# THE POLITICS OF CONTRACT ALLOCATION IN MULTILATERAL AID ORGANIZATIONS

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#### Abstract

Scholarship on informal politics in multilateral aid organizations investigates informal influence at all stages of the project cycle - from project identification to aid disbursement and project evaluation. Yet, one area remains almost entirely overlooked in the literature – allocation of aid-financed contracts. This paper aims to address this shortcoming of the extant research and develops a theory of contract allocation in multilateral aid programs. The theoretical argument explores the relationship between formal procurement arrangements and informal influence, and the role of this complex relationship in explaining patterns of contract allocation. Project implementation requires purchases of goods and services; hence, companies providing such goods and services are ultimate recipients of multilateral funding. On the one hand, many multilateral aid organizations use procurement procedures relying on competitive bidding, which allows the most competitive companies to receive contracts for providing services and goods to recipient countries. On the other hand, donor countries as well as recipient countries seek to affect the procurement process to obtain contract allocation results that are more in line with these countries' and their companies' interests. World Bank data on contract awards for projects funded by the organization provide an opportunity to test empirical implications of the theoretical argument.

#### INTRODUCTION

Multilateral organizations emerge to facilitate cooperation among actors with a range of preferences, which can diverge dramatically. Aid organizations in particular serve a shared goal of alleviating poverty and encouraging economic development; yet, member governments often disagree how this goal is to be achieved. Joint decision-making rules and a certain degree of autonomy that organizations' staff enjoy allow to adopt and implement policies. At the same time, member governments seek to use formal and informal instruments to move these policies closer to their ideal points. While formal rules are relatively more advantageous for weaker actors' interests, powerful actors make use of their informal influence over organizations' policy-making.

The extent of this informal influence remains an important research question. Studies of different stages of financial assistance programs implemented by multilateral organizations find that informal influence may affect the World Bank's willingness to punish recipients' non-compliance with program conditionality by suspending aid disbursements (Mosley et al. 1995; Collier 1997; Dreher 2004; Kilby 2009). Research on the World Bank's sister institution, the International Monetary Fund (IMF), has also found evidence that conditionality is shaped by the strategic interests of its most powerful shareholders at the imposition and implementation stages (Dreher and Jensen 2007; Stone 2002, 2004, 2008, 2011).<sup>1</sup> Similarly, powerful member governments' interests influence decisions about which countries receive foreign aid, how much aid they receive, and even how aid resources are distributed among different sectors (Schoultz 1982; Thacker 1999; Stone 2002, 2004, 2008; Nielson and Tierney 2003, 2010; Faini and Grilli 2004; Copelovitch 2010). For instance, Neumayer (2003) shows that former colonies of influential member countries tend to receive more multilateral aid. Similarly, Schneider and Tobin (2013) find that dominant European donors influence allocations of EU aid.

While various stages of multilateral financial assistance have received a significant amount of attention, the final stage – the contract allocation process – remains largely overlooked. Yet, donor governments pay a significant attention to the inflow of contracts funded by multilateral aid to their economies due to domestic political considerations. Similarly, recipient governments have similar incentives to retain domestically as much foreign assistance as possible to provide support to their own economic constituents, both for political and economic reasons. How do multilateral aid organizations balance their formal procurement rules with these powerful incentives to

<sup>&</sup>lt;sup>1</sup> Other authors find no effect at the implementation stage (Dreher 2004; Copelovitch 2010).

bias the contract allocation process? This raises a related question: which member governments have the ability to exercise informal influence? Traditionally, such influence has been considered the instrument of powerful member governments. However, recent research suggests that less powerful countries can rely on informal influence as well. Schneider and Tobin (2013) argue that weaker member governments can form coalitions to shape EU aid allocations. In the case of contract allocation, I argue, aid recipients have strong incentives as well as a certain degree of leverage over the multilateral organization to get a more favorable distribution of contracts.

The rest of the paper proceeds as follows. I begin by discussing the importance of studying contract allocation, the final stage of multilateral development assistance. I argue that recipient governments have powerful incentives to influence contract allocation. I then describe the procurement process at the World Bank, the world's largest development aid organization, and show that recipients' informal influence is enabled in part by the formal procurement rules themselves. In order to conduct empirical tests of my argument, I use data on World Bank contract allocations over the period between 1992-2011 to code dependent variables that capture patterns of contract allocation. My analyses provide empirical evidence of the importance of formal procurement rules, but also of the significant degree of informal influence exercised by recipient governments.

#### PROCUREMENT: THE OVERLOOKED STAGE OF THE AID ALLOCATION PROCESS

The process of aid allocation has been extensively analyzed in the existing aid research. The flow of aid from donor countries to multilateral organizations and directly to recipient governments is significantly influenced by donor preferences and their relations with multilateral and bilateral recipients. The flow of aid from multilateral organizations to recipient governments is less politicized; however, it still displays some of the biases of bilateral aid allocations. This literature, however, has largely overlooked what happens with financial assistance once it has been committed to projects financed by multilateral organizations. In practice, of course, before project implementation can begin, recipient governments need to procure required goods and services to make project implementation possible. Therefore, development aid enters its final allocation stage when recipient governments award contracts to suppliers of goods and services.

This final stage of the aid allocation process has received some attention in the research on bilateral aid. Specifically, studies of aid tying indicate that the practice of formally or informally tying bilateral aid disbursements to subsequent purchases of goods and services from donor countries' companies is quite common, even despite a recent decline in tying practices. In 2009, the share of untied aid in donors' bilateral aid allocations has reached 60 percent, up from the average of 30 percent in 2000, according to OECD data. While formal aid tying becomes a less common practice, there is still the informal expectation that recipients will purchase goods or services from companies to generate good will in order to sustain bilateral aid flows in the future.

### World Bank Contract Awards: Rules vs. Informal Influence

Multilateral aid organizations, such as the World Bank, seek to eliminate any such informal influences on the procurement process. Many organizations, including the World Bank, rely on procurement procedures that require competitive bidding. The main objective of implementing these procedures is to allow the most competitive companies from any eligible countries to receive contracts for providing services and goods to the recipient country in order to make project implementation possible. The World Bank, for instance, requires the use of the International Competitive Bidding (ICB) process with a few exceptions. <sup>2</sup> ICB is a set of conditions that aid recipients must satisfy in order to make the procurement process more open and transparent. In order to achieve this goal, ICB requires recipient governments to allow companies from all countries to bid on recipients' orders of goods, works and services, and to advertise available contract opportunities both nationally and internationally. One of the main results of these requirements is a predictable set of procurement expectations and reduced transaction costs – i.e. conditions that are advantageous to competitive companies.

When a country receives assistance from the World Bank for project implementation, its government is in charge of the implementation, as well as the process of contract bidding and award. The IO requires its borrowers to follow its procurement guidelines. At the same time, there is a significant leeway for the application of such guidelines: "in practice the specific procurement rules and procedures to be followed in the implementation of a project depend on the circumstances of the particular case" (WB

<sup>&</sup>lt;sup>2</sup> Whether a contract will go through international or national competitive bidding depends on the estimated size of the contract. The World Bank determines an ICB threshold for each recipient country, i.e. an estimated value above which a contract must be subject to ICB. The criteria for calculating this threshold include foreign companies' interest in a given market and the size of the market. The threshold value for goods contracts ranges from \$100,000 (e.g., Cambodia and Guyana) to \$5,000,000 (Brazil). See the World Bank's Procurement Policies and Procedures for more detail (http://go.worldbank.org/9P6WS4P5E1).

2011, 1-2). Moreover, while the procurement guidelines seek to create a level playing field for all bidders from all eligible countries by providing them with equal information and equal participation opportunities, the World Bank acknowledges its "interest in encouraging the development of domestic contracting and manufacturing industries in the Borrowing country" (WB 2011, 2). Therefore, procurement rules allow borrowing, or recipient, governments to influence outcomes of contract bidding informally if this benefits domestic companies.

Recipient governments in fact have powerful incentives to pay close attention to domestic companies' interests. When a government awards contracts to domestic suppliers, this increases their profits (Branco 1994; Vagstad 1995). In exchange for greater profits, these domestic beneficiaries are likely to provide financial and/or political support for the incumbent government in democratic countries. Similarly, in autocratic regimes, economic elites may weaken their support for the government that consistently fails to award lucrative contracts domestically. In addition, recipient governments may trade off some of these internationally funded contracts for stronger political and/or economic relations with strategically important countries. In sum, there are theoretical reasons to expect recipient governments to be willing and able to exert informal influence over contract allocation.

## DATA AND MEASUREMENT

There are currently a very limited number of studies that investigate procurement (Miyagiwa 1991; Trionfetti 2000; Rickard and Kono 2013). All of these studies, however, focus on public procurement financed by governments themselves, rather than procurement financed by multilateral aid organizations. Therefore, this paper is the first effort to conduct an empirical analysis of contract allocation in multilateral aid organizations.

## Dependent variables

Data on contract awards is the World Bank's Contract Awards Database.<sup>3</sup> The database provides information on major contracts awarded through the World Bank financed projects and reviewed by the World Bank staff. The database makes contract information available for projects awarded between 1992 and 2011. The Contract Awards database provides detailed information about included contract awards, such as the contractor, project country, project sector, contract signing date, procurement method and type, and contract amount.

<sup>&</sup>lt;sup>3</sup> The database can be found at <u>http://go.worldbank.org/GM7GBOVGS0</u>.

There are two procurement groups: consultants, and goods and services. The empirical focus of this paper is on the goods and services. Also, to make sure that bidding procedures are comparable across different contract awards, I only include contracts that are subject to International Competitive Bidding: this procurement method requires recipient governments to allow companies from all eligible countries to bid on recipients' orders of goods, works and services, as well as advertise available contract opportunities not only nationally, but also internationally.

Using information available in this database, I constructed three dependent variables. *Contract award* is a binary measure that takes the value of one when a country is awarded a contract, and zero otherwise. *Recipient as supplier dummy* gauges the informal influence of recipient governments over the procurement process: the variable takes the value of one if the contract was awarded to the recipient's domestic company, and zero otherwise. Only 19 percent of the contracts in my dataset were awarded domestically. Finally, *Contract size (logged)* measures the size of a contract award.

### Main independent variables

I first construct two measures that reflect the importance of formal decision-making rules during the procurement process. The World Bank's procurement rules emphasize the need for "the need for economy and efficiency in the implementation of the project" (WB 2011, 2), which suggests that countries with highly competitive companies should be in the best position to win contract bids and receive larger contracts, all else being equal. Therefore, I create a measure of competitiveness for recipient and supplying countries. Another formal requirement of the procurement process is to maintain the integrity and high ethical standards of contract bidding and execution. To capture the likelihood of fraudulent or any other type of unethical behavior, I use a measure of corruption at the country level for recipients and suppliers. Companies from countries with better reputations should be more successful in the bidding process.

*Competitiveness.* To examine the effect of competitiveness on contract awards, I rely on a measure of revealed comparative advantage (RCA) in the transport and machinery sector (SITC<sup>4</sup> codes starting with 7).<sup>5</sup> This is the economic sector that is likely to benefit the most from procurement needs of World Bank-funded projects. Sectoral trade data are from NBER-UN trade dataset.<sup>6</sup> I construct the widely-used Balassa measure of

<sup>&</sup>lt;sup>4</sup> Standard International Trade Classification.

<sup>&</sup>lt;sup>5</sup> The sectors are based on the SITC categories:

http://unstats.un.org/unsd/cr/registry/regcst.asp?Cl=28.

<sup>&</sup>lt;sup>6</sup> The data can be found at <u>http://cid.econ.ucdavis.edu/data/undata/undata.html</u>.

comparative advantage: the RCA of country j in the trade of product i is represented by the product's share in the country's exports relative to the product's share in world exports (Balassa 1965). In other words, if  $X_{ij}$  is the value of country j's exports of product i and  $X_{tj}$  is the country's total exports, then its RCA index is:

$$RCA_{ij} = \frac{X_{ij}/X_{tj}}{X_{iw}/X_{tw}}$$
, where subscript *w* denotes export values for the world.

*Corruption.* One of the key concerns of the World Bank in the procurement process is to ensure that its assistance is not misused; therefore, the IO's rules seek to protect contract bidding and award from corrupt or fraudulent practices. I rely on a measure of corruption, *Control of Corruption*, which is part of the World Bank's Worldwide Governance Indicators. This variable is coded to gauge "perceptions of the extent to which public power is exercised for private gain, including both petty and grand forms of corruption, as well as "capture" of the state by elites and private interests" (Kaufmann et al. 2011, 4). The range of this corruption is from -2.5 (most corrupt countries) to 2.5 (least corrupt countries).<sup>7</sup>

The next variable reflects a potential constraint on the recipient's ability to exert informal influence over the procurement process. The recipient should be more constrained when a contract receives a high number of bids: greater competition should make it more difficult for the recipient government to bias contract allocation in favor of domestic companies. *Number of bids:* When a contract is open for bidding, all eligible companies can submit their bids. This count measure reflects the degree of competition for a given contract; the average value is 6. As the procurement process becomes more competitive, the recipient should be less likely to award such a contract to its domestic company.

Finally, I construct several variables to gauge the closeness of the economic and political relationship between the recipient and its suppliers to test the influence of these links on contract allocation. If a recipient chooses to use contract awards as a mechanism of strengthening such relationships or important economic or political partners exploit

<sup>&</sup>lt;sup>7</sup> An alternative measure is available from the International Country Risk Guide (ICRG). The ICRG Corruption index takes values from 0 (most corrupt countries) to 6 (least corrupt countries) and its primary focus is on "actual or potential corruption in the form of excessive patronage, nepotism, job reservations, 'favor-for-favors', secret party funding, and suspiciously close ties between politics and business" (PRS Group 2014, 4-5). The two variables are highly correlated – at .61 in the case of borrowing countries, and at .83 in the case of supplying countries.

links to the recipient in order to secure contracts for their domestic companies, there should be a positive association between these factors and contract allocations. I measure economic links using data on bilateral trade flows, and political links using data on UN voting and alliance portfolios. Finally, in some specifications, I include a US dummy to capture the informal influence of the World Bank's most influential member government.

*Supplier's exports to recipient:* The sum of the supplier's exports to the recipient of WB aid (logged). *Supplier's imports from recipient:* The sum of the supplier's imports from the recipient country (logged). The data source for these two variables is the COW Trade dataset. These two variables capture the significance of economic ties between the recipient and potential supplier countries: a more valuable trading partner may be more likely to receive a contract from the recipient.

*UN voting similarity:* I rely on a measure of the similarity of voting patterns in the United Nations General Assembly. This variable is constructed using information on s-scores between the supplier and the recipient country in a given year. Data are from Strezhnev and Voeten (2013).

*Alliance similarity:* This measure is also an s-score, constructed with information on the similarity of two countries' military alliance portfolios. The scores are available from EUGene v.3.204 (Signorino and Ritter 1999; Bennett and Stam 2000). The mean s-score is 0.78, quite close to the maximum of 1.

## **Control variables**

I include several additional explanatory variables in the models of contract allocation based on the insights provided by the empirical literature on foreign aid and international trade. First, three economic variables (one set for suppliers and another for recipients) gauge the economic capacity of a country. Recipients with better capacity should be less likely to award contracts to other countries, while suppliers with better capacity should receive more contracts and contracts of a larger size. *GDP per capita* is a country's per capita GDP, measured in constant 2005 USD. *GDP (logged)* is a logged measure of a country's GDP, expressed in constant 2005 USD. *GDP growth* is a country's annual rate of GDP growth. *Population (logged)* is a logged measure of a country's total population. *Trade openness* is a sum of exports and imports of a given country, divided by its GDP. The World Bank's World Development Indicators database is the data source for all these variables. I also control for the effect of distance on contract awards and their size. *Distance* (*logged*) is the logged distance (in km) between the capitals of the supplying country and the recipient. The data were extracted from EUGene v.3.204 (Bennett and Stam 2000). Finally, I construct three democracy dummies, using Polity IV data. For suppliers and recipients (*S's democracy* and *R's democracy*, respectively), the democracy dummy takes the value of 1 if the country is a democracy, i.e., if its polity score is 7 or greater, and 0 otherwise. In addition, when both countries are democracy variable (*Joint democracy*) is coded as 1; otherwise, it takes the value of 0.

#### MODEL SPECIFICATION

Table 1 presents descriptive statistics for all variables included in the empirical analyses, while Tables 2-5 report estimation results. The dependent variable in models presented in Table 2 is a binary variable that codes whether a country received a contract; therefore, I specify four logit models. The first model includes dyadic fixed effects; the remaining three cluster standard errors by dyad in order to control for heteroscedasticity, and include different explanatory variables as a robustness check. The dependent variable in Table 3 is another binary variable, which takes the value of 1 if the contract was awarded to the recipient's company, and 0 otherwise. Hence, I specify five logit models: two with recipient fixed effects (since the recipient and the supplier is the same country); and three with standard errors clustered by recipient. Table 4 presents results analyzing contract size for supplying countries, excluding the recipient. Since contract size is a continuous variable, I report the following models: an OLS model with dyadic fixed effects; two standard OLS models with standard errors clustered on dyads; and two Heckman selection models, in which the outcome stage analyzes the size of a contract, while the selection stage models the process of contract award. Finally, I conduct additional robustness checks, reported in Table 5. These models analyze contract size first for aid recipients and then for non-recipients, and breaks up all World Bank contracts into IBRD and IDA contracts.

[Table 1 about here]

#### KEY EMPIRICAL RESULTS

To summarize the main findings briefly, I find evidence of formal rules structuring the contract award process, as well as evidence of the recipient's ability to bias contract

allocation in its favor. Also, these preliminary results suggest that the World Bank's most powerful member country, the US, does not exercise significant influence at the procurement stage.

First, formal rules matter, but with certain limitations. Competitiveness, one of the key measures of the World Bank's formal procurement requirements, only affects the size of awarded contracts, but not the selection of a supplier. The coefficients on *Competitiveness* are not significant at conventional levels in contract award models in Tables 2-3, but are positive and significant in contract size models in Tables 4-5. The corruption measure, on the other hand, consistently fails to yield any significant evidence of the expected positive relationship between control of corruption and contract allocation. Only recipient-sample models in Tables 5 suggest that such a relationship may indeed exist. However, additional robustness checks with alternative corruption measures are necessary to draw any conclusions. Similarly, the average number of contract bids does not appear to constrain the recipient's ability to win contracts: Table 3 reports coefficients that are not statistically significant in three different specifications.

Second, the informal influence of the US does not seem to extend to procurement politics. Table 2 suggests that the US is not more (or less) likely to win a contract than any other country, whereas Table 4 indicates that US companies tend to receive smaller contracts, all else being equal. The next step is to replace this rather crude indicator with other measures of US influence, such as flows of US bilateral aid and trade, to see whether US influence can be traced that way.

Finally, the key results that emerge from the models reported in Tables 2-4 are suggestive of a significant degree of informal influence exercised by recipient countries. In particular, countries that share the recipient's foreign policy preferences are more likely to win contracts (Table 2), while countries that have stronger export links to the recipient receive larger contracts (Table 4). In addition, the non-findings on the effect of competitiveness on contract awards, and on the effect of corruption control on the entire procurement process suggest that recipients do not fully comply with the World Bank's procurement rules.

[Tables 2-5 about here]

#### CONCLUSION

This paper has argued that informal influence is an instrument that is available not only to powerful governments, but also to governments that are traditionally considered

weak, such as recipients of multilateral aid. Recipients are able to exercise such influence because they are in charge of allocation and administration of contracts funded by the World Bank. Recipient governments have strong incentives to bias this process: they can reward their domestic economic constituents, or they can utilize contract allocation to strengthen their relations with important political or economic partners.

Preliminary empirical results presented in the paper lend support to this argument. While formal procurement rules constrain the contract allocation process, their impact is weaker than could be expected. Corruption considerations do not appear to be reflected in contract allocation. Competitiveness, on the other hand, is a significant positive determinant of contract size, albeit not of contract award. At the same time, recipient interests exert a noticeable influence on the pattern of contract allocation, as recipients tend to favor supplying countries with shared foreign policy preferences and stronger trade links.

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| Table 1: De | escriptive | Statistics |
|-------------|------------|------------|
|             |            |            |

|   | Mean    | Std.Dev. | Min    | Max       |
|---|---------|----------|--------|-----------|
| Contract award                          | 0.55    | 0.50     | 0      | 1         |
| S's competitiveness (log)               | -2.10   | 2.14     | -17.07 | 0.93      |
| S's control of corruption               | -0.05   | 1.00     | -2.06  | 2.59      |
| S's GDP per capita                      | 7223.83 | 11784.68 | 54.51  | 108111.20 |
| S's GDP (log)                           | 23.20   | 2.38     | 16.44  | 30.09     |
| S's GDP growth                          | 3.82    | 5.97     | -50.25 | 106.28    |
| S's population (log)                    | 15.47   | 2.14     | 9.16   | 21.02     |
| S's trade openness                      | 86.72   | 47.26    | 0.31   | 460.47    |
| S's democracy                           | 0.53    | 0.50     | 0      | 1         |
| UN voting similarity                    | 0.69    | 0.29     | -1     | 1         |
| Alliance portfolio similarity           | 0.78    | 0.18     | 0.15   | 1         |
| Distance (log)                          | 8.74    | 0.77     | 3.37   | 9.89      |
| Joint democracy                         | 0.22    | 0.42     | 0      | 1         |
| US                                      | 0.01    | 0.07     | 0      | 1         |
| Recipient as supplier                   | 0.19    | 0.39     | 0      | 1         |
| Contract award size (log)               | 14.31   | 1.98     | 4.79   | 21.98     |
| Total awards by recipient (log)         | 16.34   | 1.99     | 4.79   | 21.98     |
| R's competitiveness (log)               | -2.73   | 2.13     | -17.07 | 0.93      |
| R's control of corruption               | -0.36   | 0.75     | -2.06  | 2.59      |
| R's GDP per capita                      | 4277.21 | 9769.87  | 54.51  | 108111.20 |
| R's GDP (log)                           | 22.52   | 2.00     | 16.44  | 28.90     |
| R's GDP growth                          | 4.07    | 6.45     | -50.25 | 106.28    |
| R's population (log)                    | 15.26   | 2.20     | 9.16   | 21.02     |
| R's trade openness                      | 87.06   | 46.80    | 0.31   | 460.47    |
| R's democracy                           | 0.41    | 0.49     | 0      | 1         |
| Average number of bids                  | 6.09    | 5.24     | 1      | 75        |
| Average number of contracts per project | 6.95    | 14.53    | 1      | 260.70    |
| S's imports from R (log)                | 0.85    | 3.32     | -30.80 | 12.80     |
| S's exports to R (log)                  | 0.92    | 3.25     | -32.19 | 11.72     |

|                               | Model 1     | Model 2       | Model 3     | Model 4       |
|-------------------------------|-------------|---------------|-------------|---------------|
|                               | 0.01        |               |             |               |
| S's competitiveness           | 0.01        | 0.03**        | 0.00        | 0.00          |
|                               | (0.03)      | (0.01)        | (0.01)      | (0.01)        |
| S's control of corruption     | 0.07        | -0.01         | -0.05       | -0.05         |
|                               | (0.11)      | (0.02)        | (0.03)      | (0.03)        |
|                               | ~ /         | ~ /           | ( )         |               |
| S's GDP per capita            | 0.00**      | 0.00**        | 0.00**      | 0.00**        |
|                               | (0.00)      | (0.00)        | (0.00)      | (0.00)        |
| S's GDP                       | 2 52**      | -0.01         | -0 07**     | -0 07**       |
|                               | (0.47)      | (0.02)        | (0.02)      | (0.02)        |
|                               | (011)       | (0.02)        | (0.0_)      | (0.02)        |
| S's GDP growth                | -0.01*      | 0.00          | 0.00        | 0.00          |
|                               | (0.01)      | (0.00)        | (0.00)      | (0.00)        |
| Clamanulation                 | 4 0 4 * *   | 0.01          | 0.0/**      | 0.07**        |
| 5 s population                | $4.04^{**}$ | (0.01)        | $(0.06^{})$ | (0.03)        |
|                               | (0.93)      | (0.02)        | (0.02)      | (0.03)        |
| S's trade openness            | 0.00        | 0.00          | 0.00**      | 0.00**        |
| Ĩ                             | (0.00)      | (0.00)        | (0.00)      | (0.00)        |
|                               | 1 40**      | 0.00**        | 0.00**      | 0 20**        |
| UN voting similarity          | $1.43^{**}$ | $(0.80^{**})$ | (0.08)      | $(0.28^{**})$ |
|                               | (0.23)      | (0.06)        | (0.08)      | (0.08)        |
| Alliance portfolio similarity | -3.30**     | -0.41**       | -0.76**     | -0.77**       |
| 1 2                           | (1.26)      | (0.08)        | (0.11)      | (0.11)        |
|                               |             |               |             |               |
| Distance                      |             |               | -0.09**     | -0.09**       |
|                               |             |               | (0.03)      | (0.03)        |
| Ioint democracy               |             |               | 1.11**      | 1.11**        |
| ,,                            |             |               | (0.05)      | (0.05)        |
|                               |             |               |             |               |
| US                            |             |               |             | -0.06         |
|                               |             |               |             | (0.21)        |
| Constant                      |             | 0.51**        | 2 54**      | 2 56**        |
| Constant                      |             | (0.24)        | (0.41)      | (0.41)        |
| Observations                  | 9,881       | 56,189        | 41,665      | 41,665        |

Table 2: Supplier Characteristics as Determinants of Contract Award

\* p<0.10, \*\* p<0.05. Fixed-effects logit (M1) and standard logit models (M2-M4). Dependent variable: Contract award dummy. Standard errors in parentheses.

| R's competitiveness $-0.02$ $-0.01$ $-0.04$ $-0.02$ $-0.02$ (0.06)(0.10)(0.03)(0.02)(0.02)R's control of corruption $-0.41^{**}$ $-0.02$ $-0.15$ 0.030.03  | 2<br><u>'</u> )      |
|--|----------------------|
| R's competitiveness $-0.02$ $-0.01$ $-0.04$ $-0.02$ $-0.02$ (0.06)(0.10)(0.03)(0.02)(0.02)R's control of corruption $-0.41^{**}$ $-0.02$ $-0.15$ 0.030.03  | 2<br><u>'</u> )<br>' |
| (0.06) $(0.10)$ $(0.03)$ $(0.02)$ $(0.02)R's control of corruption -0.41^{**} -0.02 -0.15 0.03 0.03$   | <u>2)</u>            |
| R's control of corruption $-0.41^{**}$ $-0.02$ $-0.15$ $0.03$ $0.03$   | 5                    |
| $KSCONTOLOTCOTTUDTION -U41^{m} -UU2 -U12 UU2 UU2$  | )<br>'\              |
| (0.21)  (0.27)  (0.12)  (0.08)  (0.08)   |                      |
| (0.21) $(0.37)$ $(0.12)$ $(0.06)$ $(0.06)$   | ソ                    |
| R's GDP per capita 0.00 0.00 -0.00 0.00* 0.00*   | *                    |
| (0.00)  (0.00)  (0.00)  (0.00)  (0.00)   | ))                   |
|  |                      |
| R's GDP 0.49 -0.51 0.25** -0.04 -0.04  | 1                    |
| (0.41) (1.05) (0.12) (0.06) (0.06)   | ,)                   |
| $R'_{s} CDP $ growth 0.01 0.01 -0.00 0.01 0.01   |                      |
| $\begin{array}{cccccccccccccccccccccccccccccccccccc$   | )                    |
|  | )                    |
| R's population 1.86** 1.00 -0.38** 0.05 0.05   | ;                    |
| (0.95) $(1.94)$ $(0.13)$ $(0.07)$ $(0.07)$   | ")                   |
|  |                      |
| R's trade openness $-0.00$ $0.00$ | )                    |
| (0.00) $(0.01)$ $(0.00)$ $(0.00)$ $(0.00)$   | り                    |
| Total contract size 1.32** 1.43** 1.43**   | :*                   |
| (0.07) (0.11) (0.11)   | )                    |
|  | /                    |
| Annual contract allocation -1.29** -1.43** -1.43**   | **                   |
| (0.09) 	(0.10) 	(0.10)   | 1)                   |
| Dia dana amang 0.11 0.12* 0.12*  | *                    |
| K's democracy $0.11$ $0.13^{\circ}$ $0.13^{\circ}$ (0.22)         (0.07)         (0.07)         (0.07)   | 7)                   |
| (0.55) $(0.07)$ $(0.07)$   | )                    |
| Average number of bids -0.01 -0.01 -0.01   | 1                    |
| (0.02) $(0.01)$ $(0.01)$   | )                    |
|  | ,                    |
| Average number of contracts0.02**0.02**  | :*                   |
| (0.00) 	(0.00) 	(0.00)   | り                    |
|  | -                    |
| Constant $-1.22$ $0.75$ $0.75$<br>(1.08) (0.50) (0.50)   | ,<br>1)              |
| Observations 4.036 2.567 4.050 2.575 2.575   | <u>'/</u> 5          |

Table 3: Recipient Characteristics as Determinants of Recipient Receiving Contract Award

.

\* p<0.10, \*\* p<0.05. Fixed-effects logit (M1 & M2) and standard logit models (M3-M5). Dependent variable: Recipient as supplier dummy. Standard errors in parentheses.

|                               | Model 1 | Model 2 | Model 3 | Model 4          | Model 5      | Model 6      |
|-------------------------------|---------|---------|---------|------------------|--------------|--------------|
|                               | 4 50    |         |         |                  | 1 1 0 1      | 1.1.044      |
| S's competitiveness           | 1.52    | 0.78**  | 0.80**  | 1.11**           | 1.10**       | 1.10**       |
|                               | (1.68)  | (0.21)  | (0.22)  | (0.33)           | (0.35)       | (0.34)       |
| S's control of corruption     | -0.12   | 0.02    | 0.05    | 0.20             | 0.22         | 0.11         |
| 1                             | (0.76)  | (0.10)  | (0.10)  | (0.13)           | (0.14)       | (0.15)       |
| Cla CDD and a site            | 0.00**  | 0.00**  | 0.00**  | 0.00             | 0.00         | 0.00         |
| S's GDP per capita            | -0.00** | -0.00** | -0.00** | -0.00            | -0.00        | (0.00)       |
|                               | (0.00)  | (0.00)  | (0.00)  | (0.00)           | (0.00)       | (0.00)       |
| S's GDP                       | 0.86    | 0.26**  | 0.22*   | -0.44**          | -0.50**      | -0.60**      |
|                               | (2.25)  | (0.12)  | (0.12)  | (0.22)           | (0.25)       | (0.26)       |
| Cla CDD arrough               | 0.04    | 0.01    | 0.00    | 0.01             | 0.02         | 0.04         |
| 5's GDP growth                | (0.04)  | -0.01   | (0.00)  | (0.01)           | (0.02)       | (0.04)       |
|                               | (0.04)  | (0.02)  | (0.02)  | (0.03)           | (0.04)       | (0.04)       |
| S's population                | 5.34    | -0.14   | -0.08   | 0.12             | 0.19         | 0.32         |
|                               | (6.64)  | (0.10)  | (0.11)  | (0.18)           | (0.21)       | (0.22)       |
|                               | 0.01    | 0.00    | 0.00*   | 0.01**           | 0.01**       | 0.01**       |
| S's trade openness            | -0.01   | -0.00   | -0.00*  | -0.01**          | -0.01""      | -0.01**      |
|                               | (0.01)  | (0.00)  | (0.00)  | (0.00)           | (0.00)       | (0.00)       |
| UN voting similarity          | 0.79    | 0.12    | 0.14    | 0.54*            | 0.65**       | 0.13         |
|                               | (1.45)  | (0.26)  | (0.27)  | (0.29)           | (0.33)       | (0.39)       |
| Allianza nauttalia similarity | 4 15    | 0.21    | 0.22    | 1 76**           | 1 02**       | 1 / = **     |
| Amarice portiono similarity   | -4.15   | -0.21   | -0.55   | $-1.20^{-1}$     | $-1.05^{-1}$ | $-1.45^{-1}$ |
|                               | (4.95)  | (0.33)  | (0.38)  | (0.43)           | (0.47)       | (0.49)       |
| Distance                      |         |         | -0.00*  |                  | 0.00         | 0.00         |
|                               |         |         | (0.00)  |                  | (0.00)       | (0.00)       |
| Joint democracy               |         |         | 0.07    |                  | -0.06        | 0.03         |
| Joint democracy               |         |         | (0.12)  |                  | (0.15)       | (0.15)       |
|                               |         |         | (0.12)  |                  | (0.15)       | (0.15)       |
| S's imports from R            |         |         |         | 0.06             | 0.06         | 0.06         |
|                               |         |         |         | (0.04)           | (0.05)       | (0.05)       |
| S's exports to R              |         |         |         | 0 33**           | 0 33**       | 0 3/1**      |
| 5 5 exports to K              |         |         |         | (0.06)           | (0.00)       | (0.04)       |
|                               |         |         |         | (0.00)           | (0.00)       | (0.00)       |
| US                            |         |         |         |                  |              | -1.05**      |
|                               |         |         |         |                  |              | (0.45)       |
| Constant                      | -96 55  | g a7**  | 10 1/** | <b>7</b> 1 0/1** | 21 86**      | 22 25**      |
| Constant                      | (92 82) | (1.67)  | (1.77)  | (3 20)           | (3.47)       | (3.60)       |
| Rho                           | ()0_)   | (1.07)  | (1.77)  | -0.07            | -0.15        | -0.13        |
| -                             |         |         |         | (0.13)           | (0.16)       | (0.16)       |
| Observations                  | 1,317   | 1,317   | 1,218   | 1,520            | 1,160        | 1,160        |

Table 4: Recipient and Supplier Characteristics as Determinants of Contract Size

\* p<0.10, \*\* p<0.05. Fixed-effects (M1) and standard OLS (M2 & M3) models; Heckman models, in which

the selection stage D.V. is *Other Country as Supplier* (M4-M6). Dependent variable: Contract size (logged). Standard errors in parentheses.

|                           | Model 1:<br>WB       | Model 2:<br>IBRD | Model 3:<br>IDA | Model 4:<br>WB       | Model 5:<br>IBRD | Model 6:<br>IDA |  |
|---------------------------|----------------------|------------------|-----------------|----------------------|------------------|-----------------|--|
|                           |                      |                  |                 |                      |                  |                 |  |
|                           | Supplier ≠ Recipient |                  |                 | Supplier = Recipient |                  |                 |  |
| S's competitiveness       | 1.03*                | 0.55             | 2.60**          | 0.22**               | 0.23*            | 0.19**          |  |
|                           | (0.56)               | (0.65)           | (1.28)          | (0.05)               | (0.13)           | (0.06)          |  |
| S's control of corruption | -0.79                | -0.53            | -0.88           | 0.72**               | 0.59*            | 0.88**          |  |
|                           | (0.79)               | (1.06)           | (1.22)          | (0.22)               | (0.34)           | (0.28)          |  |
| S's GDP per capita        | -0.00**              | -0.00**          | -0.00           | 0.00                 | 0.00             | -0.00*          |  |
|                           | (0.00)               | (0.00)           | (0.00)          | (0.00)               | (0.00)           | (0.00)          |  |
| S's GDP                   | 2.76                 | 4.45             | 0.43            | 1.36**               | 0.86             | 2.37**          |  |
|                           | (2.19)               | (3.84)           | (2.83)          | (0.42)               | (0.62)           | (0.96)          |  |
| S's GDP growth            | 0.07*                | 0.02             | 0.12**          | -0.01                | -0.01            | -0.01           |  |
|                           | (0.04)               | (0.05)           | (0.06)          | (0.01)               | (0.02)           | (0.02)          |  |
| S's population            | 2.73                 | 4.60             | 9.08            | -3.23**              | -6.65**          | -3.28**         |  |
|                           | (6.83)               | (11.30)          | (8.61)          | (0.96)               | (1.63)           | (1.61)          |  |
| S's trade openness        | -0.02                | 0.01             | -0.04*          | 0.00                 | -0.00            | 0.00            |  |
|                           | (0.01)               | (0.02)           | (0.02)          | (0.00)               | (0.01)           | (0.01)          |  |
| Joint democracy           | -0.75*               | -0.69            | -1.25           |                      |                  |                 |  |
|                           | (0.42)               | (0.48)           | (0.94)          |                      |                  |                 |  |
| UN voting similarity      | 0.47                 | 0.74             | -0.15           |                      |                  |                 |  |
|                           | (1.46)               | (2.56)           | (1.77)          |                      |                  |                 |  |
| Alliance portfolio        | -4.75                | -1.00            | -5.16           |                      |                  |                 |  |
| similarity                | (4.82)               | (5.72)           | (9.28)          |                      |                  |                 |  |
| Constant                  | -97.31               | -177.84          | -146.39         | 37.49**              | 106.56**         | 17.70           |  |
|                           | (93.42)              | (155.88)         | (119.91)        | (10.75)              | (21.84)          | (12.53)         |  |
| Observations              | 1,218                | 621              | 632             | 801                  | 405              | 444             |  |

Table 5: Robustness Check: Recipient and Supplier Characteristics as Determinants of World Bank, IBRD and IDA Contract Size

\* p<0.10, \*\* p<0.05. Fixed-effects models. Dependent variables: WB (M1 & M4), IBRD (M2 & M5) and IDA (M3 & M6) contract size (logged). Standard errors in parentheses.