Looking for advice: The politics of consulting services procurement in the World Bank

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ABSTRACT

Scholarship on development aid investigates how donors' and recipients' political and economic interests interact to weaken effectiveness of aid. These influences have been traced at various stages of the aid cycle – from aid commitment and disbursement to impact evaluation. Yet, development assistance programs provide not only financial resources for recipient countries, but also human capital. Specifically, development aid agencies often rely on experts' and consulting firms' knowledge to enable project development and implementation. Such knowledge can increase recipients' capacity to implement domestic reforms, thereby spurring economic and social development. However, transfers of human capital may experience similar pressures that influence flows of financial capital and reduce their effectiveness. This article aims to investigate whether donors' and recipients' interests sway the flow of human capital provided through development programs. I focus on the procurement process for consulting services funded by World Bank development aid, and show that formal institutional requirements for consultant selection leave room for recipient governments to pursue domestic and foreign benefits from procurement decisions. In addition, my analyses show that governments' pursuit of such benefits has tangible consequences for aid effectiveness: when recipients favor domestic consulting firms, projects take more time to complete and tend to receive lower outcome evaluations.

1. Introduction

Most studies of foreign aid effectiveness build on a straightforward explanation for why aid should increase economic growth and promote development in recipient countries: aid disbursements provide capital to capital-scarce economies; hence, foreign aid should lower one of key hurdles on the path to development. Yet, foreign aid is a more complex exogenous influence than this characterization implies, especially when we consider multilateral aid. Development assistance programs inject not only financial resources into recipient economies, but also human capital.[1] This capital comes from two sources: donor organizations' staff and project consultants. The inflow of human capital should have a beneficial effect on recipient economies, just as one would expect in the case of financial capital: an infusion of advanced skills, expertise and experience into human capital-scarce economies should increase their growth rates. Previous research suggests a positive association between human capital and economic growth (Mincer,

1984; Galor & Tsiddon, 1997; Barro, 2001; Baldacci et al., 2008; Lucas, 2015).

Multilateral aid agencies, such as the World Bank, rely on consultants in a broad range of activities in recipient countries, including project identification, development and execution. This allows recipient governments to seek and acquire the expertise and experience available anywhere in the world, thereby overcoming constraints of domestic capacity for reform implementation. Borrowers[2] appear to recognize the value of consultants as the number of consulting contracts increases over time. In 2001, 41 percent of World Bank-funded contracts were allocated in the consulting procurement category (goods and civil works contracts accounted for the remaining share), and 15 cents of every project dollar went to consultants. In 2014, the share of consulting projects went up to 67 percent, and 16 cents of every project dollar paid for consulting services.[3]

Nevertheless, research on aid effectiveness indicates that foreign aid – through additional financial or human resources – has a very mixed record in producing meaningful changes in recipient

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[1] Most aid recipients fall into two bottom quartiles of the Word Bank's Human Capital Index: http://www.worldbank.org/en/publication/human-capital.

[2] I use the terms "borrower" and "recipient" interchangeably throughout the article.
[3] Based on the author's calculations using the World Bank's contract data.

countries' development (Wright & Winters, 2010; Buntaine, 2016). A large body of research offers explanations for this finding by focusing on the financial aspect of foreign aid: for instance, donors' strategic aid allocation and conditionality enforcement affect recipients' incentive structure in ways detrimental to effective uses of aid (Girod, 2012; McLean, 2015b; Girod & Tobin, 2016). Recipient governments' corruption or misplaced priorities have a similar adverse effect on aid outcomes (Remmer, 2004; Collier, 2009). Transfers of human capital and knowledge constitute a closely related but different mechanism of development assistance; nevertheless, research is yet to investigate this component of development programs and its effectiveness in promoting these programs' objectives.

This study focuses on the infusion of human capital that is tied to development programs funded by the World Bank. Specifically, I examine how recipient governments allocate consultant contracts. If such contracts serve to maximize benefits of human capital transfers, the quality of human capital would drive contract allocation. If, in contrast, this development mechanism suffers from problems that characterize financial transfers, there should be evidence of procurement outcomes consistent with donors' and/or recipients' parochial interests, such as maximization of domestic political and economic benefits.

My results indicate that, even though recipient governments care about hiring most knowledgeable experts, these governments also have powerful incentives to treat more favorably contract bids submitted by their domestic firms and firms of recipients' economic and political partners. Specifically, I show that consulting firms from countries with greater human capital and lower corruption are more likely to secure consulting contracts, which is consistent with the development goal of aid-funded programs. At the same time, there is evidence that many of the same factors that lower effectiveness of financial transfers manifest themselves in human capital transfers. Recipients favor their domestic consulting firms in the process of contract allocation, which leads to overreliance on domestic experts. In addition, recipient governments use contracts to strengthen their international links: consultants from major World Bank donor countries, firms of recipients' important trading partners, aid donors, and like-minded countries tend to benefit from consulting procurement choices.

Furthermore, this study demonstrates that such biases in consulting contract allocation have consequences in at least two areas. First, consultants appear to introduce a co-national bias in goods and services procurement: the nationality of a project's consultant is a powerful predictor of selecting suppliers of goods and services of the same nationality, which may cut against the World Bank's emphasis on suppliers' competitiveness as the dominant selection criterion. Second, when a project hires at least one consultant from the recipient country, the project takes more time to complete and its outcomes receive lower performance ratings from the World Bank's Independent Evaluation Group. Taken together, the results presented in this article suggest that the human capital dimension of multilateral aid displays many of the biases that characterize financial transfers, and that these biases shape project implementation and effectiveness.

2. Determinants of multilateral aid flows and aid effectiveness

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, which is formalized in these organizations' mandates (Hawkins et al., 2006). 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 the organizations to adopt and implement policies (Martens et al., 2002; Milner, 2006; McLean, 2012). At the same time, member governments seek to use formal and informal instruments to move these policies closer to their ideal points, especially when the governments' preferences converge (Schneider & Tobin, 2013). While formal rules are relatively more advantageous for weaker actors' interests, powerful actors make use of their informal influence over organizations' policy-making (Andersen et al., 2006; McLean, 2015a; Kersting & Kilby, 2016; Clark & Dolan, 2021).

The extent of all relevant actors' ability to influence development assistance in a way that furthers their interests remains an important research question. Studies of different stages of financial assistance programs implemented by multilateral organizations, such as the World Bank, indicate that powerful states may affect the organization's willingness to punish recipients' non-compliance with program conditionality by suspending aid disbursements (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 its largest shareholders' strategic interests at the imposition and implementation stages (Dreher & Jensen, 2007; Stone, 2002, 2004, 2008, 2011)[4]. 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 & Tierney, 2003; Copelovitch, 2010). For instance, Neumayer (2003b) 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.

A smaller, but growing, subset of studies in this research area shows that less powerful countries can shape development aid through a variety of channels as well. Specifically, recipient governments may benefit from formal rules that govern development agencies' operations and from their political and economic ties to influential member governments (Stone, 2011; Kilby, 2013; Girod & Tobin, 2016). Weaker members of international organizations can also utilize informal influence mechanisms by pooling their influence. Schneider and Tobin (2013) show that weaker member governments can shape EU aid allocations by forming coalitions. Finally, recipient governments are critical actors at the stage of project implementation and can take advantage of their role in the implementation process. For instance, a government can direct aid flows to boost their domestic political support (Jablonski, 2014; Masaki, 2018). A recipient government can influence the procurement of goods and services for project implementation and award lucrative contracts to domestic firms, thereby benefitting their constituents (McLean, 2017).

The complex interactions of various political and economic interests at all stages of the aid cycle weaken governments' and international organizations' ability to promote development goals through aid disbursements. Therefore, factors that shape the flow of development resources are also critical to aid effectiveness (Wright and Winters, 2010). This insight builds on a large number of aid studies, most of which analyze aid in aggregate terms (e.g., Neumayer, 2003a; Girod & Tobin, 2016). At the same time, recent research suggests that inflows of financial and human resources can vary in their effects, even though they aim to accomplish the same development objective. Specifically, transfers of knowledge and expertise in the form of technical assistance may be more beneficial for promotion of political liberalization than financial trans-

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[4] Other authors find no effect at the implementation stage (Dreher 2004; Copelovitch 2010).

fers (Gibson et al., 2015). This suggests that research on foreign aid needs to develop an explanation of human capital transfers as a distinct element of development aid projects, and determinants of such transfers.

3. Knowledge transfers: consulting services during aid allocation and project implementation

While various stages of the multilateral aid cycle have received a significant amount of attention, one facet of development assistance remains largely overlooked – i.e., no research has analyzed the process of hiring consultants to facilitate project implementation. Consulting services allow recipients to tap into specialized knowledge, advice and guidance, which can then help governments develop projects, secure multilateral financial assistance and carry out proposed project activities. Access to expertise and experience is particularly important for aid recipients with low levels of government capacity. In this case, governments can rely heavily on consulting services to make project development and implementation possible. Consultants can provide a range of services for aid-funded projects: from feasibility studies and legal advisory services to implementation and project management. Therefore, consulting represents an integral part of development programs funded by multilateral aid organizations.

Multiple actors pay keen attention to allocation of consulting contracts. Both recipient and donor governments have incentives to support their consulting firms in their efforts to secure aid-funded contracts. At the same time, multilateral aid organizations prefer to see most qualified firms win consulting contracts, all else being equal. This preference arises from the need for international agencies to promote their reputation for unbiased, a-political allocation of resources to maintain donor and recipient governments' goodwill. In addition, international bureaucrats may have professional motivations to increase the odds of successful project implementation. With that goal in mind, they should favor the selection of the most knowledgeable experts in a given area. Given this, development agencies specify formal rules that structure consulting services procurement in multilateral aid organizations. Taken together, aid-funded procurement of specialized knowledge and experience can be expected to reflect diverging preferences and institutional constraints in contract allocation.

Multilateral aid organizations, such as the World Bank, seek to create a level playing field during the procurement process generally and consulting services procurement, specifically. However, the World Bank may not be able to accomplish this goal directly because of recipient country ownership of aid-funded projects, of which procurement is an integral element. The multilateral aid donor acknowledges that recipient governments, or borrowers, are in charge of project preparation and implementation. Therefore, governments are responsible for the procurement process, which includes activities from developing the terms of reference (or TOR) for contract bids or proposals, to awarding and managing contracts. Depending on how borrowers frame TOR for a given assignment and specify invitations for bids or proposals, either a broad range of firms may qualify, or only certain firms would be able to satisfy all requirements. Once bids are in, the borrowers select consultants for their Bank-funded projects.

At the same time, the World Bank has the mandate to "ensure that the proceeds of any loan are used only for the purposes for which the loan was granted, with due attention to considerations of economy and efficiency and without regard to political or other non-economic influences or considerations" under the World Bank's Articles of Agreement (Article III, Section 5(b)). Therefore, the aid organization adopted a set of detailed rules and procedures to structure the selection process. Furthermore, the Bank reviews governments' procurement activities. Prior review focuses on sizeable or high-risk contracts and requires the Bank's no-objection decision to move forward to the next stage in the procurement process – i.e., providing the consultant with Notification of Intention to Award. Post review evaluates contract compliance with firm eligibility rules, potential conflicts of interest, and cases of unfair competitive advantage. In some circumstances, such as during natural disasters or in low-capacity environments, the Bank may increase its involvement in procurement, but ultimately the government remains in charge of project implementation and hence procurement activities. In addition to these arrangements, the Bank expects its borrowers to rely primarily on Quality and Cost-Based Selection (QCBS) as a consulting firm selection method. The main objective of this approach is to identify the most qualified firms, which can also offer competitive prices for their services, and reduce potential biases in contract allocation.

While QCBS is the World Bank's preferred allocation method and, when properly executed, can enhance recipient countries' access to high-quality advice and guidance at a reasonable price, the Bank's guidelines also leave significant room for governments' pursuit of their domestic interests: "the specific rules and procedures to be followed for employing consultants depend on the circumstances of the particular case" (WB, 2011, 2). Moreover, while the consultant selection guidelines seek to create a level playing field for all eligible consultants by providing them with information and opportunities to compete for contracts, the World Bank acknowledges its "interest in encouraging the development and use of national consultants in its developing member countries" (WB, 2011, 2). Such use of resources can represent an investment enhancing borrowers' domestic human capital and is consistent with the Bank's development objectives. Therefore, selection rules purposefully leave some room for recipient governments to influence outcomes of contract bidding for the benefit of domestic firms.[5] This purposeful flexibility results in a challenge for the Bank as it seeks to promote a level playing field while also encouraging the development and use of domestic consultants, even if they may sometimes have less expertise than their counterparts from other countries.[6]

When it comes to the allocation of business opportunities through the procurement process, domestic economic constituents provide their governments with powerful incentives to pay close attention to the flow of aid-funded contracts. When a government awards contracts to domestic firms, their profits increase (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 contracts domestically. Therefore, there are strong theoretical reasons to expect recipient governments to be willing to exert informal influence over consulting contract allocation not only to develop domestic human capital, but also to provide particularistic benefits for supporters.

Selecting domestic consulting firms has another benefit for recipient countries. Such consultants may recommend procurement of more local products and services through project design and technical specifications, thereby generating additional benefits for borrowers' domestic companies. This outcome is not entirely inconsistent with the World Bank's overall goal of boosting local development and promoting domestic industries. The more con-

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[5] For more detailed information about the World Bank's procurement procedures and regulations, see World Bank Procurement Regulations for IPF Borrowers: https://thedocs.worldbank.org/en/doc/178331533065871195-0290022020/original/ProcurementRegulations.pdf.

[6] I thank an anonymous reviewer for highlighting this point.

tract awards remain in the recipient country, the greater the boost to the domestic economic capacity and growth. However, some member countries may view this local bias unfavorably if their companies regularly lose in bidding for contract opportunities available through the World Bank.

The recipient government can counter some of this dissatisfaction by awarding contracts to firms from influential member countries, thereby making them less likely to insist on strict adherence to the World Bank's procurement rules, and to firms from important bilateral partners, such as aid donors, trading partners, neighboring countries and like-minded states. In the case of firms from countries that have strong bilateral ties with the recipient, the recipient's willingness to provide favorable treatment in contract allocation shows an effort to maintain existing ties and make these partners less dissatisfied with biased contract allocation. Therefore, recipient governments stand to benefit both domestically and internationally when they use their ability to influence consulting contract allocation to reward domestic and international supporters. I expect this powerful self-interested motivation to result in patterns of contract allocation that diverge from allocation outcomes that would be based on expertise and efficiency alone. These expectations can be summarized in the following testable hypotheses:

H1 (Qualifications): More advanced expertise and experience should help to secure larger contract allocations.

H2 (Domestic bias): Borrowers' domestic firms should secure larger contract allocations.

H3 (Pro-partner bias): A country's close bilateral ties with the borrower should help to secure larger contract allocations.

H4 (Informal influence): Powerful World Bank shareholders' firms should secure larger contract allocations.

4. Data and measurement

There is a small but growing body of research investigating contract allocation (Miyagiwa, 1991; Trionfetti, 2000; Rickard and Kono 2013). All of these studies, however, focus on public procurement financed by governments, rather than contract allocation funded by multilateral aid organizations. Several recent studies investigate aid-funded procurement. Specifically, McLean (2017) evaluates procurement of goods and services for World Bank project implementation.[7] David-Barrett and Fazekas (2020) assess the effect of anti-corruption reforms on aid-funded procurement. Heinzel (2021) focuses on the influence of the World Bank's staff on procurement and identifies a co-national bias in the allocation of contracts. This article contributes to the emerging body of research by analyzing the transfer of human capital through aid-funded procurement.[8] Therefore, my research design utilizes data from a multilateral aid organization (i.e., the World Bank) and assesses allocation of a subset of contracts – consulting services contracts.

4.1. Dependent variables

Data on contract allocation come from the World Bank's Contract Awards Database.[9] The database provides information on major contracts awarded through World Bank-financed projects and reviewed by the Bank's staff. The Contract Awards Database provides detailed contract information, such as the contractor, project country, project sector, contract signing date, procurement method and type, and contract amount. There are two procurement groups: consultants, and goods and services. Given that the focus of this article is on consulting contracts, I drop all goods and services contracts from my dataset. I also drop contracts for regional projects without a specified recipient country. Among remaining consulting contracts, the largest category is management and technical advice contracts, which constitute 27 percent of observations. The second largest category is project management (15 percent of observations). This suggests that consultants are typically involved in core project tasks, such as work within project implementation teams, rather than secondary activities, such as awareness campaigns or education services.

One important shortcoming of the Contract Awards Database is the lack of information on all submitted bids; I only know which firm received a contract. Hence, I need to construct a list of all consulting firms that could potentially bid on a given contract. Using information available in this database, I split all contract observations into 10 sectors: Agriculture; Education; Energy and mining; Finance; Health and social services; Industry and trade; Information and communication; Public administration and law; Transportation; Water, sanitation and flood protection. I then identified consulting companies that received two or more contracts in a given sector in any year. As a result, I constructed a list of companies that could submit a bid for a given contract in each sector; this list constitutes a counterfactual pool of bidders. Depending on the sector, the number of potential bidders ranges from 1 to 337. While the latter value seems quite high, the procurement database provides examples of contracts that received fairly high numbers of bids. For instance, a 2000 project in Thailand attracted 230 bids for the contract "Energy Service Company (ESCO) Development & Training at MEA." Therefore, my approach likely results in a greater number of potential bidders than a contract attracted in reality, but it helps to trim the list of all companies in the dataset to a number reasonably close to observed values without imposing many assumptions.

Next, for each awarded contract, in addition to the original observation, I included observations for these potential bidders, matching them with the sector of the contract. As a result of these coding steps, the number of observations is 3,498,444 for the period from 2011 to 2015, and the unit of observation changes from the contract to the contract bid. The sample size decreased to 2,999,366 once I added explanatory variables due to missing observations.

The dependent variables used in this study are *Contract award* and *Contract amount*. The former is a binary measure that takes the value of one when a consulting firm from a given country is awarded a contract, and zero otherwise. Only 0.45 percent of all contract bids in my dataset result in a contract award (N = 15,862), which makes a non-zero observation an extremely rare event.[10] The latter dependent variable is continuous and can take values which range from the minimum of 0 USD when a bidder failed to win a contract to the maximum of 54 million USD, allocated

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[7] Fleck and Kilby (2001) also analyze contract allocation, but their study looks at contracts funded by a bilateral aid agency – the USAID. Another closely related paper – Dreher et al. (2019) – considers the influence that some governments exert to bias the allocation of loans funded by the International Finance Corporation in a way that favors these governments' domestic firms.

[8] Consulting contracts should be studied separately from other types of contracts because different priorities drive their allocation. Specifically, the main selection criterion in the case of consultants is quality (or merit and expertise) rather than price, as in the case of suppliers of goods, works and non-consulting services. Moreover, allocation of goods and services contracts is in a sense secondary to the procurement of consulting services because governments rely on consultants' advice in specifying goods and services required for project implementation and developing terms of reference for those contracts. I assess this relationship in this article in Table 6.

[9] The database can be found at https://finances.worldbank.org/Procurement/Contract-Awards/pgcq-i3ft.

[10] Dorobantu et al. (2020) apply a similar approach in a study of syndication partner selection by a lead firm. Realized syndicates comprise 3 percent of the entire pool of realized and counterfactual partners.

by Afghanistan to a domestic firm in 2013 to provide consulting services for a health services project.

4.2. Main independent variables

I first constructed measures that gauge the influence of formal decision-making rules during the procurement process. The World Bank's procurement rules seek to enhance borrowers' access to high-quality advice through allocation methods such as QCBS; hence, firms from countries with high levels of human capital should be in the best position to win consulting contracts, all else being equal. Therefore, I use several measures of human capital and expertise availability in bidding countries. I also include two firm-level variables to represent experience-based expertise that may make some firms more (or less) likely to receive contracts. 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 otherwise unethical and/or illegal behavior, I use a measure of corruption at the country level for bidding countries. Consulting firms from countries with better reputations should be more successful in the bidding process.

Expertise. To examine the effect of expertise on outcomes of the procurement process, I rely on variables extracted from the World Economic Forum's Global Competitiveness dataset. The World Economic Forum publishes annual reports based on its Global Competitiveness Index (GCI), which "tracks the performance of close to 140 countries on 12 pillars of competitiveness. It assesses the factors and institutions identified by empirical and theoretical research as determining improvements in productivity, which in turn is the main determinant of long-term growth and an essential factor in economic growth and prosperity. *The Global Competitiveness Report* hence seeks to help decision makers understand the complex and multifaceted nature of the development challenge; to design better policies, based on public–private collaboration; and to take action to restore confidence in the possibilities of continued economic progress" (WEF, 2018).

Specifically, I rely on two indicators of knowledge and education availability; each takes values from one (the lowest quality) to seven (the highest quality). The measure of higher education and training quality (5th pillar of GCI) is constructed to capture "secondary and tertiary enrollment rates as well as the quality of education as evaluated by business leaders." The measure of innovation (12th pillar of GCI) represents "sufficient investment in research and development (R&D), especially by the private sector; the presence of high-quality scientific research institutions that can generate the basic knowledge needed to build the new technologies; extensive collaboration in research and technological developments between universities and industry; and the protection of intellectual property" (WEF, 2018). The expectation is that these variables will have a positive association with contract allocation, as recipients will seek out consulting firms from countries with the highest levels of technical, scientific and educational expertise. These variables are highly correlated: the correlation coefficient is 0.59.

Experience. In addition to country-level measures, which represent the size and quality of expert pool in a given country, I use firm-level knowledge indicators. These measures capture how much experience a given firm has working with the World Bank in general, and the World Bank's assistance to a given recipient country, more specifically. I construct these variables using information from the World Bank's Contract Award Database. *Firm's annual contract value* is the annual amount of all consulting contracts that a given consulting firm has received from the World Bank. *Firm's past contracts with recipient* represents the amount of all consulting contracts that a firm has received from the World

Bank's assistance to a given recipient country. Both variables should have a positive relationship with contract awards because greater experience-based expertise should increase the firm's attractiveness as a consulting services provider.

Corruption. One of the Bank's key concerns in the procurement process is to ensure that its assistance is not misused; therefore, the Bank's rules seek to protect contract bidding and award from corrupt or fraudulent practices. I rely on a measure of corruption, *CPI score*, which is available from the Corruption Perceptions Index (CPI) by Transparency International. This variable can take values from 0 (most corrupt countries) to 100 (least corrupt countries), although in my sample the values range from 1 to 92. The primary focus of this indicator is to capture perceptions of country experts and business representatives of the level of corruption in their country's public sector.[11] The least corrupt bidder countries are Finland, Denmark and New Zealand, and the most corrupt are Somalia and North Korea.

Domestic and Pro-Partner Bias. The next set of variables captures factors that may lead recipient governments to favor a given supplier over others in the process of consulting contract allocation. First, *Recipient firm* indicates whether a bidding firm is a borrower's domestic company: the variable takes the value of one if the bidder is the borrower's domestic firm, and zero otherwise. A positive coefficient on this indicator would be consistent with the expectation that the procurement process benefits borrowers' domestic consultants. Only 8.6 percent of observations in my dataset represent bids submitted by firms from recipient countries; yet, 74 percent of the contracts in my dataset were awarded to domestic firms.

Another set of beneficiaries from recipients' control over contract allocation is determined by bilateral ties between recipient and bidder countries. Recipients' partners may expect their companies to receive preferential treatment, and recipient governments' contract allocations are likely to reflect such expectations as a demonstration of goodwill and interest in maintaining friendly relations between the countries. I include the following variables to capture effects of bilateral relations on consulting contract allocations: *Ideal point distance, Distance, Recipient-bidder trade, Bidder aid to recipient,* and *Bidder aid to recipient (dummy). Ideal point distance* is an indicator of the similarity of the bidder's and recipient's foreign policy positions: I expect recipient countries to favor bids from countries that are more closely aligned with recipients in their foreign policy preferences. *Ideal point distance* is a continuous variable, ranging from 0 (when countries' positions are identical) to 4.17 (when countries' preferences diverge).[12] Hence, there should be a negative relationship between *Ideal point distance* and consulting contract allocation. The second variable, *Distance,* is the natural logarithm of the distance between two countries' capitals (in km). Countries may seek to maintain and improve their relations with neighbors or countries in the same region; therefore, I expect borrowers to allocate contracts to countries located closer, which means that there should be a negative relationship between *Distance* and contract awards.[13] Another measure of significant ties between recipient and bidder countries reflects the scale of bilateral trade links: as the size of the trade relationship grows, the recipient should increasingly favor trading partners' firms. *Recipient-bidder trade* is the (logged) total volume of recipient-bidder trade; I expect to find evidence of a positive relationship between contract awards and trade levels.[14] Finally, I use information from the AidData project to construct two aid variables to measure financial assistance from

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[11] The dataset is available at http://www.transparency.org/research/cpi/

[12] The data source is Voeten et al. (2009)'s dataset, available at hdl:1902.1/12379.

[13] The data are available at http://privatewww.essex.ac.uk/~ksg/data-5.html.

[14] The source of bilateral trade data is the International Trade dataset available at http://www.correlatesofwar.org/data-sets/bilateral-trade.

the bidder country to the recipient.[15] While *Bidder aid to recipient* is the logged value of annual aid flows from the bidder to the recipient, *Bidder aid to recipient (dummy)* is a binary indicator, taking the value of 1 if the bidder provided any amount of aid to the recipient, and 0 otherwise. In both cases, aid allocations should have a positive association with contract allocations.

In addition, borrowers may seek to provide preferential treatment to bidders from influential donor countries, so that there would be less incentive for them to pressure the World Bank to reduce domestic bias in contract allocation. Therefore, I construct two binary indicators, *US firm* and *Top WB donor firm*, to represent the World Bank's key shareholders. The former dummy takes the value of one for the US, the single largest donor country in the Bank; and the latter takes the value of one for six largest shareholders (the US, the UK, France, Germany, Japan, and China).[16] US companies received approximately 2 percent of contracts in my dataset, while companies from the six major donor nations received a little less than 9 percent of all contracts. However, when recipient country firms do not submit bids for a contract, firms from the major donor nations account for 30 percent of contract awards, with US companies receiving 7.5 percent.

4.3. Control variables

I include three additional explanatory variables in models of contract allocation based on insights provided by empirical literature on foreign economic policies. These variables gauge the economic capacity of a country: bidders with higher levels of capacity should be more successful in securing contracts. *GDP per capita* is a country's per capita GDP, measured in constant 2005 USD and logged. *GDP growth* is a country's annual rate of GDP growth. *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. Summary statistics for all variables used in this study are reported in Table A5 in the appendix.

5. Discussion of results

Tables 1–3 present main estimation results: first, full-sample models; second, split-sample models by contract size; and third, models limited to non-recipient country bidders. Tables 4 and 5 report additional models, which split the sample of all consulting contracts into ten sectors, following the World Bank's classification. Each sector represents a part of the recipient's economy, which is supported by the Bank's funding and expert advice. The dependent variables in Tables 1–3 are *Contract award* and *Contract amount*; therefore, one set of results shows logit estimates, and the other is based on tobit models. This approach relies on the assumption that the same factors shape contract awards and amounts. An alternative estimation technique would be a Heckman selection model; however, in the absence of a reasonable exclusion restriction, I prefer to use logit and tobit.[17] Tables 4 and 5 report only tobit estimates for contract amount models, whereas Tables A1 and A2 in the appendix provide corresponding logit models of contract award. All specifications include recipient country and year fixed effects.[18]

To summarize the main findings, I find evidence that both formal rules and recipient governments' interests shape the process of consulting contract allocation. The World Bank's rules that center on expertise and efficiency affect the process of selecting consultant firms, as does the borrower's bias in favor of its domestic firms and firms from important partner countries. Also, these results suggest that firms from top donor countries receive larger contract allocations than firms from other countries.

The first set of results demonstrates that formal rules governing consulting contract allocation matter: variables that measure country-level expertise have a positive and statistically significant effect on contract award in different specifications. Firms from countries that score higher on two dimensions of technical and scientific expertise fare better in the procurement process because expertise is instrumental to successful project development and implementation. Given that effective project implementation is one of the World Bank's key objectives and formal contract allocation rules aim at enhancing project effectiveness, this is an encouraging result. When recipients receive access to more qualified consultants, the odds of successful project implementation can be expected to rise. The coefficients on both measures of human capital (*Higher education* and *Innovation*) are positive and significant at conventional levels in Table 1.[19]

Next, I re-run Models 3 and 6 of Table 1 after splitting the sample to subsets of smaller and larger contracts. Recipient countries vary in socioeconomic size; therefore, I do not use a dollar value as a cut point. Instead, I standardize contract size by recipients' GDP and use the median of this measure as the cut point for dividing smaller and larger contracts.[20] Table 2 reports these split-sample models of contract allocation. The results are largely similar to those in Table 1, with one important difference. While the coefficients on *Higher education* remain positive and statistically significant regardless of contract size, *Innovation* has a positive and significant association with contract awards only in the case of more sizeable contracts.

When the sample is restricted to bidding firms from non-recipient countries, as reported in Table 3, the results remain unchanged in Models 1 and 4. Specifically, both *Higher education* and *Innovation* are positively associated with bidding firms' ability to secure consulting contracts. However, there is an important change in Models 2–3 and 5–6, which include measures of bilateral ties between recipient and bidder countries. While the coefficient on *Higher education* remains positive and significant, the direction of the relationship between *Innovation* and contract award reverses: firms from countries with a greater innovation capacity now receive reduced contract allocations, controlling for the countries' bilateral links to the recipient. This suggests that recipients prioritize their bilateral relations, rather than access to research and development expertise, although education remains an important consideration.

Finally, sector-based models yield more nuanced findings. Tables 4 and 5 indicate that projects in different sectors may require different types of expertise. Specifically, *Higher education* has a positive effect on contract amounts awarded in the Finance, Health and social services, Industry, and Transportation sectors. In contrast, higher values of the *Innovation* indicator result in more sizeable contracts in the Public administration and law, Information and communication, Education, Energy and mining, and

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[15] The dataset is available at http://dashboard.aiddata.org.

[16] The UK and France are tied in their IBRD vote share in the last three years of the period under study.

[17] See Dreher et al. (2011) for a similar approach employed to analyze aid allocation.

[18] This statistical technique accounts for any unobserved heterogeneity among recipient countries, which include influential cases such as China. This country receives World Bank assistance, while growing in importance as a Bank shareholder and supplier of goods and services for Bank-funded projects. I conducted a robustness check by dropping China as a recipient country from the sample and re-estimating contract allocation models to see if that affects my findings. Table A5 provided in the appendix shows that my main results remain unchanged.

[19] One exception is the coefficient on *Innovation* in Model 3 of Table 1, which is also positive but fails to reach statistical significance at the .05 level.

[20] Specifically, I divide *Contract amount* by recipients' GDP in a given year, and multiply that value by 1,000,000. The median of this standardized measure is 1.3. Hence, observations with values equal to or less than 1.3 are in the smaller contract subset, while observations with values greater than 1.3 are in the larger contract subset.

Table 1
Models of Consulting Contract Allocation (Full Sample).

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
	DV: *Contract award* Logit models			DV: *Contract amount* Tobit models		
Recipient firm	6.01**	6.01**	6.00**	3.87**	3.87**	3.87**
	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)
US firm		−0.04			−0.04	
		(0.07)			(0.04)	
Top WB donor firm			0.14**			0.09**
			(0.05)			(0.03)
Firm's annual contract value	0.16**	0.16**	0.16**	0.22**	0.21**	0.22**
	(0.02)	(0.02)	(0.02)	(0.01)	(0.01)	(0.01)
Firm's past contracts with recipient	−0.09**	−0.09**	−0.09**	−0.07**	−0.07**	−0.07**
	(0.02)	(0.02)	(0.02)	(0.01)	(0.01)	(0.01)
GCI: Higher education	0.28**	0.28**	0.29**	0.18**	0.18**	0.19**
	(0.04)	(0.04)	(0.04)	(0.03)	(0.03)	(0.03)
GCI: Innovation	0.09**	0.10**	0.05	0.09**	0.09**	0.05**
	(0.03)	(0.03)	(0.03)	(0.02)	(0.02)	(0.02)
B's trade openness	0.00**	0.00**	0.00**	0.00**	0.00**	0.00**
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
B's GDP growth	−0.00	−0.00	−0.00	−0.00	−0.00	−0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
B's GDP per capita	0.21**	0.21**	0.21**	0.09**	0.09**	0.09**
	(0.03)	(0.03)	(0.03)	(0.02)	(0.02)	(0.02)
CPI score	0.01**	0.01**	0.01**	0.01**	0.01**	0.01**
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Constant	−10.54**	−10.54**	−10.48**	−7.33**	−7.33**	−7.29**
	(0.16)	(0.16)	(0.16)	(0.11)	(0.11)	(0.11)
Observations	2,999,366	2,999,366	2,999,366	2,999,837	2,999,837	2,999,837
Pseudo R-squared	0.31	0.31	0.31	0.26	0.26	0.26
LL	−58547.5	−58547.4	−58543.7	−65299.0	−65298.5	−65293.9

Note. Logit and tobit models with recipient and year fixed effects (fixed effects are not reported); DVs = Contract award/amount; standard errors in parentheses. Unit of analysis: contract bid. * $p < 0.05$, ** $p < 0.01$.

Table 2
Models of Consulting Contract Allocation (Split Sample by Contract Size).

	Model 1 Smaller contracts Logit models	Model 2 Larger contracts	Model 3 Smaller contracts Tobit models	Model 4 Larger contracts
Recipient firm	6.59**	5.66**	0.86**	5.88**
	(0.08)	(0.05)	(0.01)	(0.08)
Top WB donor firm	0.01	0.16**	0.01	0.13**
	(0.14)	(0.05)	(0.01)	(0.05)
Firm's annual contract value	0.09**	0.21**	0.04**	0.35**
	(0.02)	(0.02)	(0.00)	(0.03)
Firm's past contracts with recipient	−0.06**	−0.15**	−0.01**	−0.15**
	(0.02)	(0.02)	(0.00)	(0.03)
GCI: Higher education	0.32**	0.22**	0.05**	0.21**
	(0.07)	(0.05)	(0.01)	(0.05)
GCI: Innovation	−0.07	0.15**	−0.02	0.19**
	(0.07)	(0.04)	(0.01)	(0.04)
B's trade openness	0.00**	0.00**	0.00**	0.00**
	(0.00)	(0.00)	(0.00)	(0.00)
B's GDP growth	0.00	−0.01*	−0.00	−0.01
	(0.01)	(0.01)	(0.00)	(0.01)
B's GDP per capita	0.17**	0.16**	0.02**	0.13**
	(0.05)	(0.03)	(0.01)	(0.03)
CPI score	0.01*	0.01**	0.00**	0.01**
	(0.00)	(0.00)	(0.00)	(0.00)
Constant	−10.68**	−9.92**	−1.47**	−11.43**
	(0.34)	(0.18)	(0.05)	(0.23)
Observations	1,547,649	1,449,327	1,549,499	1,450,338
Pseudo R-squared	0.33	0.29	0.37	0.23
LL	−30071.9	−27977.3	−23027.4	−34129.4

Note. Logit and tobit models with recipient and year fixed effects (fixed effects are not reported); DVs = Contract award/amount; standard errors in parentheses. Unit of analysis: contract bid. * $p < 0.05$, ** $p < 0.01$.

Water, sanitation and flood protection sectors. At the same time, firms from countries with lower levels of the *Higher education* index are more likely to receive larger contracts in the Agriculture sector. These findings indicate that there may be a significant degree of sectoral variation in types of required expertise. In addition, the patterns of contract allocation may reflect varying levels

Table 3
Models of Consulting Contract Allocation (Non-Recipient Sample).

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
	DV: *Contract award* Logit models			DV: *Contract amount* Tobit models		
Ideal point distance		−1.59**	−0.48**		−1.75**	−0.40**
		(0.38)	(0.10)		(0.50)	(0.09)
Distance		−1.72**	−1.02**		−2.46**	−0.93**
		(0.38)	(0.06)		(0.56)	(0.07)
Recipient-bidder trade		0.14	0.08**		0.16	0.08**
		(0.11)	(0.02)		(0.14)	(0.02)
Bidder aid to recipient		0.22**			0.26**	
		(0.06)			(0.08)	
Bidder aid to recipient (dummy)			0.85**			0.80**
			(0.17)			(0.16)
Firm's annual contract value	0.45**	0.58**	0.47**	0.54**	0.84**	0.48**
	(0.03)	(0.13)	(0.06)	(0.03)	(0.19)	(0.06)
Firm's past contracts with recipient	−0.19**	−0.11	−0.22**	−0.20**	−0.19	−0.20**
	(0.03)	(0.14)	(0.07)	(0.03)	(0.19)	(0.06)
GCI: Higher education	0.27**	3.14**	0.55**	0.25**	3.49**	0.49**
	(0.07)	(0.61)	(0.14)	(0.08)	(0.80)	(0.13)
GCI: Innovation	0.17**	−2.27**	−0.54**	0.26**	−2.77**	−0.50**
	(0.04)	(0.32)	(0.09)	(0.04)	(0.44)	(0.09)
B's trade openness	0.00*	−0.01*	0.00*	0.00	−0.01	0.00*
	(0.00)	(0.00)	(0.00)	(0.00)	(0.01)	(0.00)
B's GDP growth	−0.04**	−0.04	−0.05**	−0.04**	−0.09	−0.05**
	(0.01)	(0.06)	(0.02)	(0.01)	(0.08)	(0.02)
B's GDP per capita	0.16**	0.97*	0.48**	0.15**	1.35*	0.42**
	(0.04)	(0.46)	(0.08)	(0.05)	(0.63)	(0.08)
CPI score	0.01**	0.03	0.02**	0.01**	0.04	0.02**
	(0.00)	(0.02)	(0.00)	(0.00)	(0.02)	(0.00)
Constant	−9.87**	−7.13	−2.93**	−13.88**	−8.31	−4.99**
	(0.27)	(5.39)	(0.61)	(0.36)	(7.30)	(0.60)
Observations	2,680,710	97,968	820,450	2,681,994	112,972	843,070
Pseudo R-squared	0.11	0.29	0.20	0.10	0.26	0.19
LL	−21262.9	−814.7	−4219.6	−24106.1	−1005.0	−4754.7

Note. Logit and tobit models with recipient and year fixed effects (fixed effects are not reported); DVs = Contract award/amount; standard errors in parentheses. Unit of analysis: contract bid. * p < 0.05, ** p < 0.01.

Table 4
Models of Consulting Contract Allocation by Sector (Agriculture; Public administration and law; Information and communication; Education; Finance).

	Agriculture	Public admin.	Information	Education	Finance
Recipient firm	4.99**	3.14**	1.14**	1.85**	1.78**
	(0.14)	(0.06)	(0.07)	(0.06)	(0.12)
Top WB donor firm	0.43**	0.04	−0.16	0.10	0.18
	(0.11)	(0.05)	(0.10)	(0.06)	(0.13)
Firm's annual contract value	0.17**	0.15**	0.03	0.05*	0.13**
	(0.04)	(0.02)	(0.02)	(0.02)	(0.04)
Firm's past contracts with recipient	−0.01	−0.03*	0.00	0.02	−0.03
	(0.04)	(0.02)	(0.01)	(0.02)	(0.03)
GCI: Higher education	−0.38**	0.02	−0.01	−0.08	0.66**
	(0.10)	(0.04)	(0.12)	(0.04)	(0.13)
GCI: Innovation	0.14	0.11**	0.29**	0.10*	−0.07
	(0.08)	(0.03)	(0.08)	(0.04)	(0.09)
B's trade openness	0.00	0.00**	−0.00	0.00	−0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
B's GDP growth	−0.02	−0.00	0.03**	−0.01*	0.03**
	(0.01)	(0.01)	(0.01)	(0.00)	(0.01)
B's GDP per capita	0.48**	0.07*	−0.01	0.10**	−0.26**
	(0.06)	(0.03)	(0.06)	(0.03)	(0.07)
CPI score	0.00	0.01**	0.00	0.00	0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Constant	−8.51**	−3.94**	−2.32**	−3.63**	−2.22**
	(0.45)	(0.20)	(0.30)	(0.20)	(0.42)
Observations	259,889	1,046,142	97,525	120,229	27,640
Pseudo R-squared	0.32	0.27	0.16	0.39	0.21
LL	−6580.9	−17275.5	−2641.5	−3502.9	−1685.4

Note: Tobit models with recipient and year fixed effects (fixed effects are not reported); DV = Contract amount; standard errors in parentheses. Unit of analysis: contract bid. * p < 0.05, ** p < 0.01.

of adherence to the World Bank's requirement to seek out highly qualified experts as providers of consulting services in different sectors.

Another type of expertise, i.e., knowledge accumulated by firms through their work with the World Bank in general, or World Bank-financed projects in a given recipient country, is another significant

Table 5
Models of Consulting Contract Allocation by Sector (Health and social services; Industry and trade; Energy and mining; Transportation; Water, sanitation and flood protection).

	Health	Industry	Energy	Transport	Water
Recipient firm	3.90**	5.05**	6.52**	4.78**	4.65**
	(0.10)	(0.19)	(0.19)	(0.13)	(0.23)
Top WB donor firm	0.02	0.31**	−0.08	0.05	−0.49*
	(0.08)	(0.11)	(0.11)	(0.08)	(0.22)
Firm's annual contract value	0.12**	0.11	0.26**	0.21**	0.12
	(0.03)	(0.06)	(0.05)	(0.04)	(0.11)
Firm's past contracts with recipient	−0.01	0.07	−0.08	−0.06	0.03
	(0.03)	(0.06)	(0.05)	(0.04)	(0.11)
GCI: Higher education	0.14*	0.41**	−0.03	0.52**	−0.35
	(0.07)	(0.15)	(0.13)	(0.09)	(0.23)
GCI: Innovation	0.09	−0.03	0.21*	−0.03	0.39*
	(0.05)	(0.09)	(0.09)	(0.07)	(0.16)
B's trade openness	0.00**	−0.00	−0.00	−0.00	−0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
B's GDP growth	0.01	0.00	−0.01	−0.06**	−0.03
	(0.01)	(0.02)	(0.02)	(0.01)	(0.03)
B's GDP per capita	0.05	0.09	0.29**	0.04	0.41**
	(0.05)	(0.09)	(0.08)	(0.05)	(0.13)
CPI score	0.01**	0.00	0.00	0.00	0.01
	(0.00)	(0.00)	(0.00)	(0.00)	(0.01)
Constant	−5.90**	−9.32**	−12.12**	−8.23**	−5.72**
	(0.29)	(0.58)	(0.56)	(0.40)	(0.75)
Observations	516,449	54,228	416,272	437,010	24,453
Pseudo R-squared	0.42	0.22	0.23	0.29	0.30
LL	−6393.9	−4056.1	−8364.2	−7917.4	−1657.5

Note: Tobit models with recipient and year fixed effects (fixed effects are not reported); DV = Contract amount; standard errors in parentheses. Unit of analysis: contract bid. * $p < 0.05$, ** $p < 0.01$.

determinant of consulting contract allocation. As *Firm's contract value* increases, the firm's portfolio of World Bank-funded contracts grows and hence its experience with such contracts increases as well. As Tables 1–3 show, this experience results in a greater probability of winning a contract award, as well as receiving more sizeable contracts. Figure 1 illustrates the relationship between experience and the likelihood of securing a contract. Sector-specific models in Tables 4 and 5 reflect a similar positive relationship between firms' experience and contract allocations in all but three sectors: Information and communication, Industry and trade, and Water, sanitation and flood protection. At the same time, a firm's experience with a given borrower does not help the firm to secure larger consulting contracts, and may even hurt, controlling for the firm's general experience with World Bank projects. This suggests that, controlling for the overall size of a firm's consulting portfolio with the World Bank, recipient governments do not view the firm's substantial experience in providing them with advice as an asset. Therefore, experience seems to matter, but only when it is broad based, rather than country-specific.

My expectation of a positive relationship between the control of corruption measure and contract awards also finds empirical support. Since *CPI score* takes higher values for countries with lower corruption risk, firms from less corrupt countries should receive more sizeable contracts for consulting services. As Tables 1 and 2 indicate, this variable has a statistically significant, positive relationship with contract awards across different specifications. The results in Table 3 are similar, with the exception of Models 2 and 4, where the coefficients on *CPI score* fail to reach statistical significance at the 0.05 level. Tables 4 and 5 report similar findings regarding the relationship between the corruption measure and contract allocation, but the positive coefficient on the control of corruption indicator is only significant in two out of ten models (in the Public administration and law, and Health and social services sectors). Since these two sectors added together account for 37 % of all contract awards, and the Public administration and law sector alone has the largest number of contract awards (and hence contract bid observations), it is likely that the positive and significant results in full-sample models are driven by the results
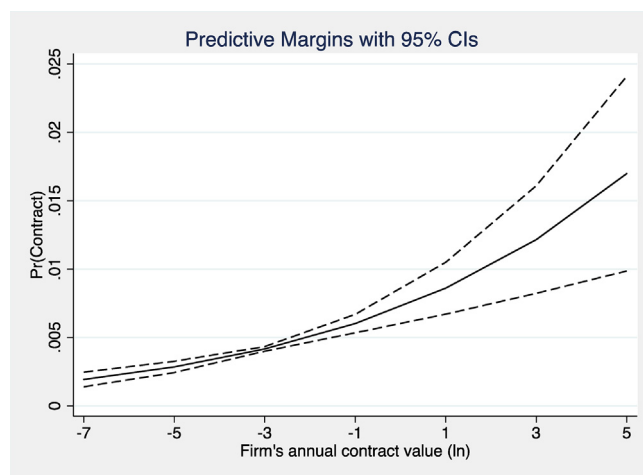

Fig. 1. Effect of Firm's Annual Contract Value on Contract Award Probability.

observed in these sectors. Intuitively, the World Bank should be particularly likely to emphasize the importance of protecting its projects and consulting bids from corrupt or fraudulent practices in the sectors that fund domestic institution-building activities, strengthening the rule of law and other similarly sensitive reforms in public administration, and law and justice.

The second set of results highlights the scale of borrowers' ability to shift contract allocation away from strictly expertise-based criteria in a way that reflects borrowers' interests. Firms from recipient countries enjoy a substantial advantage when it comes to consulting contract allocation. In every specification reported in Tables 1–5, recipient firms are substantially more likely to win contracts and receive larger contract amounts than firms from other countries, all else being equal. Given that the results are statistically significant in full-sample, split-sample models by contract size, and sector-based models, empirical evidence indicates that this advantage is not driven by any given sector or by smaller

contracts, which may be subject to less scrutiny by the World Bank, and that recipient governments consistently favor domestic firms when hiring consultants. To use the Public administration and law sector as an example, I calculate the predicted probability of a contract award for recipient firms versus non-recipient firms: the probability for the former is 0.163, whereas the probability for the latter is just 0.004, while all other regressors are fixed at their mean values.[21] Therefore, empirical evidence indicates a substantial degree of domestic preference in the procurement process, and such favorable treatment of domestic firms cannot be explained by their expertise or experience with World Bank contracts.

Firms from the World Bank's largest shareholder countries also receive some degree of preferential treatment in consulting contract allocation, but the extent of this bias is more limited than that in favor of domestic consultants. Table 1 shows that consulting firms from top donor nations are more likely to win a contract than firms from other countries and receive larger awards, all else being equal. To illustrate the size of the substantive effect, a company from a major donor country is 1.7 times more likely to receive a contract than a company from any other country. Results in Models 2 and 4 of Table 2 suggest that this effect is driven by larger contracts: while coefficients on the *Top WB donor firm* dummy are positive across all four models, they only reach statistical significance in models limited to more sizeable contracts.

Tables 4 and 5 indicate that these results for firms from major donor countries hold to some extent in sector-specific models too. Specifically, firms from top World Bank shareholder countries are favored to receive larger consulting contracts in two out of ten sectors: Agriculture, and Industry and trade. Logit models of contract awards yield similar results, as shown in the appendix. These results are substantively significant. A major donor's firm, for instance, is twice as likely to win a consulting contract in the Industry and trade sector than a firm from another country: the predicted probability of winning a contract award increases from 0.02 to 0.04 when the value of *Top WB donor firm* changes from 0 to 1, while the remaining regressors are held at their means.[22] Results for US firms in robustness checks reported in the appendix are weaker: in sector-based models, US firms are more likely to win Education contracts, whereas in other sectors these firms do not enjoy any advantage over non-US firms.[23] At the same time, US firms' preferential treatment in this sector is substantively significant: the predicted probability of receiving a contract is 0.02 for a non-US firm, and 0.03 for a US firm, while all other regressors are fixed at their means.[24]

Table 3 also provides evidence that borrowers' decision-making takes into account non-domestic factors – recipient governments influence contract allocation to favor their foreign economic and political partners. The key results that emerge from the models reported in Table 3 are suggestive of recipient governments' willingness to accommodate interests of their aid donors, trade partners, neighbors and like-minded governments. Specifically, firms from recipients' bilateral aid donors receive significantly more in contract awards than other firms: the coefficients on both aid variables are positive and statistically significant in Models 2, 3, 5 and 6. Similarly, volumes of trade between the recipient and bidder

countries have a positive and significant effect on contract allocation (Models 3 and 6), although two additional models (Models 2 and 5) yield positive results that are not statistically significant. At the same time, firms from countries that are more distant from the recipient, either geographically or ideologically, receive less in contract awards than other firms, all else being equal (Models 2, 3, 5 and 6). These findings are consistent with my theoretical expectations: recipient governments use Word Bank-financed contracts to maintain friendly relations with important economic and political partners.

Finally, several control variables yield statistically significant results. Bidder countries' economic capacity has a positive relationship with their firms' ability to secure consulting contracts. Specifically, full-sample models in Table 1 and split-sample models in Table 2 indicate that the bidder country's trade openness increases contract allocations. The results are more mixed when recipients are excluded from the sample in Table 3 and when I estimate sector-specific models in Tables 4 and 5. *GDP per capita* has a positive effect on contract allocation, indicating that firms from more advanced economies are in an advantageous position. This result is quite robust: the positive coefficient on GDP per capita reaches statistical significance in all full-sample, split-sample and non-recipient models (Tables 1–3), and five out of ten sector-based models (Tables 4 and 5). The third economic variable, *GDP growth*, does not have an effect on contract allocation in full-sample models (Table 1) and three out of four split-sample models (Table 2), but displays a negative relationship with contract awards when recipient firms are excluded from the sample (Table 3).

6. Implications for project implementation

What are some of the implications of these findings for implementation of World Bank-funded projects? I identify and briefly evaluate two considerations that seem particularly salient in the context of project implementation. The first is the relationship between the selection of consultants and the allocation of other contracts, i.e., goods and services contracts, which constitute a larger share of overall project procurement. The second is the effect of selected consultants on project implementation outcomes.

First, consultants can be involved at different project stages, from initial project development to project management. One particular area in which they can exercise influence is the procurement of goods and services necessary for project implementation. For instance, consultants can assist in developing technical specifications for required equipment. If such specifications are tailored sufficiently narrowly, competition for contracts could be substantially reduced. In this case, consultants could increase or decrease the likelihood that particular bidding companies will win contract awards.

While a complete exploration of consultants' interests and biases is beyond the scope of this article, research on foreign direct investment suggests that companies seek to reduce uncertainty and transaction costs by relying on established networks, which can be described as a familiarity effect (Leblang, 2010; Kim et al., 2015). In the context of international development projects, one source of familiarity could be the co-nationality of firms. Therefore, consultants from a given recipient country may be more likely to favor suppliers of goods and services from the same recipient country.

To explore whether there is some evidence of this familiarity effect in the allocation of goods and services contracts, I use data on all World Bank contracts awarded during the period under study. I then aggregate this information at the project level. I specify two sets of models. For the first specification, I construct a dummy variable, indicating whether at least one recipient com-

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[21] The 95% confidence interval is [.127, .199] for the predicted probability for recipient firms, and [.003, .004] for the predicted probability for non-recipient countries' firms. The results derived from the full-sample model (Model 1) in Table 1 show a similarly large substantive effect: the predicted probability of winning a contract equals .001, with the 95% CI of [.001, .001], for a non-recipient firm, and .216, with the 95% CI of [.209, .222], for a recipient firm.

[22] The 95% confidence interval is [.017, .071] for the predicted probability for major donors' firms, and [.013, .016] for the predicted probability for other countries' firms.

[23] These results are available in the appendix.

[24] The 95% confidence interval is [.015, .017] for the non-US predicted probability, and [.018, .038] for the US predicted probability.

Table 6
Models of Goods and Services Contracts Allocated to Recipient Firms.

	Model 1	Model 2	Model 3	Model 4
	DV: Recipient as supplier dummy		DV: Recipient share of contract amount	
Recipient consultant	0.93**	0.94**	2.44**	2.41**
	(0.18)	(0.18)	(0.55)	(0.55)
US consultant		0.21		0.44
		(0.13)		(0.31)
Canadian consultant		0.30		0.69
		(0.16)		(0.37)
French consultant		0.41**		1.12**
		(0.14)		(0.30)
German consultant		0.07		0.24
		(0.16)		(0.36)
Italian consultant		0.13		0.49
		(0.24)		(0.51)
Japanese consultant		0.88		2.05
		(0.74)		(1.11)
UK consultant		0.24		0.66
		(0.16)		(0.37)
IDA project	0.64**	0.62**	1.57**	1.55**
	(0.16)	(0.16)	(0.47)	(0.45)
Project cost	0.51**	0.47**	1.90**	1.79**
	(0.07)	(0.07)	(0.15)	(0.16)
Polity	−0.02	−0.02	−0.06	−0.05
	(0.01)	(0.01)	(0.05)	(0.04)
GDPPC (log)	0.03	0.06	0.18	0.26
	(0.09)	(0.09)	(0.24)	(0.24)
Population (log)	−0.17**	−0.15**	−0.33*	−0.27*
	(0.05)	(0.05)	(0.13)	(0.13)
Observations	2,536	2,536	2,538	2,538
LL	−1236.35	−1222.69	−8205.37	−8186.81

Note: Models with region and year fixed effects; standard errors clustered by recipient in parentheses. M1 and M2: logit models; M3 and M4: linear models. Unit of analysis: project. * $p < 0.05$, ** $p < 0.01$.

pany was selected to provide goods or services for a given project. For the second specification, I calculate the dollar amount of all goods and services contracts that were allocated to recipient companies, divided by the total amount of all contracts associated with a given project. The main explanatory variable is a binary indicator, *Recipient consultant*, which takes the value of one if at least one recipient country consultant was hired for a given project. The first specification is estimated with logit, and the second specification is estimated with a linear regression; in both cases, I include region and year fixed effects. I also include several controls, such as *IDA project, Project cost, Polity, GDP per capita,* and *Population*. In addition, I modify the main specifications by adding dummies for consultants from non-recipient countries.

The results reported in Table 6 suggest that, when a borrower awards consultant contracts to domestic firms, it is more likely to award goods and services contracts to domestic suppliers, all else being equal. The positive relationship holds in all four specifications, indicating that the finding of the co-national bias is robust to alternative techniques and measures. This association has non-trivial substantive consequences because recipient firms and experts succeed in securing a large share of consulting contracts. At the same time, the effect also holds for companies from other countries: consultants appear to favor suppliers of goods and services from co-national companies.[25]

Another implication of biased procurement of consulting services could be similar to the adverse effect of political and other biases in the aid allocation process. That is, effectiveness of development assistance tends to suffer when donors and/or recipients prioritize their political and economic interests, rather than the success of development programs. Therefore, in the next set of tests I probe whether there is any evidence that the substantial

domestic firm bias evident in the flow of human capital is potentially detrimental to project success.

I use project-level effectiveness evaluation data to assess whether the involvement of domestic consultant firms influences project outcome evaluations given to projects by the World Bank's Independent Evaluation Group (IEG).[26] While there may be a concern that such evaluations could suffer from biases if career incentives of the World Bank's project managers lead them to inflate the success level of projects, Kilby (2000) argues that there is little reason to suspect significant bias due to institutional constraints, including reviews by higher management. Project evaluations could also be vulnerable to the influence of geopolitical considerations. However, Kilby and Michaelowa (2019) find no evidence of such influence, concluding that the IEG has been able to function "as an institutionally independent unit" (141). Therefore, these evaluations can be viewed as proxies of project success.

I rely on two measures provided in the IEG database: the overall project outcome, and government performance. Each variable is an ordinal indicator, ranging from "Highly unsatisfactory" to "Highly satisfactory." I convert each rating to a six-point measure, ranging from 0 (highly unsatisfactory) to 5 (highly satisfactory), and use these measures as dependent variables in models of project effectiveness. In addition, I construct a measure of project duration as an alternative project outcome indicator. A project that takes more time from approval to completion is likely to encounter challenges during its implementation, and may be at a higher risk of failure to accomplish its objectives. Correlation coefficients between the duration measure and the IEG outcome and government performance indicators are −0.06 and −0.10, respectively, and both coefficients are significant at 0.01, which means that project duration may indeed reflect implementation difficulties. Therefore, I use duration as an additional indicator of effective project implementation.

[25] For instance, the bivariate correlation coefficient between the US consultant dummy and the US goods and services allocation dummy is .12, while for France it is .19, and in both cases the coefficients are significant at .01.

[26] The IEG evaluation database is available at http://ieg.worldbankgroup.org/data.

Table 7
Models of Project Duration and Effectiveness.

	Model 1 DV: Project duration	Model 2 DV: Project outcome	Model 3 DV: Government performance
Recipient consultant	2.83**	−0.14*	−0.18**
	(0.18)	(0.06)	(0.06)
Ideal point distance from US	−0.54*	0.28	0.33*
	(0.25)	(0.16)	(0.13)
IDA project	0.20	−0.05	−0.04
	(0.17)	(0.09)	(0.12)
Project cost	0.02	0.09**	0.02
	(0.05)	(0.03)	(0.03)
Polity	−0.05	−0.02	−0.02
	(0.03)	(0.02)	(0.01)
GDPPC (log)	0.43**	0.07	0.17
	(0.11)	(0.08)	(0.09)
Observations	4,293	4,228	4,005
LL	−10253.07	−5945.01	−5045.53

Note: Models with region and year fixed effects; standard errors clustered by recipient in parentheses. M1: linear model; M2 and M3: ordered logit models. Unit of analysis: project. * $p < 0.05$, ** $p < 0.01$.

Table 7 reports three models of project effectiveness. The main variable of interest, *Recipient consultant*, is a binary measure, which takes the value of one if a project employs at least one domestic consulting firm, and zero otherwise. I also include several controls, such as *Ideal Point Distance from US, IDA project, Project cost, Polity,* and *GDP per capita*. These variables capture the complexity of the project itself and the implementation environment in the recipient country. Previous studies have linked these factors to project success; therefore, my models include them as controls to avoid the omitted variable bias. Specifically, Denizer, Kaufmann and Kraay (2013) point out that country-level characteristics show a robust association with project outcomes and some dimensions of project complexity, such as project size, are similarly linked to project effectiveness. Similarly, in their study of projects funded by the World Bank and the Asian Development Bank, Bulman, Kolkma and Kraay (2017) show that project success depends on country-level implementation environment and project-level characteristics.

The estimation technique for the project duration model is OLS with region and year fixed effects, while the project effectiveness models are estimated with ordered logit, also with region and year fixed effects. The results suggest that domestic consultants are associated with increased project duration (Model 1), and lower project outcome and government performance assessments (Models 2 and 3, respectively). Therefore, the domestic firm bias appears to be detrimental to borrowers' ability to accomplish project objectives.

7. Conclusion

This article has argued that the politics of World Bank-funded contract allocation is shaped by recipient governments – multilateral aid agencies' stakeholders that tend to have less influence in influencing policy outcomes produced by these organizations than donor nations do. Recipients are able to exercise influence in the procurement process because they are in charge of allocation and administration of contracts funded by the World Bank. Recipient governments have strong incentives to shape this process: they can reward their domestic economic constituents by hiring local consulting firms, and their important economic and political part-

ners by awarding consulting contracts to firms from countries with significant bilateral ties to the recipient government administering the bidding process. In addition, the World Bank's major shareholders receive more favorable treatment, regardless of their bilateral ties with borrowers.

Empirical results presented in the article lend support to my expectations. While formal procurement rules impose constraints on the process of consulting contract allocation, these are not sole determinants of consultant selection. Availability of expertise in bidding firms' countries and a firm's experience in providing consulting services for World Bank-funded projects have significant positive effects on contract awards. At the same time, my findings identify firms that are in a more advantageous position in the bidding process: recipient companies and major World Bank shareholder firms, as well as suppliers from recipients' economic and political partner countries, receive more consulting contract allocations than other firms.

This article highlights the compromise between countries' interests in securing economic benefits from World Bank-funded contracts and the formal procurement rules that stem from the World Bank's mandate and require using multilateral aid in the most effective and efficient way possible. Recipient governments may use consulting contracts to buy goodwill and support domestically and internationally; however, this allocation bias means that the most qualified consultants may not always receive contracts. While the recipient country may benefit from improved domestic capacity of consulting firms and from advice that is more attuned to the local context, the recipient's project may not receive the most highly qualified advice, which appears to diminish the project's success. Donor governments may be similarly inclined to accept diminished effectiveness and efficiency of multilateral aid in exchange for a flow of benefits to their own domestic constituents. Such benefits also make it easier to defend resource allocation to multilateral aid organizations. The scale of costs associated with such biased contract allocation remains unclear: an assessment of the degree of inefficiency should estimate costs associated with procurement outcomes when contract allocation is swayed by recipients' interests. Such an assessment would be valuable in determining how biased contract allocation may influence the World Bank's ability to pursue its institutional objectives of economic growth and human development promotion.

CRediT authorship contribution statement

Elena V. McLean: Conceptualization, Methodology, Validation, Investigation, Data curation, Writing – original draft, Writing – review & editing.

Data availability

My replication dataset is available at https://doi.org/10.1016/j.worlddev.2022.106117.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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Appendix A. Supplementary data

Supplementary data to this article can be found online at https://doi.org/10.1016/j.worlddev.2022.106117.

References

Andersen, T. B., Hansen, H., & Markussen, T. (2006). U.S. politics and World Bank IDA-lending. *Journal of Development Studies, 42*(5), 772–794.

Baldacci, E., Clements, B., Gupta, S., & Cui, Q. (2008). Social spending, human capital, and growth in developing countries. *World Development, 36*(8), 1317–1341.

Barro, R. (2001). Human capital and growth. *American Economic Review, 91*(2), 12–17.

Branco, F. (1994). Favoring domestic firms in procurement contracts. *Journal of International Economics, 37*(1–2), 65–80. In press.

Bulman, D., Kolkma, M., & Kraay, A. (2017). Good countries or good projects? Comparing macro and micro correlates of World Bank and Asian Development Bank project performance. *The Review of International Organizations, 12*(3), 335–363.

Buntaine, M. (2016). *Giving aid effectively: The politics of environmental performance and selectivity at multilateral development banks*. Oxford University Press.

Clark, R., & Dolan, L. R. (2021). Pleasing the principal: U.S. influence in World Bank policymaking. *American Journal of Political Science, 65*(1), 36–51.

Collier, P. (2009). *War, guns, and votes: Democracy in dangerous places*. New York: HarperCollins.

Copelovitch, M. (2010). Master or servant? Agency slack and the politics of IMF lending. *International Studies Quarterly, 54*(1), 49–77.

Dávid-Barrett, E., & Fazekas, M. (2020). Anti-corruption in aid-funded procurement: Is corruption reduced or merely displaced? *World Development, 132* 105000.

Denizer, C., Kaufmann, D., & Kraay, A. (2013). Good countries or good projects? Macro and micro correlates of World Bank project performance. *Journal of Development Economics, 105*(November), 288–302.

Dorobantu, S., Lindner, T., & Müllner, J. (2020). Political risk and alliance diversity: A two-stage model of partner selection in multipartner alliances. *Academy of Management Journal, 63*(3), 1775–1806.

Dreher, A. (2004). A public choice perspective of IMF and World Bank lending and conditionality. *Public Choice, 119*(3–4), 445–464.

Dreher, A., & Jensen, N. M. (2007). Independent actor or agent? An empirical analysis of the impact of U.S. interests on IMF conditions. *Journal of Law and Economics, 50*, 105–124.

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

Dreher, A., Nunnenkamp, P., & Thiele, R. (2011). Are 'new' donors different? Comparing the allocation of bilateral aid between nonDAC and DAC donor countries. *World Development, 39*(11), 1950–1968.

Fleck, R. K., & Kilby, C. (2001). Foreign aid and domestic politics: Voting in Congress and the allocation of USAID contracts across Congressional districts. *Southern Economic Journal, 67*(3), 598–617.

Galor, O., & Tsiddon, D. (1997). The distribution of human capital and economic growth. *Journal of Economic Growth, 2*(1), 93–124.

Gibson, C. C., Hoffman, B. D., & Jablonski, R. S. (2015). Did aid promote democracy in Africa? The role of technical assistance in Africa's transitions. *World Development, 68*(April), 323–335.

Girod, D. (2012). Effective foreign aid following civil war: The nonstrategic-desperation hypothesis. *American Journal of Political Science, 56*(1), 188–201.

Girod, D., & Tobin, J. (2016). Take the money and run: The determinants of compliance with aid agreements. *International Organization, 70*(1), 209–239.

Hawkins, D. G., Lake, D. A., Nielson, D. L., & Tierney, M. J. (2006). *Delegation and agency in international organizations*. New York, NY: Cambridge University Press.

Heinzel, M. (2021). Divided loyalties? The role of national IO staff in aid-funded procurement. *Governance*, 1–21.

Jablonski, R. S. (2014). How aid targets votes: The impact of electoral incentives on foreign aid distribution. *World Politics, 66*(2), 293–330.

Kersting, E. K., & Kilby, C. (2016). With a little help from my friends: Global electioneering and World Bank lending. *Journal of Development Economics, 121* (3), 153–165.

Kilby, C. (2000). Supervision and performance: The case of World Bank projects. *Journal of Development Economics, 62*(1), 233–259.

Kilby, C. (2009). The political economy of conditionality: An empirical analysis of World Bank loan disbursements. *Journal of Development Economics, 89*, 51–61.

Kilby, C. (2013). The political economy of project preparation: An empirical analysis of World Bank projects. *Journal of Development Economics, 105*(November), 211–225.

Kilby, C., & Michaelowa, K. (2019). What influences World Bank project evaluations? In N. Dutta & C. R. Williamson (Eds.), *Lessons on foreign aid and economic development: Micro and macro perspectives* (pp. 109–150). Palgrave Macmillan.

Kim, M., Liu, A. H., Tuxhorn, K.-L., Brown, D. S., & Leblang, D. (2015). Lingua mercatoria: Language and foreign direct investment. *International Studies Quarterly, 59*(2), 330–343.

Leblang, D. (2010). Familiarity breeds investment: Diaspora networks and international investment. *American Political Science Review, 104*(3), 584–600.

Lucas, R. (2015). Human capital and growth. *American Economic Review, 105*(5), 85–88.

Martens, B., Mummert, U., Murrell, P., & Seabright, P. (2002). *The institutional economics of foreign aid*. New York: Cambridge University Press.

Masaki, T. (2018). The political economy of aid allocation in Africa: Evidence from Zambia. *African Studies Review, 61*(1), 55–82.

McLean, E. V. (2012). Donors' Preferences and Agent Choice: Delegation of European Development Aid. *International Studies Quarterly, 56*(2), 381–395.

McLean, E. V. (2015a). Multilateral aid and domestic economic interests. *International Organization, 69*(1), 97–130.

McLean, E. V. (2015b). A strategic theory of international environmental assistance. *Journal of Theoretical Politics, 27*(2), 324–347.

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

Milner, H. V. (2006). Why multilateralism? Foreign aid and domestic principal-agent problems. In D. L. Nielson, D. G. Hawkins, D. A. Lake, & M. J. Tierney (Eds.), *Delegation and agency in international organizations* (pp. 107–139). Cambridge University Press.

Mincer, J. (1984). Human capital and economic growth. *Economics of Education Review, 3*(3), 195–205.

Miyagiwa, K. (1991). Oligopoly and discriminatory government procurement policy. *American Economic Review, 81*(5), 1320–1328.

Neumayer, E. (2003a). The determinants of aid allocation by regional multilateral development banks and United Nations agencies. *International Studies Quarterly, 47*(1), 101–122.

Neumayer, E. (2003b). Do human rights matter in bilateral aid allocation: A quantitative analysis of 21 donor countries. *Social Science Quarterly, 84*(3), 650–666.

Nielson, D. L., & Tierney, M. J. (2003). Delegation to international organizations: Agency theory and World Bank environmental reform. *International Organization, 57*(2), 241–276.

Remmer, K. (2004). Does foreign aid promote the expansion of government? *American Journal of Political Science, 48*(1), 77–92.

Rickard, S. J., & Kono, D. Y. (2013). Think globally, buy locally: International agreements and government procurement. *Review of International Organizations*, 1–20.

Schneider, C. J., & Tobin, J. L. (2013). Interest coalitions and multilateral aid allocation in the European Union. *International Studies Quarterly, 57*(1), 103–114.

Schoultz, L. (1982). Politics, economics, and US participation in multilateral development banks. *International Organization, 36*, 537–574.

Stone, R. W. (2002). *Lending credibility*. Princeton University Press.

Stone, R. W. (2004). The political economy of IMF lending in Africa. *American Political Science Review, 98*(4), 577–592.

Stone, R. W. (2008). The scope of IMF conditionality. *International Organization, 62*, 589–620.

Stone, R. W. (2011). *Controlling institutions: International organizations and the global economy*. Cambridge University Press.

Thacker, S. C. (1999). The high politics of IMF lending. *World Politics, 52*(1), 38–75.

Trionfetti, F. (2000). Discriminatory government procurement and international trade. *The World Economy, 23*, 57–76.

Voeten, E., Strezhnev, A., & Bailey, M. (2009). *United Nations General Assembly voting data*. Harvard Dataverse, v17. hdl:1902.1/12379.

Vagstad, S. (1995). Promoting fair competition in public procurement. *Journal of Public Economics, 58*(2), 283–307.

Wright, J., & Winters, M. (2010). The politics of effective foreign aid. *Annual Review of Political Science, 13*(1), 61–80.

World Bank. (2011). Guidelines: Selection and Employment of Consultants Under IBRD Loans and IDA Credits & Grants by World Bank Borrowers. Washington, DC.

World Economic Forum (WEF). (2018). *Global Competitiveness Index 2017-2018. Appendix A: Methodology and Computation of the GCI 2017-2018*. Retrieved from *http://reports.weforum.org/global-competitiveness-index-2017-2018/appendix-a-methodology-and-computation-of-the-global-competitiveness-index-2017-2018/*. Accessed April 13, 2020.