 2024; Pemstein et al. 2024). Higher values of this variable reflect more severe corruption problems in a given country. The indicator is constructed by aggregating six types of corruption that span three branches of the government (i.e., the executive, legislative and judicial corruption).[3]

Violation Stage: Control Variables

In addition to the main explanatory variables, our models include several controls. First, we include the lagged dependent variable to account for potential path dependence in non-compliance with procurement rules. Second, we collect data on all contracts allocated by recipient countries and calculate the annual value of such contracts. This variable, *Total contract volume*, takes the value of zero for all non-recipient countries, given that they do not procure any goods or services using multilateral aid. Governments that oversee greater volumes of aid-funded contracts may find it more challenging to monitor all suppliers and scrutinize bids for signs of potential fraud or other irregularities. Greater contract amounts may also incentivize some companies or individuals acting in bad faith

[2] In FY 2013, the annual report lists SNC-Lavalin Inc. and over 100 of its affiliates as sanctioned entities, which significantly inflated the number of cases for the year (World Bank 2013). We treat these cases as one observation.

[3] The results remain largely unchanged when we replace the political corruption indicator (v2x_corr) with the executive corruption measure (v2x_execorr). The two variables are correlated at .95.

to seek out such opportunities more actively, thereby increasing the likelihood that they win these contracts and use this funding in unauthorized ways. Hence, there should be a positive relationship between the total contract value a given country allocates and its record of violations.

The World Bank reformed its sanctions procedures in 2011.[4] For cases reviewed and decided before that year, the sanctions system only published information on violators' identity, imposed sanctions, and violation type (e.g., fraud, collusion or corrupt practices). For cases entering the sanctions system in 2011 and afterwards, the World Bank provides greater transparency. Specifically, the Bank provides the full text of the determinations made by the World Bank Suspension and Debarment Officer (or SDO determinations) and the Sanctions Board's decisions. To capture this important change in transparency levels, we create a dummy variable for the post-2011 period (*Post 2011 period*), which takes the value of zero before 2011 and one thereafter. We expect to find a positive relationship between violation cases and this binary indicator.

We include a control for the country's level of democracy, *Polyarchy*. V-Dem is the data source for this variable. Although the empirical evidence on the effect of democracy on corruption is mixed (De Vries and Solaz 2017), some studies suggest that democratic societies are more effective in curbing corruption (e.g., Klašnja 2016). Hence, procurement rule violations should be less likely. At the same time, democracies tend to be more transparent (Hollyer et al. 2011), which can make it easier to detect non-compliance with the World Bank's procurement policies. If the transparency effect dominates, then there should be more violations recorded in democratic countries.

Our model specifications also control for GDP per capita (logged). We turn to the World Development Indicators for data on countries' per capita income (World Bank 2024b). Winters (2014) finds that more affluent countries are less likely to experience capture of World Bank aid. Given that our dataset includes both recipient and non-recipient countries, the relationship may not hold. Countries with more advanced economies may have a greater number of potential suppliers (both high quality and low quality) for World Bank projects that have the knowledge and ability to submit competitive bids for aid-funded contracts. In that case, a positive association may emerge between a country's income level and the likelihood of its suppliers' non-compliance.

To account for countries' formal and informal influence within the World Bank, we include two variables, *IBRD vote* and *Alignment with US*. The former is the share of votes within the IBRD that a member country receives for its shares of the Bank's capital stock, in addition to basic votes. We coded *IBRD vote* by referring to the Bank's annual reports. The second indicator, *Alignment with US*, represents each country's affinity with the Bank's largest shareholder, the United States. This measure is based on the estimates of countries' ideal points, which rely on the UNGA Voting dataset (Voeten et al. 2009; Voeten 2013; Bailey et al. 2017). If countries use their formal or informal influence during

[4] https://www.worldbank.org/en/news/press-release/2012/05/30/world-bank-increases-transparency-through-inaugural-publication-of-sanctions-board-decisions

the sanctions process, we should find a negative relationship between their voting share and closeness to the US, on the one hand, and their records of rule violations, on the other.

Punishment Stage: Key Variables

To investigate determinants of punishment stringency, we use a modified dataset in which a sanctioned entity is the unit of analysis. Our data collection based on the World Bank's annual reports provides information on punishment imposed against all 1,670 sanctioned companies or individuals.[5] Our main dependent variable in punishment models is *Punishment duration*: this variable represents the length of the debarment period (in months) as determined by the World Bank sanctions system. The shortest debarment period in our dataset is three months. 22 entities received the maximum possible penalty – permanent debarment. Indonesian suppliers accounted for more than half of these observations (i.e., 12). Given that the punishment duration variable is a count of months, we estimate a negative binomial model with country fixed effects. In addition, we transform the duration variable by taking its natural logarithm to estimate a linear regression.

The main explanatory variables in the punishment stage are the same as in the violation stage, i.e., *Home contracts* and *Corruption*. We expect the World Bank to impose more severe punishments on rule-breakers from countries with higher levels of corruption and a greater propensity to award contracts domestically, as stated in Hypotheses 3 and 4. Therefore, there should be a positive relationship between these regressors and the punishment duration measure.

Punishment Stage: Control Variables

Models of violation punishment also include all the controls from the violation stage: specifically, *Total contract volume*, *Polyarchy*, *GDPPC*, *IBRD vote*, *Alignment with US*, and *Post 2011 period*. We expect the World Bank to be particularly concerned about violations in countries that oversee significant contract amounts; therefore, the World Bank should punish these violations more strictly to signal to governments of these countries that they need to improve their bidder selection and monitoring procedures. The coefficient on *Total contract volume* should be positive. We also expect a positive coefficient on the democracy indicator, *Polyarchy*. Given that democracies tend to be more transparent and violations are easier to observe and investigate in such political environments, World Bank investigators should also be in a better position to uncover information justifying lengthy punishments.

The next three regressors, *GDPPC*, *IBRD vote*, and *Alignment with US*, serve as measures of influence and access to resources, which can help suppliers to fight against lengthy debarment terms. Specifically, Daku and Pelc (2017) find that a country's wealth

[5] A sanction case can include more than one entity, and imposed penalties can vary within the same case. Therefore, the unit of analysis is a sanctioned entity, rather than a sanction case.

can explain its level of influence over the World Trade Organization's legal rulings in trade disputes. More affluent countries tend to be more successful in shaping the content of the WTO's decisions to include their preferred legal interpretations. Wealth is also highly correlated with legal experience within the international trade regime, which also helps countries secure rulings with favored interpretations of the institution's rules. Still, countries with higher incomes do not appear to be winning more WTO disputes. In the context of the World Bank procurement violations, we view wealth as a potential benefit for rule-breakers given that they could access better legal expertise, which would result in more lenient decisions – i.e., shorter debarment periods. In addition, studies of formal and informal influence in international organizations suggest that major powers and countries closely aligned with them may be able to receive more favorable treatment (e.g., Stone 2008, 2011; Kilby 2011; Copelovitch 2010; Kersting and Kilby 2016; Manulak 2017). Based on this research, we expect to see a negative association between IBRD voting powers and alignment with the US, on the one hand, and punishment stringency, on the other. Finally, the post-2011 dummy captures the effect of transparency-enhancing reforms in the World Bank's sanctions system. These reforms did not aim to change the application of penalties for violating WB procurement rules; the key change was that the sanctions system began providing more information about violation cases. Therefore, we have no *a priori* expectations regarding the overall effect of these policy changes on punishment duration.

5. Results

The first set of analyses evaluates our hypotheses linking recipient countries' domestic participants in World Bank contracts to the observed patterns of procurement violations. Given that one of our dependent variables representing rule violations is a count measure, while the other is a binary indicator, we estimate three different models. Model 1 of Table 1 estimates a negative binomial regression with standard errors clustered on the country. To estimate Model 2, we replace *Violation count* with *Violation dummy* and run a logit model. Finally, Model 3 uses a bivariate probit model with partial observability (Poirier 1980). This technique has utility in situations when the observed outcome depends on choices made by two different actors.[6] In the case of procurement rule violations, one actor is a company or an individual in a given country that can break a rule, and another actor is the World Bank that can identify and investigate non-compliance and decide that the supplier's behavior is sanctionable. To estimate this model, we keep independent variables from Model 2 in the Supplier action equation of Model 3. The only exception is the post-2011 period dummy, which we move to the WB action equation, where we also add two Bank-level indicators. The first, *Total WB contract volume*, represents the (logged)

[6]Studies of IMF conditionality offer examples of this technique's utility (e.g., Stone 2008). Nieman (2015) suggests that the method enables accurate hypothesis testing. In contrast, Rainey and Jackson (2017) question the technique's overall reliability.

total annual amount of WB-funded contracts allocated by all recipient countries, while the second, *Total number of violations*, is a global count of all sanction cases involving non-compliance with WB procurement rules in a given year. These measures gauge overall trends in the workload that confronts the WB as it reviews bids and contracts and investigates potential violation cases.

The results testing Hypotheses 1 and 2 suggest that, as expected, we are more likely to observe procurement violations in countries with higher corruption levels and with greater reliance on domestic suppliers. The coefficients on these two explanatory variables (*Corruption* and *Home contracts*) are positive and statistically significant in the three models shown in Table 1. We also conduct robustness checks provided in the Appendix. Table A1 re-estimates Model 1 in Table 1 by using alternative estimation techniques: linear regression with panel corrected-standard errors and GLS linear regression with correlated errors, both accounting for potential autocorrelation within panels. Our main results remain unchanged. These findings suggest that in the environment where recipient governments' employees regularly abuse their positions of power to enrich themselves, companies and individual suppliers may be more likely to resort to illegal practices (including bribery and kickbacks) to win World Bank-funded contracts. This evidence is consistent with conclusions presented in previous research (Winters 2014). In addition, we show that home suppliers appear to draw on their local knowledge and connections to their home government officials in charge of internationally funded procurement to engage in sanctionable practices as they seek to secure contracts and spend allocated resources in ways inconsistent with their intended uses.

Several control variables have statistically significant associations with rule violations likelihood and frequency. Namely, we find that countries that allocate greater resources through the procurement process are more likely to observe non-compliance cases. Our analyses also reveal that transparency enhancing reforms of the World Bank's sanctions system had a positive effect on recorded violations. This suggests that the enforcement system was strengthened as a result. Moreover, the new mechanism of cross-debarment likely added more entities to the Bank's list of violators. Another source of transparency - democratic political institutions - is similarly positively associated with countries' non-compliance record: the polyarchy indicator is positive and statistically significant across the three models.

In addition, we find that wealthier countries are more likely to observe non-compliance, as are countries that hold a greater share of the IBRD vote. These results are significant in two out of three specifications. Our analyses also provide evidence of path dependence in patterns of rule violations: past violations are highly predictive of violations in a given period. Finally, we see no evidence that the US uses its influence within the Bank to make it less likely to investigate violations in countries closely aligned with the US.

Results in the supplier part of the bivariate probit model reported in Table 3 are largely consistent with our findings from the first two models. We also find that in the

second part of the model capturing factors affecting the Bank's behavior, two factors have a positive and statistically significant effect on observed violations. While the Bank does not influence the rule violation itself, it can be more or less likely to catch a violation and then choose not to settle, thereby bringing the violation to the formal punishment stage. We see that such formal punishments became more likely after the transparency enhancing reforms - the coefficient on the post-2011 period dummy is positive and significant. In addition, our analysis shows that the overall number of annual violations recorded by the Bank increases its propensity to identify and formally sanction a procurement violation. In contrast, the total annual volume of World Bank-funded contracts does not affect its likelihood of recording a violation.

Next, we turn to our analysis of sanctions stringency. These results are shown in Table 2. Our unit of analysis is a case of a supplier's rule violation. Although we have information on 1,670 sanctioned entities, we lose some observations after we add explanatory and control variables, which results in the sample size of 1,629. Our dependent variable is the debarment duration period, which is measured in months; hence, our estimation technique is negative binomial regression (Model 2). We also transform this variable by taking its natural logarithm to be able to estimate a linear model (Model 1). Both models include country fixed effects.

The estimation results in both models show associations consistent with our theoretical expectations. Specifically, the World Bank imposes longer punishment periods in non-compliance cases when suppliers' countries allocate more contracts to domestic suppliers and when political institutions suffer from greater corruption, as the positive and statistically significant coefficients on *Home contracts* and *Corruption* indicate. This suggests that the World Bank's sanctions system imposes more severe penalties against suppliers from countries whose domestic political conditions and procurement patterns create more favorable conditions for rule violations.

The only control variable that demonstrates a robust positive relationship with punishment duration across the two models in Table 2 is *Post 2011 period*. Greater transparency of the investigation and enforcement process appears to have incentivized the Bank to impose more stringent sanctions to signal its commitment to ensuring the integrity of the procurement process. This post-reform period also brings more violation cases into the World Bank's sanctions system through the cross-debarment cooperation agreement with other IDOs, which amplifies the signaling value of severe punishment for non-compliance.

Three other control variables influence sanctions stringency, although the significance of these results does not hold in both models. As Model 1 of Table 2 shows, suppliers from democratic countries may receive longer debarment terms than their counterparts from non-democratic countries. Model 2 of Table 2 indicates that the overall volume of Bank-funded contracts awarded by the government of the non-compliant supplier's country may be connected to longer punishment periods, while the country's voting share in the IBRD appears to reduce punishment duration, all else being equal. The latter result is consistent

Table 1: Models of Procurement Violations

	Model 1 (Negative binomial)	Model 2 (Logit)	Model 3 (Biprobit with partial observability) [Choosing non-compliance – Supplier country level]
Home contracts	0.25**	0.17**	0.12**
	(0.07)	(0.05)	(0.04)
Corruption	2.36**	1.63**	1.04**
	(0.68)	(0.52)	(0.34)
Total contract volume	0.12*	0.15**	0.04*
	(0.05)	(0.06)	(0.02)
Post 2011 period	1.42**	2.13**	
	(0.33)	(0.22)	
Polyarchy	1.86**	1.28*	0.91**
	(0.57)	(0.56)	(0.35)
GDPPC	0.24	0.32**	0.15**
	(0.13)	(0.08)	(0.05)
IBRD vote	0.18	0.23**	0.47**
	(0.13)	(0.07)	(0.14)
Alignment with US	0.95	-0.63	-0.64
	(1.10)	(0.73)	(0.41)
Lagged DV	0.15**	1.16**	0.70**
	(0.05)	(0.18)	(0.17)
Constant	-9.78**	-11.02**	-3.67**
	(1.70)	(1.08)	(0.76)
			[Determining non-compliance - WB level]
Total WB contract volume			0.16
			(0.26)
Total number of violations			0.01**
			(0.00)
Post 2011 period			0.74**
			(0.17)
Constant			-4.60
			(5.96)
Observations	3,313	3,313	3,295
Log pseudolikelihood	-1955.50	-982.16	-957.56
Pseudo R2	0.11	0.25	

*Note: Standard errors clustered on country, in parentheses. Unit of analysis: country-year. All IVs, except the post-2011 dummy, are lagged by one year. * $p<0.05$, ** $p<0.01$*

with the expansive literature on informal influence in international organizations.

Table 2: Models of Punishment Duration

	Model 1 (Linear)	Model 2 (Negative binomial)
	DV:*Month count (ln)*	DV:*Month count*
Home contracts	0.09**	0.14**
	(0.03)	(0.03)
Corruption	1.70*	1.97*
	(0.69)	(0.85)
Total contract volume	0.04	0.09**
	(0.03)	(0.03)
Polyarchy	1.12*	0.95
	(0.56)	(0.67)
GDPPC	0.24	0.21
	(0.23)	(0.27)
IBRD vote	-0.13	-0.31**
	(0.09)	(0.12)
Alignment with US	0.52	-0.51
	(0.49)	(0.53)
Post 2011 period	0.49**	1.07**
	(0.16)	(0.17)
Constant	0.71	3.97
	(2.48)	(2.65)
Observations	1,629	1,629
Log pseudolikelihood	-1736.54	-8025.35
R2	0.27	
Pseudo R2		0.07

*Note: Robust standard errors, in parentheses. Unit of analysis: violation case. All IVs, except the post-2011 dummy, are lagged by one year. Models include country FEs. * $p<0.05$, ** $p<0.01$*

6. Discussion and Conclusions

This study addresses two novel, interrelated research questions: who violates rules structuring the World Bank's procurement process, and how does the World Bank punish such violations? We view non-state entities - i.e., suppliers - as the primary actors in the procurement process and, given the Bank's decision not to sanction governments for non-compliance, even when public officials play a direct role, suppliers are primary targets of punishment for rule violations. We argue that the observed patterns of non-compliance with procurement rules can be explained by two factors: the degree of corruption normalization in suppliers' countries and opportunities for suppliers to leverage local knowledge and connections. In addition, the Bank uses its sanctions not only as a way of generating costs for companies and individuals that engaged in a specific violation, but also as a mechanism to signal its position to home governments of these entities. This indirect mechanism helps the Bank to exert pressure on governments to safeguard the Bankfunded

procurement process in their countries - or face the cost of a more severe punishment for entities from these countries caught breaking procurement rules.

Using data from the World Bank's sanctions system, we show that domestic corruption levels and the propensity to allocate more Bank-funded contracts domestically are indeed positively associated with procurement rule violations. We also find that these two domestic-level factors tend to increase debarment terms imposed in recorded cases of non-compliance. Our findings show how the Bank balances its recognition of member states' sovereignty with the need to protect its development assistance from misallocation and misuse. Although the sanctions system does not penalize governments in cases of procurement rule violations, it imposes higher costs on noncompliant suppliers from countries whose governments may be less inclined to curb unauthorized uses of the Bank's funds.

We expect these findings to apply to procurement processes in other development banks, given that they operate within similar constraints. The similarity of approaches to cases of noncompliance with procurement policies and procedures likely increased after the adoption of the Agreement for Mutual Enforcement of Debarment Decisions by the World Bank and its regional counterparts in 2010. From the policy perspective, our results indicate that the Bank's domestic preference policy, which allows recipient governments the ability to grant some preferential treatment to their domestic companies with the goal of promoting economic growth and development in these countries, also results in a greater risk of non-compliance with procurement rules.

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Appendix

Table A1: Models of Procurement Violations (Alternative Estimation Techniques)

	Model 1 (Linear regression with panel-corrected standard errors)	Model 2 (GLS linear model with heteroskedastic and correlated errors)
Home contracts	0.14**	0.14**
	(0.04)	(0.04)
Corruption	0.57*	0.58*
	(0.24)	(0.28)
Total contract volume	0.00	0.00
	(0.00)	(0.01)
Post 2011 period	0.23	0.23*
	(0.14)	(0.11)
Polyarchy	0.42	0.42
	(0.33)	(0.29)
GDPPC	0.13**	0.13*
	(0.04)	(0.05)
IBRD vote	0.13**	0.13**
	(0.04)	(0.04)
Alignment with US	-0.39	-0.39
	(0.54)	(0.45)
Lagged DV	0.30**	0.30**
	(0.11)	(0.02)
Constant	-1.73**	-1.73**
	(0.53)	(0.58)
Observations	3,313	3,313

*Note: Standard errors clustered on country, in parentheses. Unit of analysis: country-year. All IVs, except the post-2011 dummy, are lagged by one year. * $p<0.05$, ** $p<0.01$*