Foreign Aid and Power Play
Political Cycle in World Bank's Procurement Allocation

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March 2022
Preliminary draft - please do not circulate

This paper investigates the existence of a political cycle in World Bank's procurement contracts allocation. Using a model intended to predict the determinants of the average amount in dollars for procurement contracts won by supplier firms in a given semester and recipient country, our results suggest that: 1) Domestic firms win larger contracts around the election in the recipient country. Additional results also indicate hints of cronyism, since the domestic preference is particularly intense around election in recipient countries where corporations are allowed to donate to candidates. 2) Foreign firms win larger contracts after the election in the recipient country, especially when foreign corporation are allowed to contribute to candidate's electoral campaign. 3) Foreign firms win larger contracts before the election in the supplier firm's origin country. Firms would indeed win 43% bigger World Bank procurement contracts one semester before an election in their home country. Further results also provide strong hints of a supplier to recipient influence in procurement contract attribution, since this cross-country political cycle occurs especially when suppliers and recipients are significant aid partner.

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1 Introduction

In 2011, COLAS, the French leader in road construction and part of the Bouygues conglomerate, won a World Bank procurement contract for the construction of three bridges in Madagascar. In 2003, the French firm SOGEA-SATOM, a subsidiary of Bolloré's civil work enterprise Vinci, won a 7 million USD World Bank contract for the construction of road and irrigation infrastructures in Mali. In 1995, Nagarjuna Limited, a large Indian public construction company, won two World Bank contracts for road construction in Tamil Nadu's state. At first sight, there is not so much in common between those three examples. They are just civil works contracts in developing countries funded by the World Bank and the comparison ends here. However, those three contracts have a common point: they were all signed around elections in recipient or supplier countries. More precisely, they were allocated one year before a national election in the firms' countries of origin for contracts happening in Madagascar and India; and one year after an election in the recipient country for the contract occurring in Mali. Even if those illustrations appear to be anecdotal, they bring us to our main research question: Do firms win larger World Bank procurement contract around elections? Our main hypothesis is that firms win larger World Bank procurement contracts around election semesters, in what could be described as a kickback arrangement where part of the contract would be used to fund the incumbent's electoral campaign.

The potential existence of a political cycle in World Bank procurement contract allocation is a consequential issue. Procurement became the Bank's preferred way of doing aid, as it would be more efficient than grants or concessional loans. This efficiency could however be challenged here. In fact, a firm chosen for electoral motives may not be the most adapted in order to execute a project. Lehne et al. (2018)'s article underlines the costs of this kind of electoral attribution. They found that public road contracts probably attributed thanks to political connections are the one most likely to never be constructed. In addition of being detrimental to the World Bank's intervention, this political cycle may also be damaging for recipient and supplier countries electoral systems. The fact that incumbent government could use the contracts' process of allocation in order to get more funds for their campaign is an unfair advantage regarding other candidates.

Using both the World Bank's Contract Award Database and the National Election across Democracy and Autocracy (Nelda), we try to assess the potential political cycle in the World Bank procurement contract's allocation. Our results validate the existence of both a domestic and an international political cycle stemming from the recipient and supplier elections. Local firms win significantly larger World Bank contracts around election semesters in the recipient country; and foreign firms win larger contracts respectively two semesters after an election in the recipient country and one semester before an election in the firms' country of origin. More precisely, local firms would win respectively 96% and 82% larger procurement contracts one semester before and during an election semester in the recipient country. Foreign firms would win on average 63% larger contracts two semesters after an election in the recipient country and 43% larger contracts one semester before an election in the firms' origin country.

We aim at contributing to the political cycle in procurement literature. To our knowledge, no previous research ever focused on the link between election and the choice of the World Bank's contractors. The novelty of our subject and the way we approach this question is therefore a contribution for this strand. We indeed resort to a gravity model in order to assess

the impact of election on World Bank's procurement contract allocation. To the best of our knowledge, Waldemar and Mendes (upcoming), who look at the cross-country determinants of European Union's procurement contract, is the only other similar research that employ tri-dimensional data (a supplier, recipient and time dimensions). We also aim at contributing to the cross-country influence literature. We indeed put a focus on the effect of the supplier countries' election, where most of the cross-country influence literature focused on the effect of recipient elections, notably on aid received. Focusing on multilateral is also a novelty in this literature where most of previous papers looked at countries relations through the scope of bilateral aid. As the recent article published in Mediapart (a French investigation journal) pointed out[1], bilateral aid is used in order to advantage donors' firms. More precisely, the AFD would favor large French firms such as Vinci or Suez for large contracts attributed through public procurement procedures, such as the contract of Douala's airport renovation for 24.4 million euros. French firms would even be almost automatically chosen for contract going through a procurement process. This kind favoritism for firms coming from donor countries was, to the best of our knowledge, never observed for IDA and IBRD procurement contracts. This alternative to tied aid would be a way for developed countries to retrieve the contributions they have made to the World Bank. Finally, we also contribute to the World Bank's procurement literature, as our results complement McLean (2017) and Zhang and Gutman (2015) approaches. We suggest indeed the existence of a political cycle for the domestic preference they both identified. In other words, the recipient country would tend to favor local companies for the execution of World Bank contracts particularly around election semesters.

Our paper is organized as the following: section 2 overviews the literature and presents the mechanisms. Section 3 introduces the data used in order to evaluate the political cycle in World Bank procurement contracts. Section 4 presents the main results of the domestic political cycle. Section 5 explores the international political cycle. Section 6 concludes.

2 Foreign aid's electoral returns: assumptions and mechanisms

Our main hypothesis is that firms win larger World Bank procurement contracts around election semesters, in what could be described as a kickback arrangement. Before entering to the core description of our mechanism, a brief explanation of the World Bank procurement contract allocation process seems essential. At first, the bank agrees to fund a project in a given place. It is then the recipient country's duty to choose the firm in charge of the project's execution. The selection of the supplier can be conducted through several procedures. After choosing the supplier, the World Bank funds are transferred to the selected firm and the project can start. One has to distinguish the effect of the election in recipient country r or in supplier country s.

Let's first assume that an election is upcoming in country r and the incumbent government tries to be reelected. In order to achieve this objective, the incumbent is seeking funds for its electoral campaign. As the recipient government is in charge of supplier in order to execute the World Bank contract, it can use the allocation process at his advantage and select friendly domestic firms that would accept to fund the campaign in exchange of a procurement contract[2].

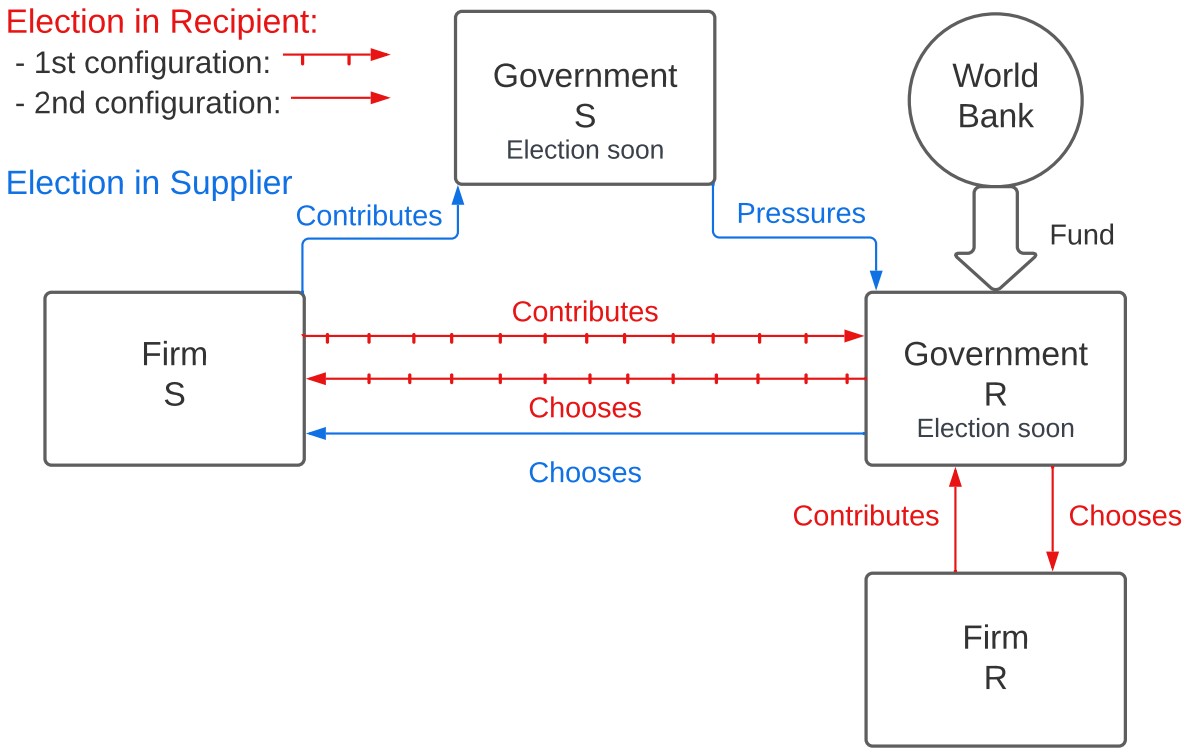
[1] https://www.mediapart.fr/journal/international/270921/les-derives-de-l-aide-francaise-au-developpement

[2] Gaining campaign funding may not be the only interest for the recipient government to help a domestic firm

An alternative way for the incumbent government from r in order to raise electoral fund would be to allocate the contract to a foreign firm coming from another country s. The foreign supplier firm coming from s could be grateful and accept to fund the incumbent's campaign in exchange.

Let's now assume an election is upcoming in country s. The incumbent government also wants to be reelected and is consequently looking for fund. One possible way to obtain such financial support would be to help a domestic firm winning a World Bank procurement contract in the country r, the latter being still in charge of choosing the supplier firm. To this aim, s could use its economic or diplomatic influence over r's government, so they choose a supplier coming from s. If this pressure is effective, the selected firm is grateful for the contract and accepts to fund the incumbent's campaign. Those three mechanisms are summarized in figure 1. The red lines represent the domestic political cycle mechanisms, with the crossed lines as the mechanism when the supplier does not come from the recipient country. The blue lines represent the international political cycle.

Figure 1: Domestic and International Political Cycle Mechanisms



The effects of supplier or recipient elections are slightly different, as the domestic political cycle does not involve a cross-country game of influence. However, both situations include crucial electoral motives to choose or push for a certain firm to win a World Bank procurement

winning a procurement contract: the image of a leader helping domestic firms or job creation may be additional motives.

contract, which implies a return of favor from the selected corporation to the government. Those three cases also denote a sub-optimal choice of the supplier firm. The chosen firm may indeed be the favorite for incumbent's interest, but possibly not the best quality/price ratio to conduct a World Bank project. As a brief summary of the mechanisms, we are going to test three hypotheses:

Hypothesis 1: *Domestic firms from r win larger World Bank procurement contracts around election semesters in the recipient country r.*

Hypothesis 2: *Foreign firms coming from s win larger World Bank procurement contracts around election semesters in the recipient country r.*

Hypothesis 3: *Firms coming from s win larger World Bank procurement contracts in country r around election semesters in their origin country s.*

There are several required assumptions for these kick-back mechanisms to occur. The quite independent choice of the contractors from the recipient, no matter what is the allocation method, is the main assumption permitting our mechanism. But the World Bank can review the choice of the supplier firm, and put its veto if they see any irregularities. However, the existing literature comforts us in the probability of our mechanisms to occur. Focusing on World Bank procurement contract in civil works and International Competitive Bid, Zhang and Gutman (2015) show that only 30% of the contracts are reviewed by the World Bank. This limited audit combined with the existence of discretionary allocation method makes the story still feasible.

Our hypothesis also implies a relative shortcoming from the World Bank, especially on its procurement allocation process. It would not be the first time that World Bank contracts are not allocated through the optimal process imagined by the institution. First, Kaja and Werker (2010) found that a country receives more World Bank projects in year where it has a representative in the World Bank Board of Directors. In a similar manner, Dreher et al. (2019) focus on the contracts from the International Finance Corporation. Their results suggest that country's membership in the board of the IFC would influence the contract's allocation, as firms coming from developed countries with a member on the board would receive more loans. McLean (2017) and Zhang and Gutman (2015) both identified the existence of a domestic preference for World Bank procurement contract while using the same dataset as us. In other words, the recipient country tends to take advantage of their dominant position in the supplier's choice to favor domestic bidders. Finally, Kersting and Kilby (2016) suggested a faster loan disbursement before an election in the recipient country, notably if the latter is politically aligned with the United States. The recipient's government would consequently have more contracts to allocate before an election.

Focusing on the international political cycle, one crucial assumption is that supplier countries will use their influence over recipient in order to get what they want. Regarding the existing literature, such behavior has already been observed. According to Kuziemko and Werker (2006), the amount of ODA received from the USA and the United Nations would significantly grow (by respectively 59% and 8%) in years were the recipient country has a

representative in the Security Council of the UN. Those results seems to depict a vote buying from the developed to recipient countries through aid, as this gain is larger in key diplomatic years (i.e. when the Security Council's vote is crucial). Dreher et al. (2009a) and Dreher et al. (2009b) show a similar pattern for World Bank's aid and IMF's loans, as the number of project and credit received would be higher in years where the recipient has a member in the UN Security council. With a larger focus in terms of donors, Faye and Niehaus (2012) finds that bilateral aid would be use not only to influence the recipient's vote at the UN, but also in order to impact recipient's internal election result. In fact, donors would give more aid to politically aligned recipient before competitive election. As it already exists for vote at the UN and for the recipient's election outcome, we can consider that an influence from the supplier to the recipient about the choice of the contractor is likely to happen.

Another assumption of our story is the existence of a solid connection between government and corporation, notably for the funding of candidates and political parties against procurement contract. The existence of this kind of kickbacks has already been established in the literature. Titl and Geys (2019) evidence this sort of connection for public procurement contract in Czech Republic between 2007 and 2014. More precisely, firms donating 10% more to a political party gaining (losing) power would witness an increase (decrease) in the value of their public procurement contracts by 0.5–0.6%. Daniele and Bennedsen (2010) find similar results in what they describe as the world's least corrupt society: Denmark.

Those kickback arrangements between government and corporation are also expected to be more pronounced around election years. Kapur and Vaishnav (2013) suggest that construction firms in India experience a short-term liquidity crunch around election year, which translates in a decrease of their cement's consumption. Those firms would encounter this situation as they spent their treasury in order to fund electoral campaigns. Mironov and Zhuravskaya (2016) observe an increase in tunneling around election years for firms with a procurement contract in Russia [3]. In other words, it is an increase in corruption for the public procurement allocation around regional election years, as cash would go from firms to politicians in exchange of procurement contracts. Likewise, Goldman et al. (2013) identify that US companies connected to the winning (losing) party receives significantly more (less) procurement contract after the election. In a nutshell, these various results underline the idea of procurement as an object of trade between firms and politicians in order to affect the outcome of upcoming elections.

3 World Bank Procurement Data

In line with McLean (2017) and Zhang and Gutman (2015), our paper builds on the World Bank's Contract Award Database [4]. The latter gives information for major contracts between the year 1993 and 2019. As the database seems rather incomplete for the year 1993 and 1994, we focus on the 1995-2019 period. The information present is highly detailed: name of the supplying firm, its country of origin, date of the contract's signature, contract's amount (in US$), recipient country, contract's category and allocation method are indeed available in this database.

[3] tunneling is an illegal practice where company insider directs company assets or future business to themselves for personal gain

[4] https://www.worldbank.org/en/projects-operations/products-and-services/brief/summary-and-detailed-borrower-procurement-reports

Based on this dataset, the most common procurement allocation method, at least for the period that we cover (1995-2019) is the Quality and Cost Based Selection. According to the World Bank Procurement Regulations for Investment Project Financing Borrower (2016), it is a "competitive process among shortlisted firms under which the selection of the successful one takes into account the quality of the Proposal and the cost of the services". This process is used exclusively for consultancy contracts. The second procurement allocation method is the International Competitive Bid. Here, the recipient government has to advertise the procurement opportunity. Firms from all over the world can candidate if they meet the World Bank's prequalification. This procedure is mainly used for goods and civil work contracts. The third procurement allocation method is the Single Source Selection where the choice of the supplier is at the discretion of the recipient government. Of course, this procedure lacks of transparency and the World Bank's Guideline for Selection and Employment of Consultant (2014) encourages using it only in exceptional circumstances. Yet, this method applies to 22% of the World Bank contract between 1995 and 2019. It has been mainly used for consultancy missions, but for some goods and civil work contracts as well. Finally, the forth procurement allocation method is the National Competitive Bid. It is similar to the international one, the main difference being that only firms coming from the recipient country can answer to the call for tender. Like its international equivalent, this method has been mainly used for civil work and goods contracts. There exist other procurement allocation methods, which remain marginal and do not enter in those four main categories.

From this raw data, we constructed the mean amount in US$ won by firms coming from country s for World Bank contracts implemented in recipient country r and won in year t semester k, which is our main dependent variable [5]. In overall, we have 179,187 World Bank's contracts won by 132,762 firms coming from 197 supplier countries for project located in 153 recipient countries between 1995 and 2019. We considered in the group of supplier (recipient) countries that won (received) at least one World Bank contract over the period, which explains why the number of supplier and recipient countries is different.

We constructed our set of five variables of interest from the National Election across Democracy and Autocracy (Nelda) (Hyde and Marinov, 2012). The latter is a rich database on elections between 1945 and 2020, which provides highly detailed information such as the exact date of the election, incumbent participation, if the election were hold early or late, and the type of election in a given country. The election considered can be the legislative or the presidential if the political system is respectively parliamentary or presidential[6]. Thanks to the election date, we built the election semester (a dummy variable equal to one if there is an election during year t semester k in a given country r or s). As the mean mandate length in our sample is 4.4 years, we decided to build five election variables going from two semesters before the election to two semesters after the election. In other words, our set of variables are going from one year prior the election to one year after the election, so our set of dummies do not overlap between themselves.

Table 1 below presents some descriptive statistics for our six main variables.

[5]The mean amount is constructed as the following: total amount in USD won by firms coming from s for contracts in country r and year t semester k divided by the total number of contracts won by firms coming from s in country r and year t semester k.

[6]Indirect elections are not considered in this dataset (i.e. if there is no mass voting). Since our mechanism may also occur in cases where elections are indirect, countries with this kind of election were added.

Table 1: Descriptive Statistics - Main Variables

	Observations	Mean	sd	Min	Max
Mean Amount	1,543,760	45,069.62	2,086,001	0	861,000,000
Semester k-2	1,507,924	0.11	0.32	0	1
Semester k-1	1,507,924	0.11	0.32	0	1
Election Semester	1,507,924	0.32	0.40	0	1
Semester k+1	1,507,924	0.11	0.32	0	1
Semester k+2	1,507,924	0.11	0.32	0	1

4 Election in Recipient countries: Domestic Political Cycle

This section examines the first two hypotheses introduced above, namely H1 and H2, hereafter referred to as the domestic political cycle. Formally, we wish to test whether more public contracts are awarded around election semesters to domestic or foreign firms.

4.1 Empirical approach

Given the structure of the World Bank procurement data and the possibility to isolate the semester in which the contract was won, we rely on an econometric specification based on this fine time decomposition, which allows the inclusion of multiple fixed effects that minimise the omitted variable bias in a fairly significant way. In order to first test for H1, *i.e.* "*Domestic firms from r win larger World Bank procurement contracts around election semesters in the recipient country r*", we resort to the following model:

$$Procurement_{r,k,t} = \alpha + \sum_{k \in -2,+2} \beta_k Election_{r,k,t} + \omega_{r,t} + \mu_{k,t} + \theta_r + \varepsilon_{r,k,t} \quad (1)$$

with $Procurement_{r,k,t}$ denoting the mean amount of World Bank procurement won by firms from recipient country r in the semester k of year t. Variables of interest thus consist in a set of dummy variables $\sum_{k \in -2,+2} Election_{r,k,t}$ flagging semesters around the election semester (*i.e.* the semester in which the election takes place). More specifically, we are interested in the two semesters before and after the election, which amounts to looking one year before and after the election semester. As the dates of elections are generally fixed by national constitutions, reverse causality is not a major problem in estimating the effect of elections on the average amounts of procurement won, i.e. the set of β_k. Yet, doubtful readers may still think that government incumbent could influence the date of the next election (by moving it back or forward) to coincide, more or less closely, with World Bank procurement funding. We show right after the main results, that removing inconsistent election dates, for which dates might have been moved, does not affect our main findings. However, while reverse causality is not of great concern here, our estimates may still be plagued by omitted variables that might affect the evolution of the average value of procurement won around the election. To deal with this potential estimation bias, we extend our specification with a set of fixed-effects aiming at controlling for 1) time-varying factors at the recipient-year level ($\omega_{r,t}$), 2) global events (common to all sample countries) that could affect the timing of the World Bank procurement funding ($\mu_{k,t}$), and 3) structural and time-invariant characteristics of recipient countries (θ_r) which would lead some

of them to receive procurement funding disproportionately. Lastly, we cluster the standard errors at the recipient-year level to control for potential error contamination within a given year in a given recipient country, as there might be unobserved factors leading observations to be correlated at this level (such as civil protests, new laws, etc.). Results stemming from this specification are displayed in the first column of Table 2 below.

We then build on this model to test our predictions regarding H2, *i.e.* "*Foreign firms coming from s win larger World Bank procurement contracts around election semesters in the recipient country r*". However, such assumption modifies the structure of our data as they now involved another stakeholder in the relationship under study. While equation1 builds on bi-dimensional panel (with time and recipient dimension), H2 necessitates to include supplier countries into the analyses in order to control for many unobserved factors that might lead foreign firms from a given country (the supplier country) to win larger procurement contracts around elections in the country receiving the procurement funding (*i.e.* the recipient country). The structure of our data therefore becomes three-dimensional (with time, recipient and supplier dimension) consisting in a dyadic panel dataset. Specifically, we match all developing countries that have received World Bank funding at least once during the study period, with those that have had one (or more) company(ies) win a contract at least once during the same period. That is, one recipient (or funded) country displays a fixed number of rows corresponding to the number of supplier countries considered times the number of years in the study period, some of these rows being equal to the zero (if in that specific year, companies from a given supplier country did not win procurement contracts in this recipient country) or to the average amount of procurement contracts (if company(ies) from a given supplier country won procurement contract in that same recipient country in that year). Because of this dyadic structure, H2 is then tested thanks to a gravity model with Poisson Pseudo Maximum Likelihood estimators, which have been shown as better performing in the estimate of gravity models (Sun and Reed (2010), Gómez-Herrera (2013), Larch et al. (2019)), and which takes the following form:

$$Procurement_{s,r,k,t} = \alpha + \sum_{k \in -2,2} \beta_k Election_{r,k,t} + \omega_{r,t} + \mu_{k,t} + \theta_r + \gamma_s + \zeta_{s,r} + \delta_{s,k,t} + \rho_{s,r,t} + \varepsilon_{s,r,k,t} \quad (2)$$

with $Procurement_{s,r,k,t}$ now denoting the mean amount of World Bank procurement won by firms from supplier country s, in recipient country r, in the semester k of year t. The set of election semester dummy variables does not change as we are still interested in the effect of election in recipient country on average amount won by foreign companies, conversely to equation 1 where the focus is on domestic firms. Regarding endogeneity issue, the same concerns apply as for the previous specification. However, the dyadic dimension of our data potentially inflates the risk of omitted variable bias, leading us to extend our model with an additional set of fixed-effects as compared to specification 1 . These control for invariant characteristics of the supplier country (γ_s) and of the dyad ($\zeta_{s,r}$) such as the cultural, or geographical proximity between recipient and supplier countries. They also aim at capturing time-varying factors at the dyadic-year level ($\rho_{s,r,t}$) as well as in the supplier countries, down to the semester level ($\delta_{s,k,t}$). Considering this new specification, estimates are then ran by clustering standard errors at a level similar to the one of our variable of interest (recipient-

semester-year level), based on similar assumptions as the these underlying the estimate of model 1. Results are reported in the second column of Table 2 below.

4.2 Main results

Looking at Table 2, both the first column (when wining companies come from the recipient country) and the second one (when wining companies are foreign firms), results suggest the existence of a domestic political cycle in the allocation process of World Bank procurement. While the magnitude of coefficients is rather similar between the two set of results, the timing of this political cycle differs according to the residence criteria of the firms. Indeed, recipient countries seem to (on average) favour their domestic firms (by awarding them larger government contracts) half a year before the election, as well as during the election period, while supplier countries see their multinational firms winning larger contracts abroad in the year following the election in recipient countries.

Table 2: Political Cycle on World Bank procurement contract - Effect of recipient election

Dep. Var.:	$MeanAmount_{r,k,t}$	$MeanAmount_{s,r,k,t}$
	Supp. = Recip.	Supp. $\neq$ Recip.
Semester k-2 $_{r,k,t}$	0.275	-0.094
	(0.189)	(0.140)
Semester k-1 $_{r,k,t}$	0.677	0.079
	(0.260)***	(0.170)
Election Semester $_{r,k,t}$	0.599	0.293
	(0.266)**	(0.206)
Semester k+1 $_{r,k,t}$	0.443	0.439
	(0.244)*	(0.182)**
Semester k+2 $_{r,k,t}$	0.219	0.487
	(0.221)	(0.152)***
N	5,902	39,982
R^2	0.84	0.86
Supplier FE	Yes	Yes
Recipient FE	No	Yes
Recipient x Supp FE	No	Yes
Year x Sem FE	Yes	Yes
Supplier x Year FE	Yes	Yes
Supp x Year x Sem FE	No	Yes
Supp x Recip x Year FE	No	Yes
N Supp x Year (clusters)	2,951	-
N Recip x Year x Sem (clusters)	-	5,654

Robust standard errors in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.010$

This first set of results points to conflicts of interest in the World Bank-financed procurement process in developing countries as there would be no economically rational reason, apart from individual electoral interests, to justify significantly higher average contract amounts around election years compared to other periods of public funding and contracting. If they were some, it would be observed at the funding level, *i.e.* the World Bank level where the amounts of multilateral funds dedicated to procurement financing would be dependent of the recipient countries' electoral calendar. Indeed, doubtful readers might argue that the World Bank would favor developing countries facing upcoming elections by providing them more contracts as usual. Although not as directly evident, Kersting and Kilby (2016) shows that the World Bank disburses procurement funds more quickly around election periods in recipient countries, particularly when these countries are aligned with the United States in the UN Security Council vote, suggesting that more funds may be available around these periods. But since our dependent variable is the average amount per contract won, the results already control for the possibility that these funds may be tied to elections. Moreover, Table S.A1 in the supplementary appendix, reports results of estimates where both the total amount of procurement and the number of contracts are dependent variables and confirm the absence of disproportionate allocation of procurement funds by the World bank around election years, both in volume and value. Finally, we assess the reliability of our results in relation to the composition of the sample. Indeed, some readers might be concerned that these results are influenced by a specific recipient or supplier country for which the relationship between elections and the amount of public contracts is particularly strong, which would not allow us to conclude that there is a true average effect. The figures A2 in the appendix thus report the coefficient estimates when each recipient country (and alternatively each supplier country) is removed from the sample. The results suggest that the above conclusions are rather robust and do not depend solely on one particular country, which might nevertheless have been feared given the large proportion of contracts won by China since 2005.

We next examine the above mentioned domestic political cycle using first information about the allocation method of these procurement. As explained above, developing countries receiving World Bank funds for procurement are then in charge of selecting the company that will implement the contract domestically. There are four different ways of awarding these procurement: 1) International Competitive Bidding (ICB) where domestic and foreign companies compete for the contract, Quality-Cost Based Selection (QCBS) where the recipient government selects the company based on the efficiency of its proposal, 3) Single-Source Selection (SSS) which is a type of private treaty (over-the-counter) award (with fewer requirements regarding the quality of the proposal), and National Competitive Bid (NCB) where only domestic companies are allowed to compete for the procurement contract. Running the same regressions as these in Table 2 but focusing on sub-samples of contract allocation method, hence comparing the probability of winning larger procurement contract (on average) around election semester under one of the four allocation method, as compared to winning larger procurement contract in semesters further away from elections. Table A1 in the appendix displays the results. Looking first at the national policy cycle where supplier firms come from the recipient country (columns (1) to (4)), results suggest that none of the four allocation methods is favoured, leaving it unclear which process might most facilitate such arrangements between politicians and firms and which might therefore be most prone to cronyism. Results for the

second configuration, *i.e.* where supplying firms come from abroad, are more clear-cut and emphasize, quite intuitively, international competitive bidding as the main allocation method under which supplier countries observe (on average) their domestic companies winning larger contracts abroad in countries that had election over the last two semesters. Continuing the examination of this domestic political cycle, we then repeat the exercise, but this time differentiating between procurement according to their main sector of activity. Three categories of procurement are financed by the World Bank: those for the supply of goods, those for civil works and those for consultancy services. Figure A1 in the appendix report coefficients estimates for the set of dummy variables flagging semesters around the election semester and suggest that domestic companies win larger contracts (on average) targeting civil works around the election semester while foreign ones see this political cycle being driven by no-consultancy procurement contracts, and probably those dedicated to the supply of goods. Indeed, coefficient for civil works procurement are negative and significant around the election semester, which reveal a kind of technical division of labour as such contracts are mostly allocated to domestic companies over this specific election period. These results somehow illustrates our main assumption established previously as these two category of procurement are the most lucrative ones (see Figure S.A1 in the supplementary appendix), and would therefore be the more prone to be strategically allocated to friendly companies that could easily support kick-back arrangements given the larger amounts of these contracts.

4.3 Investigating channels for cronyism

The existence of such a domestic political cycle in the award of World Bank procurement contracts provides strong evidence of cronyism between politicians and the supplier companies that win these contracts. But to make such a claim, one needs more direct evidence of on-lending arrangements between these stakeholders. However, this exercise inevitably has limitations when it comes to uncovering behaviour that is counterproductive, unauthorised, and most likely hidden. Therefore, we then try to provide more evidence of cronyism by refining our results according to exogenous factors such as the political environment of the recipient countries and the context of international foreign aid, which should not affect this political cycle, unless the latter actually serves some handover arrangements.

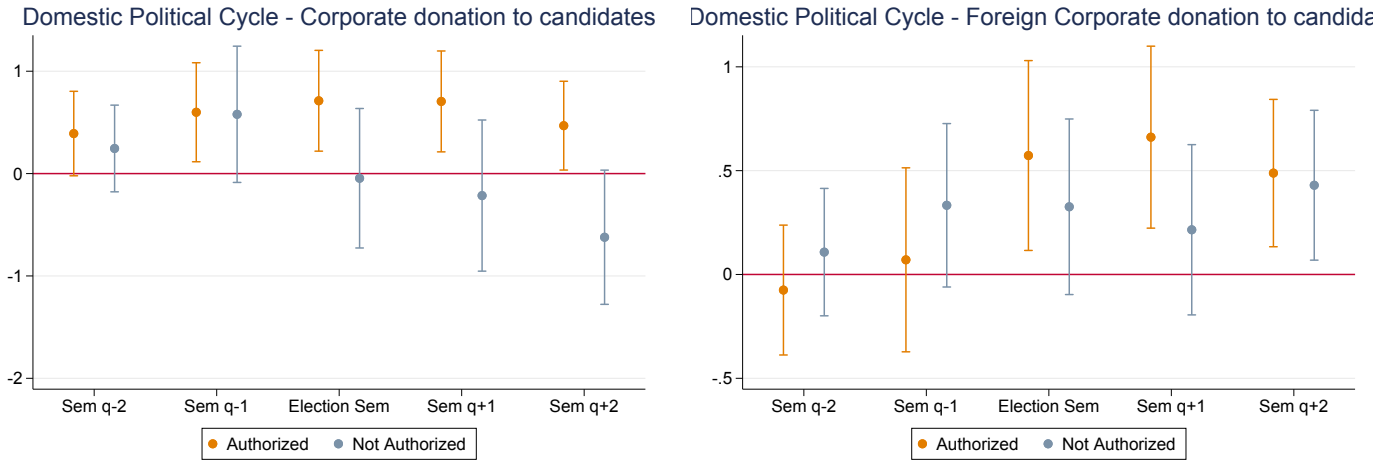
4.3.1 Political environment

As explained in the second section, one of the hypotheses supporting the existence of this domestic political cycle is that recipient governments select firms to help finance their election campaigns, regardless of when the public contract is awarded. Indeed, as discussed above, foreign multinational companies (which are likely to have more cash at their disposal) could finance the recipient government's campaign in advance and then be awarded the public contract (as they would have agreed with the recipient governments in advance). Domestic companies, on the other hand, with potentially smaller financial resources, could be selected by the government in advance of the upcoming elections to use part of the contract's gratuities to fund the government's election campaign. Yet, participation of private companies to the funding of candidates' election campaigns is closely tracked and even banned in many OECD countries and some emerging countries (see Figure A3 in the appendix). Although many developing, and

thus recipient, countries allowed private companies (both domestic and foreign) to financially contribute to the candidate campaign, some of them like Mozambique, Ecuador, Uzbekistan, Egypt, Tunisia, Guinea-Bissau and Liberia do not allow that kind of donations. Therefore, if kick-back arrangements are not one of the mechanisms underlying the political cycle in the procurement allocation process, the likelihood of obtaining larger contracts should not be different in these countries than in those that allow private donations to election candidates.

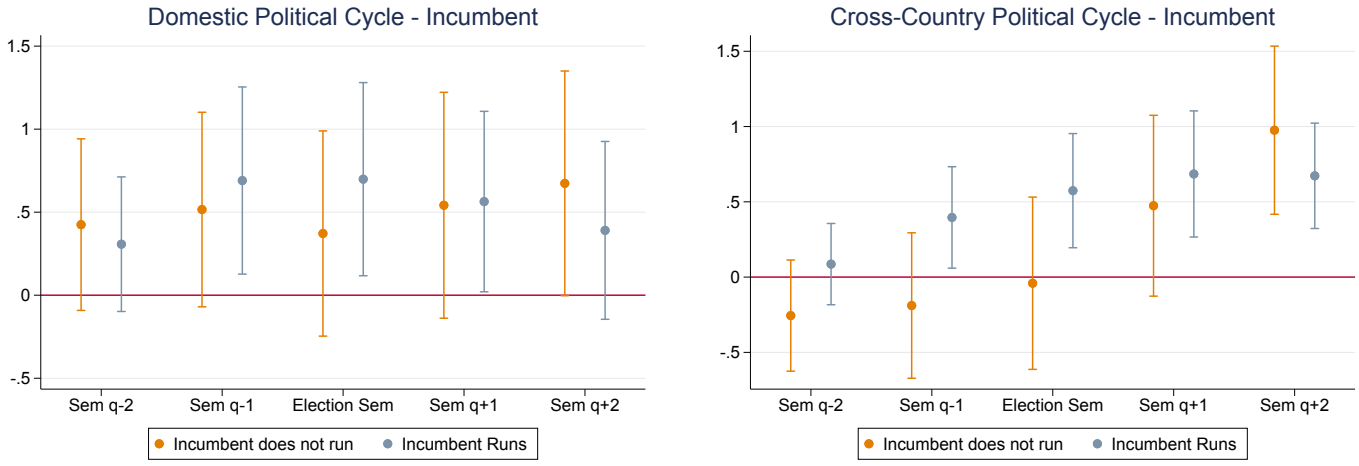
Using the Political Finance Database, we define two sub-samples of recipient countries; one where private donations to candidate are allowed, and another one where such donations are banned. We then test our empirical model on these two sub-samples. Figure 3 below show coefficient estimates of semesters around the election semester for each of these sub-samples, and for both configurations (domestic winning firms *versus* foreign ones). Results are clear-cut; the political cycle is only observed in countries where private donations to candidates is authorized, thus providing strong hints of cronyism in the allocation of World Bank procurement contracts around election semester in recipient countries.

Figure 2: Political cycle where it is "allowed"



In the same vein, we also expect the incumbent to have more power and network to influence the award of public contracts as compared to election where the incumbent would not run for another mandate. Splitting the sample into two sub-groups according to whether the incumbent runs or not. The coefficient estimates reported in the figure below confirm this intuition, as they lead to the observation of a larger and more persistent political cycle when the incumbent runs for the next election. The timing of the domestic political cycle is in line with our previous findings, with domestic companies wining (on average) larger procurement contracts over the semester preceding the election semester, as well as during the election one, and foreign firms getting more significant contracts during and after the election semester.

Figure 3: Political cycle where it is "easier"



4.3.2 Compensation for the decrease in tied aid

The second channel we can think of to explain this higher probability of receiving more lucrative procurement contracts around elections concerns the commercial interests of bilateral donors. For the second and only configuration, where foreign firms (on average) win larger contracts in the semesters following elections in recipient countries, one could suspect that bilateral donors intervene (unofficially) in this award process by encouraging the recipient government to choose a firm from the donor country.

All sovereign states contribute to the World Bank's funds, but high-income countries more than others given their greater financing capacities. Therefore, although bilateral donors' allocation to the World Bank might be considered as an altruistic effort, this view has been largely challenged by the existing literature. Indeed, while the literature has shown that the allocation of bilateral aid was to some extent driven by diplomatic (especially during the Cold War) and then commercial (after the fall of the Soviet bloc) interests (Berthélemy and Tichit, 2004; Alesina and Dollar, 2000), it has also highlighted similar evidence regarding multilateral aid, where funds were strategically allocated to countries in line with the interests of the largest bilateral donors (Kuziemko and Werker, 2006; Dreher et al., 2019, 2021). Moreover, since 2005 and the Paris Declaration, most of the bilateral donors have committed to significantly reduce tied and partial tied aid, a type of development assistance that was commonplace throughout the 70s, 80 and 90s (albeit it started to decline in the early 90s). Given the academic evidence discussed above and the international context of tied aid reduction, it would be reasonable to assume that bilateral donors are looking for other ways to obtain returns from their official development assistance, whether provided on a bilateral or multilateral basis. In the same vein, it could also be argued that this quest would be more likely to succeed in a context where the recipient governments also share individual interests, and especially electoral interests, since the above findings suggest greater scope for manoeuvre around these periods.

In order to test the above assumption, we re-run our gravity model (*i.e.* 2), but extending the model with interaction terms between the political cycle dummy variables and a variable measuring the annual share of tied over the overall aid committed by supplier countries (of which winning foreign firms come from).[7] Column (1) of Table A2 in the appendix displays the results. While we still observe largest amount on the procurement contracts (on average) won by foreign companies, we observe that it is largely reduced (especially two semesters after the election semester) when winning firms come from countries with the largest share of tied aid over their overall amount of official development assistance. This suggest that, conversely, supplier countries with reduced share of tied aid see their domestic firms winning (on average) even larger procurement contracts in recipient countries, around their election semester (especially two semesters after the elections), thus supporting the possibility that procurement in developing countries might be used by traditional donors to compensate for the loss of economic returns induced by the reduction of their tied aid.

Overall the above findings show the allocation of the World Bank procurement contracts is prone to align on electoral interests of the recipient countries, as both domestic and foreign companies seem to win more important contracts around elections in these countries, especially when private donations to candidates are allowed, and when recipient government are running to stay in power. In addition, the final results in this section highlight other factors in this procurement policy cycle that also implicate the interests of supplier countries, as the latter appear to benefit disproportionately from these contracts, especially if they experience a reduction in tied aid, suggesting that they have found some options for obtaining returns on their allocation of World Bank funds, including through such procurement. The following section therefore proposes to analyse in more depth how the interests of supplier countries affect this allocation process, by looking at other drivers, including political ones, in these countries.

5 Election in Supplier countries: International Political cycle

The second section of this paper discusses a third mechanism that might be at play in the allocation of these procurement contracts, referred as the cross-country political cycle or the international political cycle. This mechanism assumes that this allocation process could be diverted in order to serve electoral interests, this time in supplier countries *i.e.* in countries which see their domestic companies winning these contracts abroad. The following section thus attempt testing our third hypothesis reported below:

Hypothesis 3: *Firms coming from s win larger World Bank procurement contracts in country r around election semesters in their origin country s.*

5.1 Modified gravity model

Testing **H3** requires defining another model, relatively similar to the specification 2, but with some changes in our variables of interest and with additional sets of fixed effects, thus taking the following form:

[7] Note that in order to match annual tied aid commitments with the semester dimension of our data, we have reported the same amount of tied aid commitments for the two consecutive semesters of the same year.

$$Procurement_{s,r,k,t} = \alpha + \sum_{k \in -2,2} \beta_k Election_{s,k,t} + \omega_{r,k,t} + \mu_{k,t} + \theta_r + \gamma_s + \zeta_{s,r} + \delta_{s,t} + \rho_{s,r,t} + \varepsilon_{s,r,k,t} \quad (3)$$

The main difference of this specification is first the set of electoral dummy variables, $Election_{s,k,t}$, which is now based on the electoral calendar of the supplier countries (of which foreign winning firms come from). Other differences then relate to the sets of fixed effects. Since the focus is on the political cycle of the supplier country, one can include $\omega_{r,k,t}$, which control for any factors in recipient countries that vary by semester within a given year, such as the domestic political cycle. Lastly, while we were previously controlling for time-varying factors in supplier countries, for each semester and year, we can now only control for time-varying heterogeneity at the supplier $\times$ year level, as disaggregating this at the semester level would capture electoral semesters variables in supplier countries. As for the prior specifications, we challenge this specification to inconsistent election dates, leading us to be not much concerned with reverse causality issues. Only omitted variables threatens the identification of a causal effect running from election dates to mean amount of procurement contracts won by foreign companies. We however believe that the large set of fixed effects helps in minimizing such concern. Lastly, and conversely to previous estimates, the standard errors are now clustered at the supplier $\times$ year $\times$ semester level, in line with the level of our variables of interest.

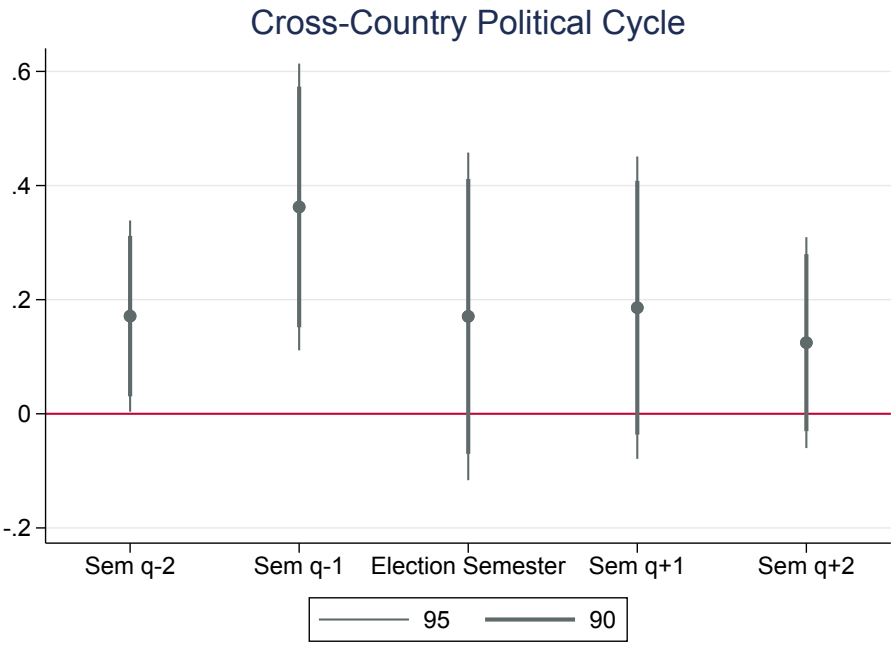
5.2 Main Results

Figure 4 below displays the estimated coefficients for our five dummy variables capturing semesters around the election semester in supplier countries, with both level of confidence (5 and 10%) reported.[8] Unlike the domestic political cycle, where foreign firms are more likely to win larger government contracts in the semesters following the elections in the recipient country, the timing of the transnational political cycle appears to be more upstream, as winning foreign firms tend to win more lucrative government contracts in recipient countries as their home country gets closer to the election semester. The effect of the last semester before elections is particularly strong, hence suggesting that some political considerations lie behind the allocation of procurement contracts in recipient countries, in favor to the home country of the supplying foreign firms. With regard to the existing literature on World Bank procurement and the previous results, we believe that this result, as it stands, already provides some evidence of cronyism, since it would hardly be explained by faster World Bank disbursements around elections, as suggested by Kersting and Kilby (2016). Indeed, apart from electoral interests, there should be no good reason for a country not receiving World Bank funds to see its domestic firms win larger government contracts as it approaches its next election. In a similar way to the results obtained when the election semesters conform to the calendar of the recipient country, we test whether the result presented above could be determined by a particular provider country. Although the $k-2$ semester ($q-2$ in Figure A4) falls below the 10 percent statistical significance when removing the country with the largest number of winning firms (*i.e.* China), it is nevertheless noticeable that the statistical significance of the $k-1$ semester is still above the least conservative 10 percent margin, at exactly 6 per cent of the p-value, thus

[8] The corresponding table is in the supplementary appendix (see Table S.A2).

providing evidence of a genuine average effect of the upcoming elections on the mean amount of procurement contracts won.

Figure 4: Cross-Country Political Cycle - Main results



Looking more closely at the characteristics of this political cycle, we again investigate which types of contract are the most likely to be subject to a disproportionate response in terms of value around election semesters, and under which types of award method. Results from figure A5 in the appendix suggest that supplier countries are more likely to see their domestic firms win more lucrative civil work procurement contracts in the semester before the election, which may again support the cronyism hypothesis as civil work contracts remain more important (in terms of amount) than consultancy and goods procurement contracts. Similarly, and unsurprisingly, the award method by which this political cycle seems to be materializing is the one that leaves the most room for international competition, namely international tendering (*i.e.* ICB). This second set of findings complements our overall story regarding the existence of political considerations in the allocation of World Bank procurement contracts based on the three hypotheses announced in the introduction. However, as these findings raise important ethical questions and seriously challenge the primary purpose of this form of aid, which is to serve the collective interests of recipient countries and not individual interests, least of all in the provider countries (especially historical donors), we attempt in the following section to provide more evidence on the mechanisms triggering the effect of aid.

5.3 Cross-country political cycle: behind the scenes

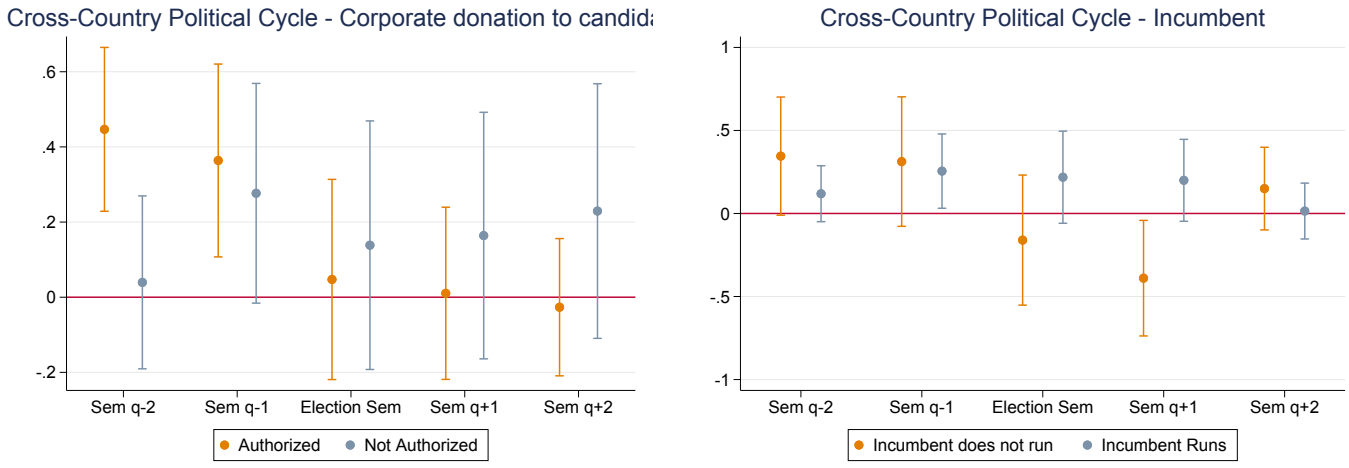
5.3.1 Electoral environment in supplier countries

The first mechanisms that we suggest examining are the same as those studied above, for the national political cycle. Indeed, if we believe that politicians have more interest in their companies winning more lucrative contracts around the semesters of the election, it is because

in one way or another, they know that this will serve their electoral goals. One way in which this could materialize, again, could be through financial support for the electoral campaign, whether these funds come from awarded supply contracts, or are advanced from companies' cash flow. Consequently, we re-run specification 3 over two sub-samples divided according to whether private donations to candidates are allowed or not in countries that had at least one domestic company that did win a World Bank procurement contract abroad over the period of study. Simultaneously, we also test whether the effect of election on the mean amount of procurement contract won differs according to the electoral perspective of the incumbent in the supplier country. We again run our estimates on two sub-samples, this time divided according to whether the incumbent is running again for a new mandate or not. Our intuition behind this hypothesis is relatively similar to what we suspected for the domestic political cycle. The incumbent would potentially benefit from the wider networks that might ease its interference in the allocation process of procurement contract. On an international scale, we believe this assumption makes even more sense, as the incumbent would have been more likely to meet in person officials of the recipient countries over its mandate and should thus be in a favored position to reach the people in charge of selecting the winning company, as compared to new election candidates.

Since these characteristics of the electoral environment in supplier countries are exogenous to the World Bank procurement allocation process, both regarding the amounts of funding allocated and the selection of recipient countries, we think that they could not be good reason, beside cronyism, that might legitimate to observe differentiated effect on this two sets of sub-samples. Any variation in the effect of semesters around election across the above defined sub-samples would therefore sets the cat among the pigeons by uncovering strong hints of kick-back arrangements between government from supplier countries and their domestic companies. Figure 5 below report the estimates of coefficients for our two sub-samples.

Figure 5: Cross-Country Political cycle and electoral environment in supplier countries



Results provide some support to the above assumptions as one can notice that the cross-country political cycle seem to materialize solely in supplier countries where private donations to candidate are authorized, hence "allowing" domestic companies to finance candidate

campaigns, although this seems to happen in exchange for larger procurement contracts won abroad. In the same vein, one can also notice that the cross-country political cycle only turns significant when the incumbent is running for another mandate, thus giving additional support to the hypothesis made about the necessity of having enough connections to bend the allocation process of procurement contracts abroad in favor of domestic companies.

5.3.2 Factors of influence: Board membership and foreign aid ties

We next review other mechanisms that could drive the political cycle in supplier countries. In particular, according to the diagram presented in Figure 1, such a political cycle would not exist if there were no opportunities for negotiation or means of influencing the award process towards foreign companies of interest to politicians facing the next election. In line with this idea, the above results show that the likelihood of winning a larger procurement contract is increased when the incumbent in the supplier country is running for another term which suggest that international political connections, whether direct or indirect (via discussion forums in international institutions for example), could be a way of tilting the allocation process in favour of the companies from the supplier country.

The boards of the World Bank could be a place where such connections and influences can be exercised. Indeed, the literature studying the political economy of foreign aid provides ample evidence that membership in international institutions is often accompanied by certain 'privileges' (Dreher et al., 2009b; Vreeland, 2011; Dreher et al., 2019). In line with this literature, it would be reasonable to assume that membership at the board of the institution financing the procurement contracts under study could be one of the transmission channels. Executive directors' election or appointment (for the largest contributors to the World Bank) is set every two years, and each candidate is elected from a geographically close sub-group of countries (*e.g.* in 2003, the elected Austrian representative at the board obtained the majority of votes among Austria, Belarus, Belgium, Czech Republic, Hungary, Kazakhstan, Luxembourg, Slovak Republic, Slovenia, and Turkey). Given the relatively short term of office, membership of the Board would therefore provide a small window of opportunity to negotiate and arbitrate decisions in favour of the country represented. Therefore, it is tempting to think that countries not receiving World Bank funds could take advantage of this private discussion space and tilt the award of public contracts in favour of their national companies, especially if they share their mandate with representatives of recipient countries.

Using World Bank Annual Reports from 1995 up to 2019, we retrieved information on the composition of the Boards of Executive Directors at the World Bank thanks to which we identified the board membership of each sample country and for each year over the period of study. We then re-run our main specification aiming at capturing the cross-country political cycle on various sub-samples: 1) one where both the recipient and supplier country shared a term at the board of executive directors; 2) one where only the supplier country were sitting at the board; 3) one where only the recipient country were elected at the board; and 4) one where neither the recipient nor the supplier country were elected at the board. Table 3 below shows the results for these sub-samples estimates.

The results in the first column show a strong policy cycle when both the recipient country and the supplier country (the country from which the winning firms originate) have an elected representative on the World Bank's Board of Directors over the same period of time, thus

Table 3: Cross-Country Political Cycle, by presence at the Board of Executive Directors

Dep. var.:	(1)	(2)	(3)	(4)
	$MeanAmount_{s,r,k,t}$			
	Recip and Supp	Just Supp	Just Recip	None
Semester k-2 $_{s,k,t}$	0.1139	-0.0636	0.8324	0.5077
	(0.321)	(0.119)	(0.412)**	(0.207)**
Semester k-1 $_{s,k,t}$	1.3301	-0.0199	0.6774	0.6621
	(0.505)***	(0.157)	(0.437)	(0.286)**
Election Semester $_{s,k,t}$	0.8490	0.0729	0.5435	0.4307
	(0.492)*	(0.202)	(0.474)	(0.301)
Semester k+1 $_{s,k,t}$	1.4296	0.2965	0.7352	-0.2575
	(0.476)***	(0.193)	(0.459)	(0.243)
Semester k+2 $_{s,k,t}$	1.0122	0.3091	0.6720	-0.1812
	(0.302)***	(0.134)**	(0.398)*	(0.192)
N	2,156	20,196	1,358	15,096
R^2	0.89	0.90	0.86	0.91
Supplier Fixed Effect	Yes	Yes	Yes	Yes
Recip Fixed Effect	Yes	Yes	Yes	Yes
Recip x Supp Fixed Effect	Yes	Yes	Yes	Yes
Year x Sem Fixed Effect	Yes	Yes	Yes	Yes
Recip x Year x Sem Fixed Effect	Yes	Yes	Yes	Yes
Supp x Year Fixed Effect	Yes	Yes	Yes	Yes
Supp x Recip x Year Fixed Effect	Yes	Yes	Yes	Yes
N Supp x Year x Sem (clusters)	692	1,062	992	4,348

Robust standard errors in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.010$

giving more weight to our hypothesis of the Board as a "place of arrangement". These large effect of semesters around the election is however not shared as strongly by other sub-samples estimate, except the one in column (4) where none of the stakeholders is sitting at the Board, which suggest that in absence of this space for discussion, supplier country may find other ways of bending the award process in their favor. Among these alternative means, it would also be possible to consider historical and current aid links as another means for the supplier country to exert influence. Distinguishing dyad of recipient and supplier countries according to the amount of aid received and provided, respectively, we divide the whole sample between pairs of countries in which supplier countries are defined as significant aid partners of recipient countries.[9] Column (1) of Table A3 in the appendix display a significant positive effect of the two semesters preceding the election semester in the supplier country, as in the main regressions, but such effect seems to hold mostly when recipient and supplier countries are characterized as significant aid partners. Given the timing of these effects, which mirror those observed when none of the stakeholders are on the World Bank's Board of Executive Directors, it seems that in the absence of a privileged position to negotiate (unofficially) at the World Bank on the selection of winning firms, supplier countries may be able to use their development

[9]Following Frot (2009), we define pairs of recipient and supplier countries as significant aid partners when the share of foreign aid provided by supplier country i in the overall amount of aid granted to recipient country j is larger than the share of supplier country i in the overall amount of aid provided worldwide, by all donors.

cooperation partnership to tilt the award process in their favour, particularly as their elections approach.

5.3.3 Offsetting untied aid

In the same vein, and as for the section on the domestic political cycle, one can wonder how this international political cycle relates to bilateral aid practices. Results of the first section indeed show that foreign firms win more lucrative procurement contracts around election semesters in their home country, and that this effect is reinforce when their government experience reduction in tied aid commitments. Following bilateral donors commitments at the Paris declaration of 2005, tied aid significantly declined in the next decade. Traditional donors, who are also major contributors to the Bank's budget, may however still aspire to retrieve the contributions they made to multilateral institutions. In order to see whether such decline in tied aid might also lead supplier countries to look more intensively for political return on procurement contracts, we again run specification 3, including interaction terms between election semesters and tied aid commitments from supplier countries. Results of column (2) in Table A2, suggest that such substitution is also at play around election semesters in the firms' home country. More precisely, the larger contracts won around election semesters in the supplier country is largely reduced when winning firms comes from countries with large share of tied aid over their total official development assistance. In other words, supplier countries that reduced the share of tied aid saw their firms won even larger procurement contracts around their election semesters. Suppliers could therefore be suspected of using this international political cycle in order to compensate for financial losses incurred by the reduction of tied aid. Further than a substitution, this result implies that traditional donors (*i.e.* countries that were doing the most tied aid) are likely to be driving the international political cycle.

Overall, the above results suggest the existence of an international political cycle, as foreign firms win significantly more lucrative contracts over the semesters preceding an election in their home country. Furthermore, this political cycle seems to be exacerbated when supplier and recipient countries both sit at the Bank's board of directors, and when the supplier has a significant economic influence over the recipient. In other words, this cycle mainly occurs when representative from both countries can effortlessly meet, or when the supplier can easily influence the recipient's choice by waiving its bilateral aid. Such cycle would also serve electoral interests in the supplier country, as foreign firms win significantly larger contracts around elections when corporations can legally fund candidates in the firms' origin country, and when the supplier government runs for reelection. Consequently, the international political cycle is at work when the kickback is authorized and relatively easy to implement. In addition, this last subsection highlights that winning larger contracts around election in the supplier countries can offer an alternative to tied aid.

6 Conclusion

Building a three-dimension model mobilizing data from the World Bank's Contract Award Database and the National Elections across Democracy and Autocracy dataset, we put forward the occurrence of both a domestic and an international political cycle for World Bank procurement contracts. More precisely, domestic and foreign firms would win significantly larger World Bank contracts around election semesters in the recipient countries, which validate our first and second hypotheses. Further heterogeneity analysis suggests that both cycles would occur especially when corporations are allowed to donate to candidates and when the incumbent government is running for reelection. Supplier's interests are also met in the domestic political cycle, as the latter would substitute tied aid. Additionally, foreign firms would win significantly larger World Bank contract in a given recipient country one semester before an election in their origin countries, consequently validating our third hypothesis. This international political cycle would occur especially when corporations are allowed to fund candidates and when the incumbent runs for reelection. The supplier to recipient influence is at play when they can both easily meet at the World Bank board of directors, and when the supplier has a significant economic influence over the recipient. World Bank procurement contracts are therefore likely to be used as the object of a kickback arrangement between private companies and both recipient and supplier governments. Yet, our findings only consist in indications of cronyism. Future research on this subject should thus lower the analysis down to the firm-level, in order to see whether politically connected firms are indeed those benefiting the most from such political cycles.

Appendix

Table A1: Domestic Political Cycle, by allocation method

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Dep. var.:	$MeanAmount_{r,k,t}$				$MeanAmount_{s,r,k,t}$		
	Supp. = Recip.				Supp. ≠ Recip.		
	ICB	QCBS	SSS	NCB	ICB	QCBS	SSS
Semester k-2 $_{r,k,t}$	-0.711	0.527	0.007	0.140	-0.029	-0.063	-0.297
	(0.310)**	(0.373)	(0.263)	(0.292)	(0.226)	(0.102)	(0.170)*
Semester k-1 $_{r,k,t}$	0.625	0.422	-0.355	0.511	0.013	0.033	0.051
	(0.437)	(0.417)	(0.381)	(0.357)	(0.264)	(0.122)	(0.228)
Election Semester $_{r,k,t}$	0.682	0.574	-0.494	0.067	0.360	0.111	0.079
	(0.475)	(0.448)	(0.412)	(0.367)	(0.317)	(0.134)	(0.222)
Semester k+1 $_{r,k,t}$	0.154	-0.248	0.465	0.228	0.560	0.055	-0.241
	(0.440)	(0.481)	(0.392)	(0.355)	(0.262)**	(0.122)	(0.251)
Semester k+2 $_{r,k,t}$	0.173	-0.967	0.669	-0.103	0.341	-0.165	-0.196
	(0.335)	(0.434)**	(0.365)*	(0.254)	(0.193)*	(0.103)	(0.221)
N	2,074	2,142	2,474	1,804	12,400	15,968	9,136
R^2	0.84	0.70	0.73	0.66	0.77	0.85	0.83
Supplier FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recip FE	No	No	No	No	Yes	Yes	Yes
Recip x Supp FE	No	No	No	No	Yes	Yes	Yes
Year x Sem FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Supplier x Year FE	No	No	No	No	Yes	Yes	Yes
Supplier x Year x Sem. FE	No	No	No	No	Yes	Yes	Yes
Supplier x Recip x Year FE	No	No	No	No	Yes	Yes	Yes
N Supp x Year (clusters)	1,037	1,071	1,237	902	-	-	-
N Recip x Year x Sem. (clusters)	-	-	-	-	3,602	4,628	3,170

Robust standard errors in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.010$

Figure A1: Political cycle by contract category

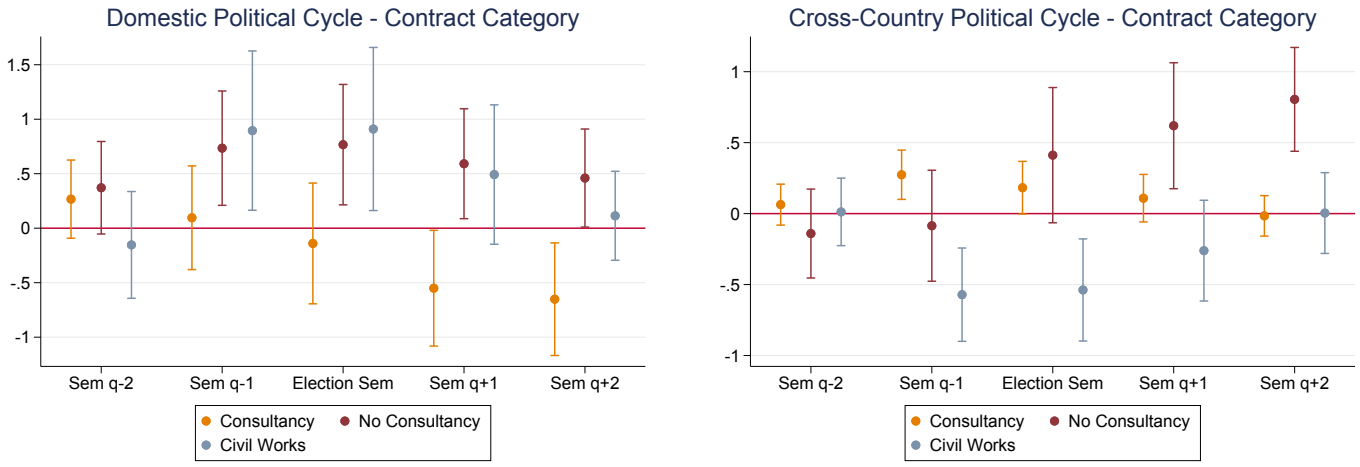


Figure A2: Domestic Political cycle - Checking for Outliers

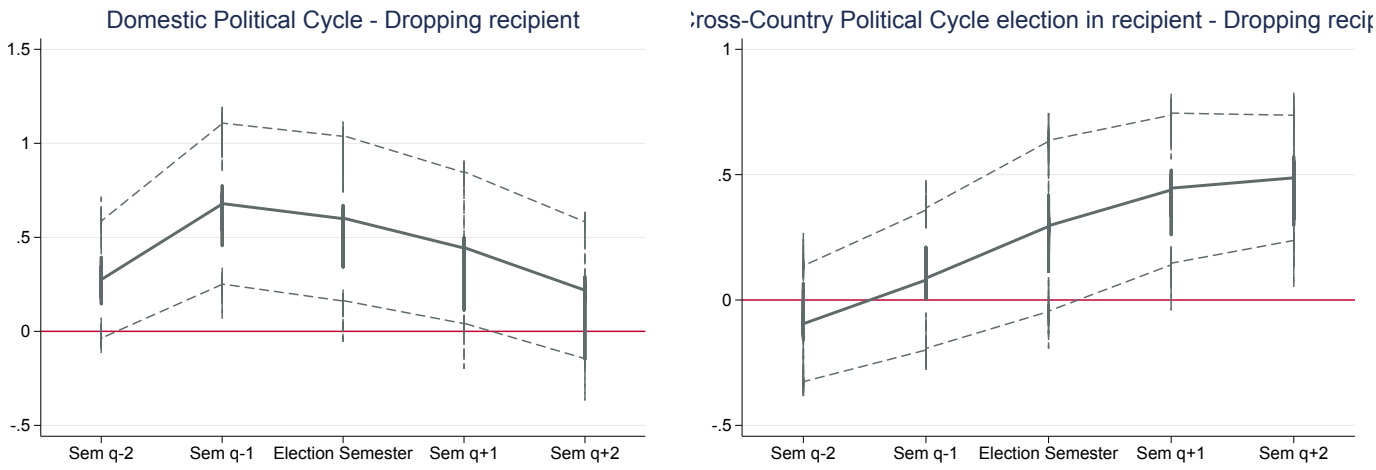
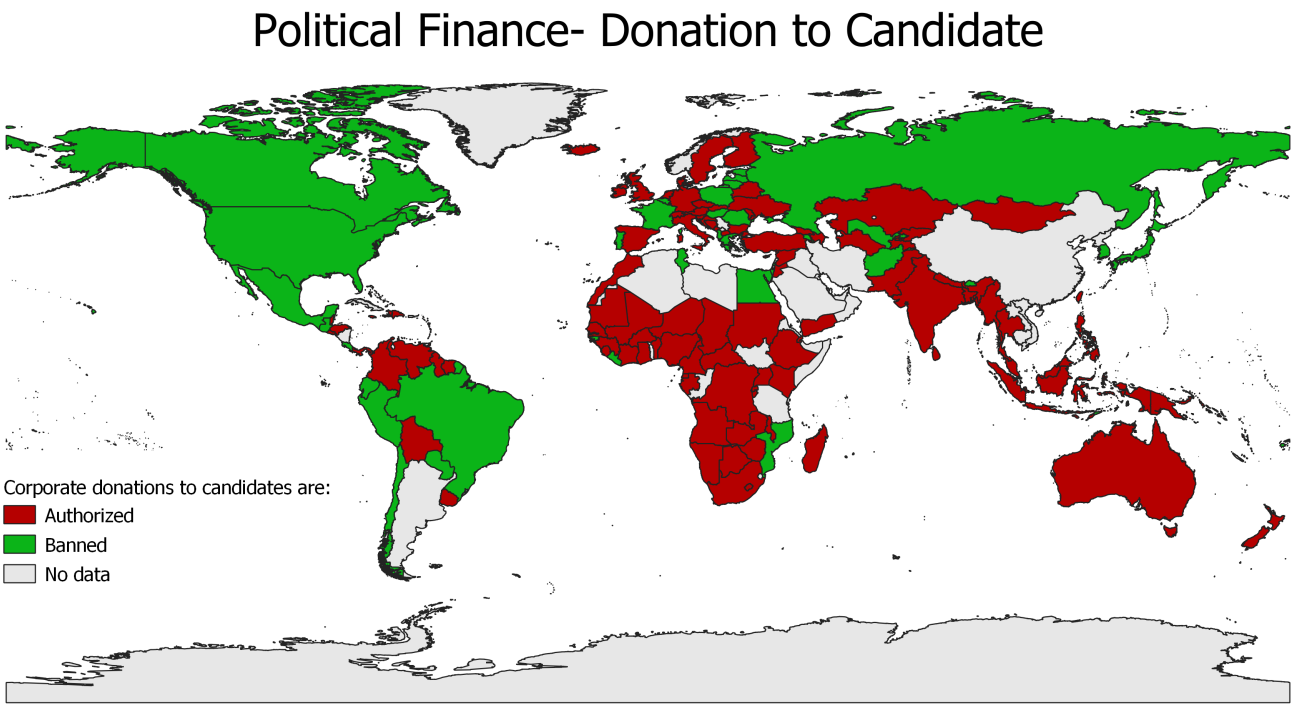


Figure A3: Map of countries authorizing/banning corporate donations to candidate



Source: Political Finance Database

Table A2: Political Cycle on World Bank procurement contract - Cross-Country Political Cycle, election in recipient/supplier, interaction with share tied aid

	(1)	(2)
Dep. var.:	$MeanAmount_{s,r,k,t}$	
Election in	Recipient: Semester k $_{r,k,t}$	Supplier: Semester k $_{s,k,t}$
Semester k-2 x Tied Aid$_{s,t}$	0.746	0.016
	(0.557)	(0.380)
Semester k-1 x Tied Aid$_{s,t}$	0.521	-1.175
	(0.672)	(0.473)**
Elec Semester x Tied Aid$_{s,t}$	0.448	-1.909
	(0.787)	(0.570)***
Semester k+1 x Tied Aid$_{s,t}$	0.121	-1.972
	(0.715)	(0.532)***
Semester k+2 x Tied Aid$_{s,t}$	-1.508	-1.838
	(0.605)**	(0.401)***
Semester k-2	-0.161	0.171
	(0.160)	(0.101)*
Semester k-1	0.031	0.442
	(0.198)	(0.142)***
Election Semester	0.243	0.321
	(0.249)	(0.158)**
Semester k+1	0.403	0.351
	(0.218)*	(0.143)**
Semester k+2	0.591	0.281
	(0.178)***	(0.101)***
N	39,982	41,966
R^2	0.86	0.88
Supplier Fixed Effect	Yes	Yes
Recip Fixed Effect	Yes	Yes
Recip x Supp Fixed Effect	Yes	Yes
Year x Sem Fixed Effect	Yes	Yes
Recip x Year x Sem Fixed Effect	No	Yes
Supp x Year Fixed Effect	Yes	Yes
Supp x Year x Sem Fixed Effect	Yes	No
Supp x Recip x Year Fixed Effect	Yes	Yes
N Recip x Year x Sem (clusters)	5,654	-
N Supp x Year x Sem (clusters)	-	5,818

Robust standard errors in parentheses. Note that Tied Aid$_{s,t}$ is the annual share of foreign aid of supplier country i committed for year t. The variable in level (not in interaction) is therefore captured by the set of Supplier x Year fixed effects. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.010$

Figure A4: Cross-Country Political Cycle - Checking for Outliers

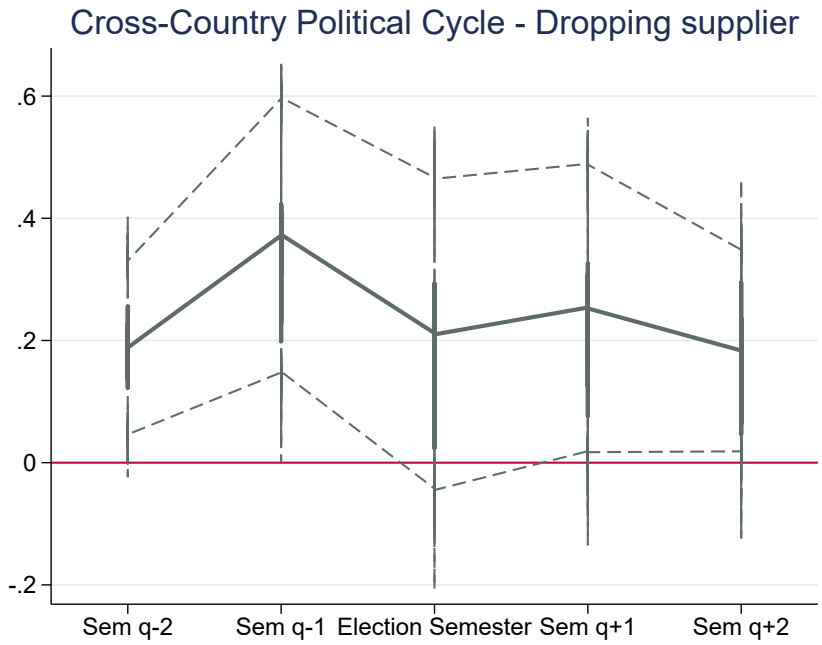
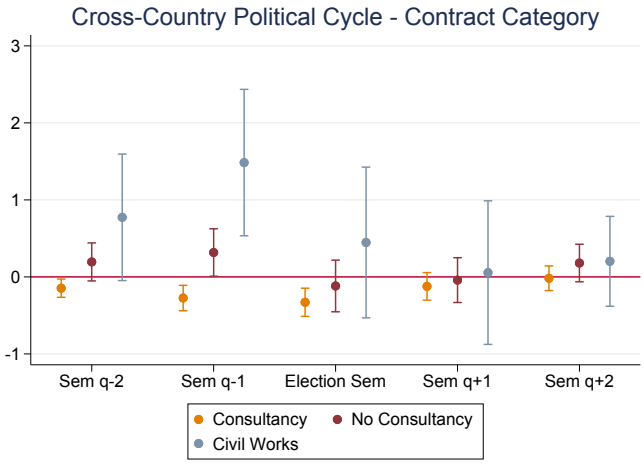


Figure A5: Cross-Country Political cycle - by contract category and allocation method



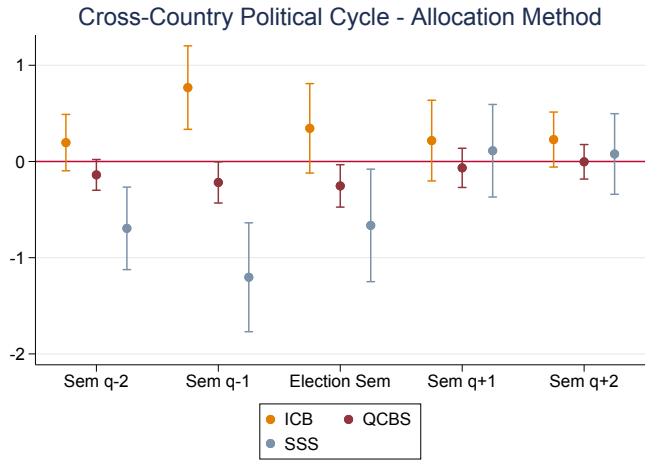


Table A3: Cross-Country Political Cycle, by significance of aid partnership

Dep. var.:	$MeanAmount_{s,r,k,t}$	
	Sign. aid partner	Not sign. aid partner
Semester k-2 $_{s,k,t}$	0.2792	0.0320
	(0.164)*	(0.102)
Semester k-1 $_{s,k,t}$	0.6244	-0.0981
	(0.197)***	(0.121)
Election Semester $_{s,k,t}$	-0.1129	-0.1367
	(0.202)	(0.142)
Semester k+1 $_{s,k,t}$	-0.3148	-0.0651
	(0.204)	(0.125)
Semester k+2 $_{s,k,t}$	-0.1220	0.0034
	(0.175)	(0.108)
N	10,158	28,782
R^2	0.92	0.89
Supplier Fixed Effect	Yes	Yes
Recip Fixed Effect	Yes	Yes
Recip x Supp Fixed Effect	Yes	Yes
Year x Sem Fixed Effect	Yes	Yes
Recip x Year x Sem Fixed Effect	Yes	Yes
Supp x Year Fixed Effect	Yes	Yes
Supp x Recip x Year Fixed Effect	Yes	Yes
N Supp x Year x Sem (clusters)	1,828	5,538

Robust standard errors in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.010$

Supplementary Appendix

Political Cycle in World Bank's Procurement Allocation

Table S.A1: Political Cycle on World Bank procurement contract - Domestic Political Cycle

	(1)	(2)	(3)	(4)	(5)	(6)
Dep. Var.:	$TA_{r,t,q}$	$NC_{r,t,q}$	$MA_{r,t,q}$	$TA_{r,t,q}$	$NC_{r,t,q}$	$MA_{r,t,q}$
	Supp. = Recip.			Supp. ≠ Recip.		
Semester q-2 $_{r,t,q}$	0.294	0.037	0.275	-0.039	0.041	-0.094
	(0.134)**	(0.044)	(0.189)	(0.144)	(0.032)	(0.140)
Semester q-1 $_{r,t,q}$	0.127	0.004	0.677	0.048	0.057	0.079
	(0.161)	(0.056)	(0.260)***	(0.173)	(0.043)	(0.170)
Election Semester $_{r,t,q}$	0.000	-0.049	0.599	0.044	-0.029	0.293
	(0.181)	(0.060)	(0.266)**	(0.185)	(0.043)	(0.206)
Semester q+1 $_{r,t,q}$	-0.035	-0.137	0.443	0.199	-0.102	0.439
	(0.170)	(0.058)**	(0.244)*	(0.165)	(0.041)**	(0.182)**
Semester q+2 $_{r,t,q}$	0.001	-0.094	0.219	0.346	-0.028	0.487
	(0.118)	(0.042)**	(0.221)	(0.130)***	(0.035)	(0.152)***
N	5,902	5,902	5,902	39,982	39,982	39,982
R^2	0.94	0.84	0.84	0.87	0.27	0.86
Supplier FE	Yes	Yes	Yes	Yes	Yes	Yes
Recip FE	No	No	No	Yes	Yes	Yes
Recip x Supp FE	No	No	No	Yes	Yes	Yes
Year x Sem FE	Yes	Yes	Yes	Yes	Yes	Yes
Supplier x Year FE	No	No	No	Yes	Yes	Yes
Supplier x Year x Sem. FE	No	No	No	Yes	Yes	Yes
Supplier x Recip x Year FE	No	No	No	Yes	Yes	Yes
N Supp x Year (clusters)	2,951	2,951	2,951			
N Recip x Year x Sem. (clusters)				5,654	5,654	5,654

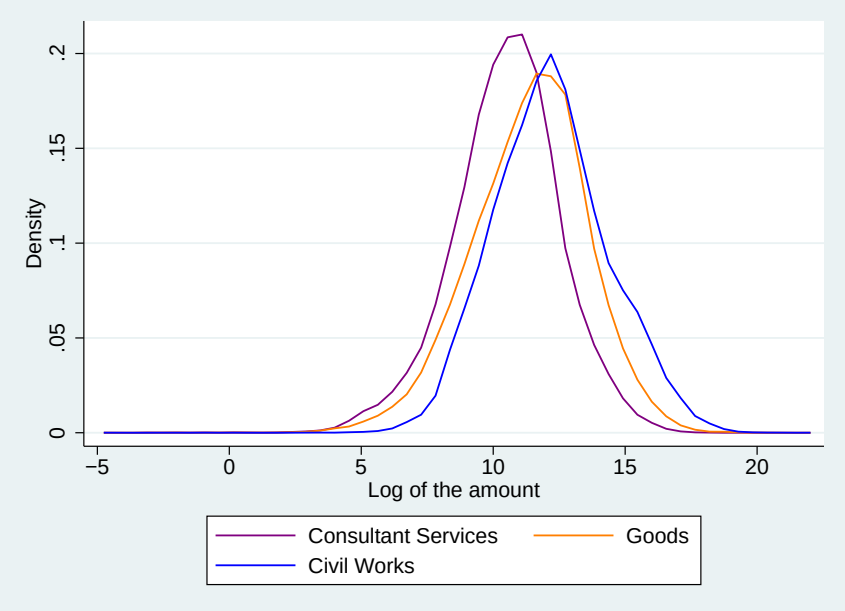
Robust standard errors in parentheses. $TA_{r,t,q}$, $NC_{r,t,q}$, $MA_{r,t,q}$ stand for Total Amount of procurement (in USD), Number of Contracts, and Mean amount per contract, respectively. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.010$

Table S.A2: Cross-Country Political Cycle, election in the supplier country

Dep. var.:	$MeanAmount_{s,r,k,t}$
	Supplier≠Recipient
Semester k-2 $_{s,k,t}$	0.1712
	(0.085)**
Semester k-1 $_{s,k,t}$	0.3625
	(0.128)***
Election Semester $_{s,k,t}$	0.1707
	(0.146)
Semester k+1 $_{s,k,t}$	0.1860
	(0.135)
Semester k+2 $_{s,k,t}$	0.1247
	(0.094)
N	41,966
R^2	0.88
Supplier Fixed Effect	Yes
Recip Fixed Effect	Yes
Recip x Supp Fixed Effect	Yes
Year x Sem Fixed Effect	Yes
Recip x Year x Sem Fixed Effect	Yes
Supp x Year Fixed Effect	Yes
Supp x Recip x Year Fixed Effect	Yes
N Supp x Year x Sem (clusters)	5,818

Robust standard errors in parentheses, clustered at the supplier × year × semester level. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.010$

Figure S.A1: Density function of USD amounts per contract with respect to contract's category



Source: Authors' calculation.

References

Alesina, A. and Dollar, D. (2000). Who gives foreign aid to whom and why? *Journal of Economic Growth*, 5(1):33–63.

Berthélemy, J.-C. and Tichit, A. (2004). Bilateral donors' aid allocation decisions—a three-dimensional panel analysis. *International Review of Economics & Finance*, 13(3):253–274.

Daniele, M. and Bennedsen, A. M. (2010). *Political Reforms and the Causal Impact of Blood-Related Politicians on Corporate Performance in the World's Least Corrupt Society.*

Dreher, A., Lang, V., Rosendorff, B. P., and Vreeland, J. R. (2021). Bilateral or multilateral? international financial flows and the dirty-work hypothesis.

Dreher, A., Lang, V. F., and Richert, K. (2019). The political economy of International Finance Corporation lending. *Journal of Development Economics*, 140:242–254.

Dreher, A., Sturm, J.-E., and Vreeland, J. R. (2009a). Development aid and international politics: Does membership on the UN Security Council influence World Bank decisions? *Journal of Development Economics*, 88(1):1–18.

Dreher, A., Sturm, J.-E., and Vreeland, J. R. (2009b). Global horse trading: Imf loans for votes in the united nations security council. *European Economic Review*, 53(7):742–757.

Faye, M. and Niehaus, P. (2012). Political aid cycles. *American Economic Review*, 102(7):3516–30.

Frot, E. (2009). Early vs. late in aid partnerships and implications for tackling aid fragmentation. Technical report, SITE working paper.

Goldman, E., Rocholl, J., and So, J. (2013). Politically Connected Boards of Directors and The Allocation of Procurement Contracts. *Review of Finance*, 17(5):1617–1648.

Gómez-Herrera, E. (2013). Comparing alternative methods to estimate gravity models of bilateral trade. *Empirical Economics*, 44(3):1087–1111.

Hyde, S. D. and Marinov, N. (2012). Which elections can be lost? *Political analysis*, 20(2):191–210.

Kaja, A. and Werker, E. (2010). Corporate Governance at the World Bank and the Dilemma of Global Governance. *The World Bank Economic Review*, 24(2):171–198. Publisher: Oxford Academic.

Kapur, D. and Vaishnav, M. (2013). Quid Pro Quo: Builders, Politicians, and Election Finance in India. SSRN Scholarly Paper ID 1972987, Social Science Research Network, Rochester, NY.

Kersting, E. K. and Kilby, C. (2016). With a little help from my friends: Global electioneering and world bank lending. *Journal of Development Economics*, 121:153–165.

Kuziemko, I. and Werker, E. (2006). How Much Is a Seat on the Security Council Worth? Foreign Aid and Bribery at the United Nations. *Journal of Political Economy*, 114(5):905–930.

Larch, M., Wanner, J., Yotov, Y. V., and Zylkin, T. (2019). Currency Unions and Trade: A PPML Re-assessment with High-dimensional Fixed Effects. *Oxford Bulletin of Economics and Statistics*, 81(3):487–510. _eprint: https://onlinelibrary.wiley.com/doi/pdf/10.1111/obes.12283.

Lehne, J., Shapiro, J. N., and Eynde, O. V. (2018). Building connections: Political corruption and road construction in india. *Journal of Development Economics*, 131:62–78.

McLean, E. V. (2017). The politics of contract allocation in the World Bank. *The Review of International Organizations*, 12(2):255–279.

Mironov, M. and Zhuravskaya, E. (2016). Corruption in Procurement and the Political Cycle in Tunneling: Evidence from Financial Transactions Data. *American Economic Journal: Economic Policy*, 8(2):287–321.

Sun, L. and Reed, M. R. (2010). Impacts of Free Trade Agreements on Agricultural Trade Creation and Trade Diversion. *American Journal of Agricultural Economics*, 92(5):1351–1363. Publisher: Oxford Academic.

Titl, V. and Geys, B. (2019). Political donations and the allocation of public procurement contracts. *European Economic Review*, 111:443–458.

Vreeland, J. R. (2011). Foreign aid and global governance: Buying bretton woods–the swiss-bloc case. *The Review of International Organizations*, 6(3-4):369–391.

Zhang, C. and Gutman, J. (2015). Aid procurement and the development of local industry: a question for africa. *Brookings Global Working Paper Series*.