# Measuring Donor Influence at the World Bank

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Previous research on international financial institutions (IFIs) has shown that organizations, such as the World Bank, are subject to political pressures from powerful donor states when allocating international financial assistance. This article seeks to broaden our understanding of the role of donor states in shaping the lending activities of the World Bank, by developing an additive index of donor-borrower relations for each of the Bank's top five largest financial contributors: Japan, Germany, the United Kingdom, France, and the United States. Utilizing regression analysis of the relationship between donor influence and the annual value of aid countries received during the period between 1990 and 2011, the data largely supports the null hypothesis that donor-borrower relations have no impact on the allocation of development aid. Contrary to the dominant explanation in the literature, the data suggests that donor influence from the Bank's top five largest donors, including the United States, has little to no impact on the World Bank's aggregate lending decisions. However, in reality, support for the null hypothesis may have more to do with inherent limitations in the newly developed donor-borrower relations indices (DBRI) rather than with the application of donor influence.

## Introduction

The World Bank Group (WBG), commonly referred to simply as the World Bank, is an international organization tasked with promoting economic development and combating poverty in the developing world. The WBG is comprised of several interrelated branches: the International Bank of Reconstruction and Development (IRBD) provides development services to middle-income countries, the International Development Association (IDA) offers discounted funding to the world's poorest countries, and the International Finance Corporation (IFC) and the Multilateral Investment Guarantee Agency (MIGA) provide aid to the private sector. As part of its mission, the WBG helps plan, implement, and fund development projects, which, among other things, build schools, water treatment plants, and hydroelectric dams. The World Bank is one of the largest, most well-funded and influential international institutions in the world. Given the depth of its resources, the scope of its reach, and its unique mandate, the Bank has a profound impact on the lives of millions of people across the globe.

Numerous studies have shown that across multiple dimensions the World Bank's lending decisions correlate with the United States' (US) political preferences. For example, studies have shown that countries with close economic and political ties to the US are more likely to receive development aid and to receive larger volumes of funding (Andersen et al. 2006; Dreher et al. 2009b; Fleck and Kilby 2006; Vreeland & Dreher 2014). The central conclusion of this research is that politically well-connected aid recipients receive greater amounts of development assistance than their less well-connected peers. Research on the politicization of the international financial institutions (IFIs) has traditionally focused on the influence of the US; however, there is good reason to suspect that other wealthy and political influential donors are similarly able to shape the Bank's lending decisions. Studies examining the World Bank from a principal-agent (PA) perspective have argued that the Bank is subject to political

pressures from multiple donor states, which often compete with one another to realize their disparate development agendas (Nielson and Tierney 2003; Nielson et al. 2006; Weaver 2008). The present study combines the insights of the foreign aid and principal-agent literature to examine the impact of a broader swath of donor influence at the World Bank. Specifically, this study expands the scope of relevant donors to include the Bank's top five largest financial contributors: the United States, Japan, Germany, the United Kingdom, and France<sup>i</sup>.

Conclusive evidence of the politicization of development aid has been difficult to obtain. Anecdotal accounts of donor meddling in the Bank's internal decision-making processes to steer development funding to friends and allies abounds (Gwin 1997; Toussaint 2008; Wade 2002), but such instances can be written off as outlier events that do not accurately reflect the Bank's typical behavior. As such, several studies have analyzed aggregate trends in the Bank's lending portfolio in search of systematic evidence of political interference. The nature of large scale, aggregate data analysis necessitates the use of uniform measures, which creates a methodological obstacle for researchers attempting to measure donor influence. What looks like political pressure in one context may not apply in others. To bypass this problem existing research tends to utilize indirect measures of donor influence based on assessments of donorborrower relations (Andersen et al. 2006; Fleck and Kilby 2006; Kilby 2013; Neumayer 2003). If donors are systematically intervening in the Bank's funding decisions, as anecdotal evidence suggests, it is reasonable to assume that they are steering aid toward friends and allies as opposed to enemies and rivals. If this is, in fact, the case, aggregate analysis of the Bank's various investment portfolios should show that aid recipients with closer ties to influential donors receive more aid on average than their peers with weaker or antagonistic relations to powerful donors.

Existing research generally confirms the presence of donor influence in the allocation of multilateral aid, finding a positive relationship between different dimensions of donorborrower relations and the amount of aid countries receive. For example, both Dreher et al. (2009) and Vreeland and Dreher (2014) find that temporary members of the United Nations Security Council (UNSC) receive disproportionately high levels of funding from the World Bank. Vreeland and Dreher (2014) argue that this is evidence that powerful countries pressure the Bank to increase lending to temporary UNSC members in exchange for their support on important votes undertaken by the Security Council. This interpretation is supported by additional evidence which shows that developing countries with close, economic, political, and geostrategic ties to the US are both more likely to receive development aid and to receive greater amounts of funding than their peers (Andersen et al. 2006; Fleck and Kilby 2006; Neumayer 2003).

Despite evidence confirming the presence of donor influence in the allocation of development assistance, our understanding of the extent of that influence is limited in two important ways. First, such evidence tends to focus mainly on the role of the US (Andersen et al. 2006; Fleck and Kilby 2006; Kilby 2013; Neumayer 2003) or does not specify the precise donor exerting pressure on the Bank (Dreher et al. 2009b; Vreeland and Dreher 2014). Therefore, we do not know if the US's influence is unique among donors or if other major financial contributors are similarly able to direct the flow of development funding. Second, while the logic of employing indirect assessments of donor influence remains consistent across the various studies on the subject, to our knowledge, no attempt has been made to develop a multifaceted and conceptually valid measure of donor-borrower relations. Existing studies utilize individual dimensions of donor-borrower relations, whether it be trade-ties,

bilateral aid, or voting behavior at the United Nations, as a proxy for donor influence. It is important, however, to explore how these different dimensions combine and interact, especially considering their use as a substitute for direct measures of donor influence. It is possible that each of these individual measures is picking up the causal influence of some omitted covariate other than donor influence. In order to be sure that the positive correlation observed in the existing literature is due to variation in donor-borrower relations, a more robust assessment of this dyadic relationship is necessary.

Following the work of those such as Andersen et al. (2006), Dreher et al. (2009b), Fleck and Kilby (2006), Vreeland and Dreher (2014), this study seeks to develop a novel measure of donor-borrower relations to more rigorously test the assertion that those with closer ties to the Bank's top donors receive greater amounts of aid than their less well-connected peers. Consequently, this study has created an index of donor-borrower relations to quantify the geostrategic ties between the Bank's clients and its top-five largest financial contributors.

Preliminary iterations of the donor-borrower relations index (DBRI) reveal surprising results. Contrary to the main finding of the World Bank literature, by utilizing an additive index of donor-borrower relations, this study reports evidence that there is no statistically significant relationship between ties to the US and the amount of aid recipients receive. At face value, this finding contradicts the main assertion of the foreign aid literature and implies that the US exerts no statistically significant influence on the IBRD's funding decisions. Further, expanding our assessment to include the Bank's other major financial-backers, there is similarly little evidence that donor-borrower relations are systematically correlated with the Bank's lending decisions. Interestingly, there is some suggestive evidence that countries with closer geostrategic ties to Japan and France are more likely to receive development aid from IBRD, though these findings remain tentative. These results overwhelmingly support the null hypothesis, calling into question the extent of donor influence at the World Bank; however, these results should be considered preliminary and thus taken with a grain of salt. In addition to the mass of evidence in the World Bank literature which supports donor influence arguments, Blemings (2017) recently found that utilizing a disaggregated assessment of donor-borrower relations generally confirms the presence of donor influence in the allocation of development aid.

The null findings reported here are possibly a result of poor construct validity related to the operationalization of the DBRI. The DBRI is a simple additive index, premised on the assumption that each subcomponent of the donor-borrower relationship (trade, bilateral aid, and political affinity at the UN General Assembly) are valued equally, however, there is some evidence to suggest that trade and donor aid are greater indicators of close donor-borrower relations than political affinity. Several studies have examined the Bank's lending behavior during similar time periods and found positive correlations between the Bank's lending practices and the amount of trade and bilateral aid received from the Bank's top donors (Blemings 2017; Andersen et al. 2006; Fleck and Kilby 2006; Neumayer 2003). In light of these studies, it seems that the support for the null hypothesis found here is due to conceptual validity errors in the measurement of donor-borrower relations. It is likely that alternative weighting specifications will yield different results. As such, the attempt here to develop a multifaceted and robust assessment of international political relationships represents a tentative first step in the right direction on the long road to understanding how such relationships impact the operation of international institutions (IOs) like the World Bank.

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The remainder of this article is organized as follows: Section I outlines the broad contours of the World Bank literature, elaborating on the logic of donor-influence arguments and specifying a set of hypotheses derived from it. Section II explains the data and methodology used to test the hypothesized relationship between donor-borrower relations and the amount of development aid countries receive, detailing the process by which the DBRI is created. Section III presents the results from a series of regression analyses of the relationship between the DBRI for each of the Bank's top-five donors and the value of aid received. Finally, a brief conclusion discusses the implications and limitations of this study.

#### Theory

Studies of the World Bank are largely divided into two categories, the foreign aid and the international organizations (IO) literature. The former specifically addresses the issue of aid allocation while the latter examines a broader swath of the Bank's behavior, with emphasis on institutional processes and organizational reform.<sup>ii</sup> In addition to focusing on different aspects of the Bank's operation, these two strands of literature develop largely competing conclusions about the Bank and the sources of its behavior. The present study draws on insights from both sets of literature to develop and test a set of observable implications regarding the role of international politics and donor-state influence in the provision of multilateral development aid.

The foreign aid literature focuses on variation in the allocation of financial assistance across bilateral and multilateral sources of funding, arguing that both types of aid are in part awarded according to international politics, with politically connected countries receiving greater amounts of foreign assistance than their less well-connected peers. Studies on the determinants of bilateral aid flows have consistently shown that wealthy donor states use aid as an instrument of statecraft, in which economic assistance is employed to bolster donor's foreign policy agendas (Alesina and Dollar 2000; Vreeland and Dreher 2014; Kuziemko and Wreker 2006)<sup>iii</sup>. In addition to the evidence from bilateral aid flows, the role of politics in allocating foreign aid is also observed at the International Monetary Fund (IMF). Numerous studies have demonstrated that politically well-connected countries receive preferential treatment from the IMF. The well-connected are more likely to receive aid in the first place, receive greater volumes of financial support than their peers, and receive aid with fewer strings attached (Dreher et al. 2009a; Dreher et al. 2015; Thacker 1999)<sup>iv</sup>.

Such findings are largely mirrored at the World Bank, where several studies have shown that politically connected countries receive preferential treatment from the World Bank as well (Dreher et al. 2009b; Andersen et al. 2006; Fleck and Kilby 2006). Dreher et al. (2009b) and Vreeland and Dreher (2014) have shown that temporary members of the United Nations Security Council (UNSC) receive a greater number of World Bank loans than non-UNSC members, suggesting that powerful donors pressure the Bank to lend more to temporary UNSC members in exchange for their votes on important decisions at the United Nations. The politicization of development aid is also observed at the UNGA, where several studies have shown that countries who vote similar to the United States are more likely to receive aid (Andersen et al. 2006; Kilby 2013; Neumayer 2003). Finally, Fleck and Kilby (2006) find evidence of a positive correlation between economic and political ties to the US and the amount of aid countries receive. Specifically, Fleck and Kilby show that countries who trade more with the US and that receive greater levels of direct bilateral aid from the US also tend to receive higher levels of World Bank funding than their peers. The underlying logic behind

these findings is that powerful donors, such as the US, intervene in the World Bank's internal decision-making process to steer aid towards friends and allies while pressuring the Bank to withhold funds to rivals and enemies (Gwin 1997; Wade 2002).

Despite the evidence of donor influence provided by the foreign aid literature, insights from IO studies on the World Bank add complicating wrinkles to how we think about this variation in the Bank's lending behavior. Several studies working from a principal-agent perspective have argued that the World Bank retains significant autonomy from powerful donor states and that it is often able to resist exogenous pressures (Nielson and Tierney 2003; Nielson et al. 2006; Weaver 2008)<sup>v</sup>. For example, Nielson and Tierney (2003) argue that because the Bank is beholden to multiple donors at once, often with divergent preferences, it is able to resist external pressures to reform by playing competing interests against one another to preserve the status quo. Similarly, Weaver (2008) argues that the Bank often engages in seemingly hypocritical behavior, in which it embraces certain institutional policies and reforms, only to fail to implement them, as a way to respond to competing pressures from multiple donor states. According to Weaver, such hypocritical behavior is a coping mechanism, which allows the Bank to appease its various donors while maintaining independence. Nielson et al. (2006) further highlight the Bank's autonomy from powerful donors by showing that reforms advocated by donor states are more likely to be adopted successfully when they "fit" within the Bank's existing organizational norms. Nielson et al. argue that outside pressure from donor states is unlikely to be received within the Bank unless it aligns with the Bank's internal culture and policies.

To summarize, the IO and foreign aid literature largely draw opposite conclusions about the relationship between donor influence and World Bank behavior. Nielson and Tierney (2003), Nielson et al. (2006), and Weaver (2008) stress the Bank's autonomy and highlight the difficulty states have in controlling international organizations. In contrast, Andersen et al. (2006), Fleck and Kilby (2006), Dreher et al. (2009b), and Vreeland and Dreher (2014) emphasize the impact donors have over the World Bank, arguing that powerful financial donors, such as the United States, intervene in the Bank's funding decisions to steer aid toward friends and allies. The present study draws on insights from both interpretations, to develop and test a set of hypotheses which expand the empirical analysis of donor influence over the World Bank's funding decisions. As emphasized in the IO literature, the World Bank is beholden to multiple donor states, each with potentially divergent preferences for how the Bank should allocate its development aid. As such, this study expands upon traditional measures of donor influence to examine the potential impact of each of the Bank's top five largest financial contributors-the United States, Japan, Germany, the United Kingdom, and France-on the allocation of development aid. Following the logic of donor influence arguments established by those such Andersen et al. (2006), Fleck and Kilby (2006), and Neumayer (2003), we should observe that borrowers with closer geostrategic ties to the Bank's largest financial backers receive greater levels of funding than their less wellconnected peers. In other words, we expect to observe a positive correlation between donorborrower relations and the value of aid recipients are awarded (hypothesis 1).

Based on insights from the IO literature, we know that international institutions like the World Bank are under pressure from multiple principals, including several prominent financial backers, beyond the United States. This would suggest that multiple donors are potentially able to influence the Bank's allocation decisions, directing funding toward their individual foreign policy goals. If this is true, we should observe a positive correlation

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between the donor-borrower relations with each of the Bank's top-five largest donors and the value of aid countries receive (*hypothesis 2*). Alternatively, it is possible that the Bank is able to navigate the push and pull of the alternative foreign policy preferences of its top donors, to cancel out such influence and maintain autonomy over funding decisions. In this case, the null hypothesis should be true, and we should find no correlation between donor-borrower relations and the value of aid received.

 $H_1$ : Donor-borrower relations are positively correlated with the value of aid countries receive from the World Bank.

 $H_2$ : Donor-borrower relations with the Bank's top five largest financial backers are positively correlated with the value of aid countries receive from the World Bank.

## Data and methodology

To test the hypotheses outlined in the previous section, this study creates an additive index of geostrategic ties between donors and borrowers referred to as the donor-borrower relations index (DBRI). To the best of our knowledge, the DBRI is the first measure which seeks to move beyond single dimensions of geostrategic relations to capture the broader and more multifaceted nature of the relations between countries in their international relations. The patterns in donor-borrower relations which are captured by the DBRI, serve as an indirect or proxy measure of donor influence over the aid allocation process at the World Bank. Trends in the DBRI, are compared against the loan portfolio of the main agency of the World Bank for the period between 1990 and 2011. The relationship between donor-borrower relations and the value of aid countries received is evaluated utilizing a series of quantitative analyses: a basic OLS linear regression model and a two-stage selection model.

The main dependent variable of interest, *Value of Aid*, measures the annual amount of development assistance a country received from the main agency of the World Bank, the International Bank for Reconstruction and Development (IBRD), measured in constant 2005 USD. In addition, a log measure of the value of aid (*Ln Value of Aid*) is included to smooth out the high levels of variance in the distribution of development aid<sup>vi</sup>. This measurement choice is common among existing studies on the determinants of World Bank lending including Andresen et al. (2006) and Vreeland and Dreher (2014)<sup>vii</sup>. Data on the IBRD's loan portfolio is obtained from the World Bank's Projects and Operations Database available online.

The main explanatory variables of interest in this study are a newly designed set of additive indices intended to quantify the extent of geostrategic relations between the World Bank's top financial backers and its clients. The donor-borrower relations indices are intended to capture the strategic importance of aid recipients to the Bank's largest donors on a scale ranging from (0-16). Zero indicates absolutely no ties between an aid recipient and a donor, while sixteen indicates very close ties. The indices are composed of three dimensions of the relationship between countries, including trade flows, bilateral aid exchanged, and political affinity at the UN General Assembly—all factors which have individually shown positive correlation with the Bank's lending decisions (Andersen et al. 2006; Dreher et al. 2009; Fleck and Kilby 2006; Vreeland and Dreher 2014). Each individual dimension of donor-borrower relations (exports, imports, bilateral aid, and political affinity) is divided along an ordinal level measurement scale corresponding to the categories: no relations = 0, weak relations = 1, moderate relations = 2, strong relations = 3, and very strong relations =  $4^{viii}$ . For example, countries which make up a very small amount of the US export market would receive a value

of 1 for the strength of their export relations with the US, while countries which purchase large volumes of US exports would receive a value of 4. This process is repeated across the four different dimensions, resulting in a maximum DBRI score of 16, indicating very close geostrategic ties between a donor-borrower dyad. Assignment to each category (0-4) is determined by dividing each dimension into quartiles corresponding to the categories low through very high, with no relations corresponding to zero.

The final DBRI score is an additive assessment of how close the Bank's clients are to a given donor, assuming that each of the four dimensions of donor-borrower relations is valued equally<sup>ix</sup>. For example, a country with very strong trade ties to the United States, which also receives high levels of bilateral aid, and tends to vote with the US at the UN General Assembly would receive a maximum *US index* score of 16. According to the logic of donor influence arguments, the United States intervenes in the Bank's funding decisions on behalf of such countries to steer greater levels of development funding their way. If donor influence arguments are correct and the Bank's principal donors are interfering in the IBRD's funding decisions, we should observe a positive relationship between the various donor-borrower relations indices and the *Value of Aid*.

The use of donor-borrower relations measures allows us to gain insight into the broad aggregate patterns in the allocation of development aid. Using such measures, we can assess the total impact of politics on the Bank's funding decisions. While such an approach allows for a holistic assessment, it necessarily entails sacrificing precision for generalizability. Proxy measures cannot offer definitive proof of donor influence, but they can provide robust suggestive evidence which spans a great number of cases and periods of time.

#### Table 1: Components of the Donor-Borrower Relations Index (DBRI)

Category (Range)	Description
Trade: Exports (0-4)	The Strength of Export Relations *Based on the annual value of donor exports purchased (constant USD) -Very Strong Relations (4) -Strong Relations (3) -Moderate Relations (2) -Weak Relations (1) -No Relations (0)
Trade: Imports (0-4)	The Strength of Import Relations *Based on the annual value of imports sold in donor countries (constant USD) -Very Strong Relations (4) -Strong Relations (3) -Moderate Relations (2) -Weak Relations (1) -No Relations (0)
Bilateral Aid (0-4)	The Strength of Development Relations *Based on the annual amount of bilateral donor aid received (constant USD) -Very Strong Relations (4) -Strong Relations (3) -Moderate Relations (2) -Weak Relations (1) -No Relations (0)
Political Affinity (0-4)	The Strength of Political Affinity *Based on annual average vote similarity at the UNGA -Very Strong Relations (4) -Strong Relations (3) -Moderate Relations (2) -Weak Relations (1) -No Relations (0)
DBRI Scale (0-16)	

Each of the four dimensions is divided into quartiles, based on their individual distributions relative to each of the top-five donors (United States, Japan, Germany, United Kingdom, & France). The strength of relations across each dimension is then summed for each donor-borrower dyad to arrive at the final DBRI Score (for details refer to Appendix A).

The data involved in the creation of the DBRI are derived from several sources. Data on trade flows between countries are obtained from the IMF's Direction of Trade Statistics data series. Data on the annual amount of bilateral aid awarded from donors directly to borrowers are available through the Organization for Economic Cooperation and Development (OECD). The final component of the index's centers on voting patterns at the UNGA. Several studies have shown that vote similarity at the UN is correlated with the lending behavior of the international financial institutions (IFIs) (Thacker 1999; Dreher and Jensen 2003; Barro and Lee 2003). The data on political affinity is derived from records of UN voting behavior provided by Strezhner and Voeten (2013). The specific measures of political affinity employed

in the creation of the donor-borrower relations indices are novel, as assessments of the dyadic vote similarity between all borrowers and each of the Bank's top donors were not previously available<sup>x</sup>.

In addition to the DBRI, which proxies for donor influence, this study also controls for several demographic and economic covariates which likely influence the IBRD's funding decisions. Such factors include population, gross domestic product, per capita income, annual economic growth rates, domestic savings, and foreign direct investment (FDI)<sup>xi</sup>. Data for all of the demographic and economic controls were obtained from the World Bank's World Development Indicators (WDI) data series.

The sample of panel-data used in this study covers the period between 1990 and 2011 and includes 57 different countries, for a total sample size of  $n=1,264^{xii}$ . To be included in the sample, observations had to pass a three-step case selection process, designed to isolate those countries with an existing financial relationship to the IBRD. In order to be included in the sample, countries must have been a member of the IBRD during the entire period under study, have borrowed at least once during that period, and data must be available for all of the explanatory variables<sup>xiii</sup>. This selection criterion focuses on only those countries with no need for the World Bank's services and developing countries, which, for whatever reason, have never borrowed from the Bank. As such, this sample provides an accurate snapshot of the IBRD's loan portfolio for the 1990s and the first decade of the 2000s—omitting only borrowers for which complete data is unavailable or those who joined the Bank during the study period, thus running afoul of panel-data analysis<sup>xiv</sup>.

This sample may elicit concerns about selection bias. Some may be worried that in focusing only on countries who have borrowed, the coefficients produced by regression analysis will be biased and therefore inaccurate. There are two variants of this concern. The first is that such a research design fails to speak to the experiences of those countries which are likely to borrow but never have. To a certain extent, this is a valid criticism; however, it does not hinder the specific research objective of this particular inquiry. This study is concerned with understanding why some countries receive more aid than others. The implicit scope condition inherent in this project is that all results apply only to those nations which have a financial relationship with the Bank—those that have borrowed at least once. Given the opaque nature of the World Bank's lending process, we have no way of precisely discerning whether a country has elected not to borrow, as is the case with prosperous developing countries, or whether would-be borrowers are denied access. As such, any country that has not borrowed falls outside the purview of this study. All generalizations derived from this project apply only to those countries with an established financial relationship with the Bank.

The second concern regarding selection bias is that, if international politics renders some countries more likely to receive aid, then focusing on only those countries which have borrowed potentially underestimates the effect of politics on the Bank's funding decisions. This would be a problem if there were little temporal variation in the Bank's lending portfolio and recipients received aid every year. There is, however, significant variation in the timing and frequency of when countries are awarded funding. Very few countries receive aid every year, rather most countries receive aid sporadically—with the notable exception of countries like China, India, and Brazil. In fact, a substantial proportion of the observations on the dependent variable are years in which a particular country received no aid at all. An example of this is illustrated in the left-hand side of Figure 1. Within the sample of the IBRD loans, the

percentage of observations in which no aid was received in a given year is at just above 50%. The presence of so many zero observations nullifies the concern that the sample is biased in favor of those which receive aid. If anything, the sample is biased conservatively against the influence of international politics. The presence of so many zero observations increases the standard errors associated with any individual regression coefficient; in effect creating a difficult test to pass. Therefore, any evidence demonstrating the influence of international politics should be considered especially rigorous given the higher threshold required to attain statistical significance.

#### Figure 1: Zero-Point Clustering on the Response Variable



On the left-hand side, we have the relationship between the Value of Aid and population. Here we can see the large concentration of zero observations on the dependent variable (instances in which no aid was awarded in a given year). On the right-hand side, we see the same relationship expressed using a log-scale without the zero observations. This comparison highlights the distorting effect of numerous zero observations (non-events) for continuous response variables.

While the relatively high percentage of zero observations on the dependent variable creates a difficult test to pass, thus strengthening any conclusions drawn from statistically significant results, it may also risk the problem of zero-point clustering (as illustrated on the left-hand side of Figure 1). Zero-point clustering occurs when there is a large proportion of observation on the dependent variable for which no event occurred-in this case when countries do not receive development aid in a specific year (Belotti et al. 2015). If the concentration of zeros (non-events) is severe enough it can bias the coefficients produced by regression analysis, effectively masking the true relationship between the response and explanatory variables. The presence of a large concentration of non-events in the distribution of a continuous response variable will flatten the slope of the regression line associated with any given explanatory variable. Additionally, the severity of zero-point clustering also impacts the standard errors associated with each coefficient, increasing the average amount of error and undermining the generalizability of the results. It is worth repeating that the presence of such bias would act conservatively against the influence of politics in the aid allocation process, but for the purposes of this study, merely establishing the presence of donor influence represents a step forward.

To address the potential problems associated with zero-point clustering, an additional set of analysis is conducted using a two-stage model, similar to the common Heckman section model. During the first stage, the model estimates the probability of receiving World Bank aid (PR Aid), while the second stage estimates the *Value of Aid* received for only those observations in which aid was awarded (Heckman 1979). This approach essentially breaks the data into two separate samples, allowing us to accurately assess the influence of the explanatory variables without the distorting effects of all the zeros (non-events).

In sum, to evaluate the impact of donor influence over the World Bank's lending decisions, this study creates an index of donor-borrower relations to quantify the geostrategic relations between the Bank's clients and its top donors. Patterns in DBRIs for each of the Bank's top five largest donors are compared against two measures of the annual value of aid countries have received, the *Value of Aid* and the *Ln Value of Aid*. To evaluate the relationship between these variables, a series of three quantitative models is developed. The first utilizes basic OLS regression analysis of the factors influencing the *Value of Aid*. The second follows the same approach, but for the *Ln Value of Aid*. Finally, a third variant employs a two-stage selection model for the *Value of Aid*.

#### Results

According to the logic of donor influence arguments, powerful donor countries intervene in the aid allocation decisions of the IFIs to steer funding to their friends and allies while withholding development support from enemies and rivals. Existing evidence suggests that the United States has historically exerted such influence over the Bank (Andersen et al. 2006; Fleck and Kilby 2006; Kilby 2013; Neumayer 2003). I extended the logic of donor influence arguments to test whether the Bank's other leading financial backers are similarly able to guide the flow of development funding. Specifically, I hypothesize that donor-borrower relations relative to each of the top donors are positively correlated with the amount of World Bank funding countries receive. In order to test this proposition, I employ an indirect assessment of donor influence based on the political relationships between each of the Bank's top five largest donors and a sample of countries which borrowed from the World Bank between 1990 and 2011. Utilizing an additive index of donor-borrower relations, I find little support for traditional donor influence arguments. In contrast with the major findings of the foreign aid literature, I find no statistically significant relationship between geostrategic ties with the United States and the value of aid countries receive from the IBRD. Expanding the analysis beyond US influence yields similarly weak support for donor influence arguments. There is some evidence to suggest that countries with close ties to both the United Kingdom and Germany actually receive less development aid instead of more, as predicted. One exception to these results is that countries with close ties to Japan and France were more likely to receive development aid from the IBRD. Beyond this limited support, however, the donorborrower relations indices largely fail to operate as expected.

Table 2: Influences on the Value of Aid Countries Receive from the IBRD

	(1)	(2)	(3)	(4)
VARIABLES	Value of Aid	Ln Value of Aid	Pr (Aid)	Value of Aid
Ln Population	1.149e+08***	0.667***	0.0181	2.745e+08***
-	(3.796e+07)	(0.154)	(0.233)	(8.896e+07)
Ln GDP	7.704e+07*	0.209	0.454**	3.902e+07
	(3.965e+07)	(0.149)	(0.230)	(8.616e+07)
Ln Income	1.052e+08**	0.519***	0.190	3.287e+08***
	(4.316e+07)	(0.158)	(0.226)	(9.144e+07)
Growth Rate	1.899e+06	0.0106	0.0172	1.207e+06
	(2.564e+06)	(0.0110)	(0.0170)	(6.379e+06)
Savings	-3.825e+06***	-0.0114***	-0.0179***	-383,630
_	(1.177e+06)	(0.00373)	(0.00531)	(2.155e+06)
Ln FDI	3.034e+07***	-0.0579	-0.117**	1.338e+07
	(7.139e+06)	(0.0397)	(0.0550)	(2.293e+07)
US Index	-1.924e+06	-0.00414	0.0385	-3.017e+06
	(5.264e+06)	(0.0261)	(0.0360)	(1.507e+07)
UK Index	9.507e+06	-0.0894***	-0.0813**	1.669e+07
	(7.347e+06)	(0.0311)	(0.0412)	(1.799e+07)
JP Index	-3.873e+06	-0.0230	0.132***	-1.905e+07
	(8.454e+06)	(0.0284)	(0.0417)	(1.645e+07)
GR Index	-3.931e+07***	0.0288	-0.00478	-4.752e+07**
	(1.190e+07)	(0.0371)	(0.0585)	(2.146e+07)
FR Index	2.888e+06	0.0102	0.0870**	-6.923e+06
	(4.790e+06)	(0.0261)	(0.0386)	(1.509e+07)
Constant	-4.480e+09***	0.679	-11.74***	-7.276e+09***
	(3.965e+08)	(1.028)	(1.519)	(5.945e+08)
Sample Size	1,208	607	1,208	607
R-squared	0.306	0.621	Pseudo .16	.396

Standard errors reported in parentheses (\*\*\* p < 0.01, \*\* p < 0.05, \* p < 0.1). Column 1 reports the results from the standard model using PCSEs. Column 2 lists the results for a log version of the value of aid. Columns 3 & 4 report the results from the two-stage model. Column 3 reports the findings for stage one, the probability of receiving aid based on a logit model, while column 4 reports the results for stage two, after accounting for the likelihood of receiving aid.

Table 2 reports the results of the regression analysis across several different model specifications. Column 1 reports the results from the standard OLS regression model<sup>xv</sup>. Column 2 presents the findings for a version of the model based on a log measure of the dependent variable. Finally, columns 3 and 4 report the results of the two-stage model, which accounts for any potential problems related to zero-point clustering. Here we can see that aid recipients' relations with the United States have no statistically significant impact on the amount of aid they receive from the IBRD. Further, and in contrast with donor-influence arguments, the coefficients associated with the *US Index* are consistently negative across model specifications, indicating that, for the countries included in the sample, closer relations with the United States are surprisingly associated with less development aid. This finding fails

to support hypothesis 1 and suggests that contrary to existing studies, the World Bank is free from US political influence.

The evidence regarding hypothesis 2 is slightly mixed, but also largely fails to support expectations. The coefficients that measure donor-borrower relations with the UK and Germany yield statistically significant negative results, which undermines hypothesis 2 and strongly clashes with the implications of the foreign aid literature. As illustrated in Figures 2 and 3, countries with closer geostrategic ties to the United Kingdom are both less likely to receive IBRD funding (Model 3 Stage 1) and are found to receive less development aid than their peers (Model 2). Similarly, those with closer ties to Germany are also shown to receive less development aid from the IBRD. The data does offer very limited support for hypotheses 1 and 2 in that IBRD clients with higher DBRI scores for their relations with both Japan and France are found to be more likely to receive development assistance from the Bank. As reported in Column 3 of Table 2 and illustrated in Figure 3 (Stage I), those with closer geostrategic ties to Japan and France are statistically more likely to receive an IRBD loan in any given year than their peers. Taken as a whole, these findings largely refute hypotheses 1 and 2, and contradict donor influence arguments, suggesting that the Bank is much more independent than the dominant narrative of the foreign aid literature asserts.

#### Figure 2: Interval Estimates of Donor Influence (95% Confidence) Models 1 & 2







In addition to the results pertaining to donor influence, analysis of the IBRD's loan portfolio during the 1990s and early 2000s reveals that the main agency of the World Bank allocates a greater share of its resources to large, economically productive countries with relatively high levels of affluence and potentially greater access to foreign sources of capital. The coefficients for population, GDP, per capita income, and FDI all yield consistently positive and statistically significant results. In other words, larger, more economically successful IBRD clients are found to receive greater levels of funding than their smaller, less economically robust peers. In some respects, these results make sense, as the IBRD concentrates the majority of its investment in large developing economies which represent safe returns on investment. On the other hand, these findings are strikingly out of sync with the Bank's image as a development institution working for the world's poorest. Among IBRD's aid recipients, the weakest economies seem to be receiving the least amount of development support<sup>xvi</sup>.

Overall, the results pertaining to the role of international politics largely support the null hypothesis and, in some cases, suggest the opposite relationship predicted by donor influence arguments. There is limited suggestive evidence that Japan and France may be pressuring the Bank to provide loans to their friends and allies but given the overall weakness of the results produced by the DBRI measures, such findings should be considered tentative. At face value these findings cast doubt on the validity of donor influence arguments, however, it is important to situate these findings within a broader context. Within the literature on the subject, a growing number of studies have found a positive association between US influence and lending decisions of the World Bank. As such, it is possible that the weak support for donor influence arguments found in this study result from construct validity limitations inherent to the creation of the DBRIs. When constructing the indices, for example, each of the various subcomponents (trade, bilateral aid, and political affinity) were treated as equally important dimensions of donor-borrower relations, it is possible, however, that some of these dimensions are more important than others and that less salient components are masking the true impact of international politics.

Additionally, when creating the DBRIs, these subcomponents, most of which are interval-level phenomenon, were truncated into an ordinal level measurement scale. The process by which this conversion was implemented relied on dividing the distribution of each component into quartiles corresponding to low through high levels of strategic importance. It is possible that in flattening the data in this way, the true nature of the strategic relationship was obscured or distorted. Subsequent efforts to develop valid and robust measures of the political relationships between countries should focus on alternative weighting and measurement schemes which may yield results more consistent with the dominant conclusions of the foreign aid literature. Alternatively, if such studies also fail to support donor-influence arguments, it may be necessary to reexamine the empirical basis of the emerging consensus within the foreign aid literature—that aid is awarded, in part, according to the preferences of powerful donors such as the United States.

Given the inconclusive results of this study, some readers may be inclined to reject donor influence arguments and conclude that the World Bank is largely an independent actor awarding development aid according to its own private preferences. Some have suggested that internal divisions among the Bank's executive board—which is made up of representatives from each member state—prevent powerful donors from influencing lending decisions. Others have suggested that the Bank suffers from a form of agency slack, in which the Bank's principal donors, represented on the executive board, are unable to control the behavior of the Bank's lending staff. Yet, while such interpretations are consistent with the findings of the present study, they are not supported by either the broader findings of the World Bank literature or the internal structure of the Bank itself.

On the first point, that there may be little consensus among the executive board, it may be the case, that the US's preferences for how multilateral development aid is awarded are accurately captured by the DBRI, but that those preferences are not effectively translated into reality due to bureaucratic politics among the Bank's executive directors. However, while this conclusion is consistent with the findings of this paper it is inconsistent with other well-established facts. The most obvious being the previously mentioned studies, which find statistically significant evidence of donor influence over the Bank's lending practices (Blemings 2017; Andersen et al. 2006; Fleck and Kilby 2006; Neumayer 2003). Additionally, it has been well documented that the Bank has a pro-lending bias, in which the vast majority of loans presented to the executive board are approved, so much so, that the executive board has been criticized as being little more than a rubber-stamp.

On the second point, regarding the issue of the executive board's control over the lending bureaucracy; while there is certainly a significant amount of agency slack at the World Bank, especially related to issues of environmental and good governance reforms, the structure of the funding approval process effectively ensures the board's control over the rank-and-file loan officers. The board has final authority over all lending decisions and no loans can be funded without the authorization of the executive board. In practice, the board is often overwhelmed with loan requests, forcing it to give superficial analysis to the details of any given project, thus allowing staff to circumvent specific policy preferences of donors, but the lending bureaucracy cannot award funding without board approval.

Finally, some have criticized the indirect approach of measuring donor influence employed in this study, arguing that the real preferences of donors cannot be truly known without direct engagement with the Bank's staff. On this point, I completely agree. The most effective way to determine whether the Bank's top donors intervene in its lending decisions would be to utilize a two-step multi-method process. The first step would involve documenting a positive correlation between donor-borrower relations and the value of aid countries receive. The second step would be to confirm that the observed correlation is in fact due to donor influence, by speaking directly to the Bank's loan staff, who guide loan applications from conception to board approval. Without such triangulation, even statistically significant results are open to alternative explanations. Following the trend of the existing literature, the present study is concerned with step one in this two-stage process. Before going to speak with Bank officials, it is important to have a solid understanding of the descriptive facts of the Bank's loan portfolio.

#### Conclusion

This study has sought to expand arguments about the nature of donor influence over the World Bank and to develop a more rigorous assessment of donor-borrower relations. The dominant narrative in the foreign aid literature suggests that the World Bank is largely beholden to its largest financial backer, the United States. However, insights from the IO literature suggest that the Bank is actually subject to political pressures from multiple donors beyond just the US. This study has developed a novel set of measures to quantify the geostrategic ties between the Bank's clients and its largest and most politically influential donors. Utilizing additive indices of donor-borrower relations, this study finds little evidence of donor influence over the Bank's aid allocation process, related to the US or other top donors. These findings seem to support the conclusions of the PA literature, which stresses the autonomy of international institutions like the World Bank. However, the weak findings related to donor influence may be the result of measurement limitations and not necessarily an indictment of the efficacy of donor influence arguments. Additional research and further development of measures of donor-borrower relations are necessary in order to speak more definitively about the relationship between international politics and the allocation of multilateral development aid.

Appendix A: Index codings for relations with countries

Index coding for relations with the United States

Variable	No ties (Very Low)	l <sup>st</sup> quarter (Low)	2 <sup>nd</sup> quarter (Middle)	3 <sup>rd</sup> quarter (High)	4 <sup>th</sup> quarter (Very High)
US Exports (annual)		Less than 1 - 116	117 - 847	848 - 3,480	3,481 - upwards
US Imports (annual)		Less than 1 - 111	112 - 1,083	1,084 - 4,714	4,715 - upwards
US Aid (annual)		Less than 100k	100k - 6.5	6.6 - 51	52 - upwards
US Affinity (annual)		.2143	.4456	.5771	.72 - upwards

 $(Very \ low = 0, \ Low = 1, \ Middle = 2, \ High = 3, \ Very \ High = 4)$ 

\*Trade data is expressed in millions of \$US

Index coding for relations with the United Kingdom

Variable	No ties (Very Low)	l <sup>st</sup> quarter (Low)	2 <sup>nd</sup> quarter (Middle)	3 <sup>rd</sup> quarter (High)	4 <sup>th</sup> quarter (Very High)
UK Exports (annual)		Less than - 32	33 - 119	120 - 600	601 - upwards
UK Imports (annual)		Less than - 37	38 - 176	177 - 869	870 - upwards
UK Aid (annual)		Less than 110k	110k - 1.24	1.25 - 7.6	7.7 - upwards
UK Affinity (annual)		.93 - 1.14	1.15 - 1.24	1.25 - 1.33	1.34 - upwards

 $(Very \ low = 0, \ Low = 1, \ Middle = 2, \ High = 3, \ Very \ High = 4)$ 

#### Index coding for relations with Japan

Variable	No ties (Very Low)	l <sup>st</sup> quarter (Low)	2 <sup>nd</sup> quarter (Middle)	3 <sup>rd</sup> quarter (High)	4 <sup>th</sup> quarter (Very High)
JP Exports (annual)		Less than 1 - 39.7	39.8 - 196	197 - 1,218	1,218 - above
JP Imports (annual)		Less than 1 - 14.1	14.2 - 94	95 - 655	656 - above
JP Aid (annual)		Less than 430k	430k - 8.3	8.4 - 42.6	42.7 - above
JP Affinity (annual)		1.28 - 1.45	1.46 - 1.52	1.53 - 1.60	1.61 - above

(Very low = 0, Low = 1, Middle = 2, High = 3, Very High = 4)

Index coding for relations with Germany

Variable	No ties (Very Low)	l⁵t quarter (Low)	2 <sup>nd</sup> quarter (Middle)	3 <sup>rd</sup> quarter (High)	4 <sup>th</sup> quarter (Very High)
GR Exports (annual)		Less than 1 - 45.5	45.6 - 232	233 - 1,581	1,581 - above
GR Imports (annual)		Less than 1 - 29.9	30 - 258	259 - 1,251	1,252 - above
GR Aid (annual)		Less than 510k	510k - 14	15 - 37.4	37.5 - above
GR Affinity (annual)		1.15 - 1.34	1.35 - 1.43	1.44 - 1.51	1.52 - above

 $(Very \ low = 0, \ Low = 1, \ Middle = 2, \ High = 3, \ Very \ High = 4)$ 

## Index coding for relations with France

Variable	No ties (Very Low)	l <sup>st</sup> quarter (Low)	2 <sup>nd</sup> quarter (Middle)	3 <sup>rd</sup> quarter (High)	4 <sup>th</sup> quarter (Very High)
FR Exports (annual)		Less than 1 - 37.2	37.3 - 317	318 - 1,018	1,019 - above
FR Imports (annual)		Less than 1 - 23.5	23.6 - 230	231 - 907	908 - above
FR Aid (annual)		Less than 605k	605k - 6.5	6.6 - 33.2	33.3 - above
FR Affinity (annual)		1.03 - 1.24	1.25 - 1.31	1.32 - 1.39	1.40 - above

(Very low = 0, Low = 1, Middle = 2, High = 3, Very High = 4)

## Appendix B: List of countries included in the Sample

Algeria	Grenada	Poland
Argentina	Guatemala	South Africa
Barbados	Honduras	South Korea
Belize	Hungary	St. Lucia
Bolivia	India	St. Vincent & Grenadines
Botswana	Indonesia	Swaziland
Brazil	Iran	Thailand
Cameroon	Jordan	Trinidad and Tobago
Chad	Lesotho	Tunisia
Chile	Malaysia	Turkey
China	Mauritius	Uruguay
Colombia	Mexico	Venezuela
Congo	Morocco	Vietnam
Costa Rica	Mozambique	Zimbabwe
Cote d'Ivoire	Namibia	
Cyprus	Nigeria	
Dominican Republic	Pakistan	
Ecuador	Panama	
Egypt	Paraguay	
El Salvador	Peru	
Fiji	Philippines	

Of the 88 countries in the IBRD's loan portfolio, 57 are included in the sample.

## Appendix C: List of excluded borrower countries

Albania	Iraq	Russia
Armenia	Jamaica	Serbia
Azerbaijan	Kazakhstan	Seychelles
Belarus	Latvia	Slovak Republic
Bosnia and Herzegovina	Lebanon	Slovenia
Bulgaria	Lithuania	St. Kitts and Nevis
Croatia	Macedonia	Turkmenistan
Czech Republic	Moldova	Ukraine
Dominica	Montenegro	Uzbekistan
Estonia	Papua New Guinea	
Georgia	Romania	

31 borrower-countries are omitted from the sample either due to data availability restrictions or to the fact that they joined the World Bank during the study period.

## REFERENCES

Alesina, A, & Dollar, D. (2000): Who gives foreign aid to whom and why? Journal of
Economic Growth 5(1): 33-63.
Andersen, T. B., Hansen, H., & Markussen, T. (2006): US Politics and World Bank IDA-
Lending The Journal of Development Studies, 42(5): 772-794.
Barro, R. & Lee, J. (2001): "IMF-Programs: Who is Chosen and What are the Effects?"
Working Paper, presented at the IMF Research Conference, November 2001.
Belotti, F., Deb, P., Manning, W.G., & Norton, E.C. (2015): Twopm: Two-part Models. The
<i>Stata Journal</i> , 15(1): 3-20.
Blemings, T. (2017): "The Politics of Development Aid: Understanding the Lending
Practices of the World Bank Group" Unpublished Manuscript
Bradley, C. A. & Kelley, J. (2008): "The Concept of International Delegation" Law and
Contemporary Problems, 71(1): 1-36.
Dreher, A., Strum, J., & Vreeland, J. (2015): "Politics and IMF Conditionality" Journal of
Conflict Resolution, 59(1): 120-148.
Dreher, A., Strum, J. & Vreeland, J. (2009a): "Global Horse Trading: IMF Loans for Votes in
the United Nations Security Council" European Economic Review, 53(7): 42-757.
Dreher, A., Strum, J. & Vreeland, J. (2009b): "Development Aid and International Politics:
Does Membership on the UN Security Council Influence World Bank Decisions?"
Journal of Development Economics, 88(1): -18.

- Dreher, A. & Jensen, N. (2003): "Independent Actor or Agent? An Empirical Analysis of the Impacts of US Interests on IMF Conditions" *Working Paper, Leitner Program in International Political Economy, Yale University, 2003.*
- Chwieroth, J. (2008): "Normative Change from Within: The International Monetary Fund's Approach to Capital Account Liberalization" *International Studies Quarterly*, 52(1): 129-158.
- Fleck, R. & Kilby, C. (2006): "World Bank Independence: A Model and Statistical Analysis of US Influence" *Review of Development Economics*, 10(2): 224-240.
- Gwin, C. (1997): "US Relations with the World Bank, 1945-1992" in Kapur, D., Lewis, J., and Webb, R. (eds.): *The World Bank: Its First Half Century, Vol. 2.* Brookings Institution Press.
- Hawkins, D. G., Lake, D., Nielson, D., and Tierney, M. (eds.) (2006): *Delegation and Agency in International Organizations*. Cambridge University Press.
- Heckman, J. (1979): "Sample Selection Bias as a Specification Error" *Econometrica*, 47(1):153-161.
- Kilby, C, (2013): "An Empirical Assessment of Informal Influence in the World Bank" *Economic Development and Cultural Change*, 61(2): 431-464.
- Koremenos, B. (2008): "When, What, and Why Do States Choose to Delegate?" *Law and Contemporary Problems*, 71(1): 151-192.
- Kuziemko, I. and Werker, E. (2006): "How Much is a Seat on the Security Council Worth? Foreign Aid and Bribery at the United Nations" *Journal of Political Economy*, 114(5): 905-930.
- Lundborg, P. (1998): "Foreign Aid and International Support as Gift Exchange" *Economics* and Politics, 10(2): 127-144.
- Meernik, J., Krueger, E. and Poe, S. (1998): "Testing Models of US Foreign Policy: Foreign Aid during and after the Cold War" *The Journal of Politics*, 60(1): 63-85.
- Miller-Adams, M. (1999): The World Bank: New Agendas in a Changing World, Routledge.
- Neumayer, E. (2003): *The Pattern of Aid Giving: The Impact of Good Governance on Development Assistance,* Routledge.
- Nielson, D. and Tierney, M. (2003): "Delegation to International Organizations: Agency Theory and World Bank Environmental Reform" *International Organization*, 57(2): 241-276.
- Nielson, D., Tierney, M. and Weaver, C. (2006): "Bridging the Rationalist-Constructivist Divide: Re-engineering the Culture of the World Bank" *Journal of International Relations and Development*, 9(2):107-139.
- Oatley, T. (2003): "American Interests and IMF Lending" Memo: University of North Carolina at Chapel Hill.
- Phillips, D. (2009): *Reforming the World Bank: Twenty Years of Trial—and Error*, Cambridge University Press.
- Reynolds, E. and Winters, M. (2016): "Foreign Aid Funnel? A Placebo-Based Assessment of Aid Flows to Non-Permanent United Nations Security Council Members" *Research and Politics*, 3(1): 1-9.
- Strezhnev, A. and Voeten, E. (2013): "United Nations General Assembly Voting Data" Harvard Dataverse.
- Toussaint, E. (2008): The World Bank: A Critical Primer, Pluto Press.
- Thacker, S. (1999): "The High Politics of IMF Lending" World Politics, 52(1): 38-75.

- Vreeland, J. R. and Dreher, A. (2014): *The Political Economy of the United Nations Security Council*, Cambridge University Press.
- Wade, R. (2002): "US Hegemony and the World Bank: The Fight over People and Ideas" *Review of International Political Economy*, 9(2): 201-229.
- Weaver, C. (2008): *The Hypocrisy Trap: The World Bank and the Poverty of Reform*, Princeton University Press.

## ENDNOTES

- i. This study focuses on the Bank's top five, historically largest, donors, not necessarily the current top five. The US, UK, Japan, Germany, and France have historically been the dominant members at the World Bank; however, more recently China has emerged as a significant donor within the IBRD. As of 2017, China is the third largest donor at the IBRD, yet it remains a minority contributor at the other agencies of the WBG. Given that China only recently emerged as a major financial contributor, it is not included as a top donor.
- ii. For more on organizational reforms at the World Bank refer to Miller-Adams (1999), Chwieworth (2008), and Phillips (2009).
- iii. On this point see also, Meernick et al. (1998), Lundborg (1998), and Reynolds and Winters (2016).
- iv. For more on the politicization of IMF aid refer to Barro and Lee (2001), Oatley (2003) and Dreher and Jensen (2003).
- v. Principal-agent theory as it pertains to IR, argues that states and international organizations (IOs) are engaged in an ongoing contractual relationship in which both parties exert causal influence over IO behavior. In this framework, states represent principals who hire or contract IOs, who are agents, in order to perform some function that states are either unwilling or unable to perform themselves. Organizations like the World Bank are analogous to the employees of nation-states, possessing delegated authority to act on behalf of states. For more on PA theory refer to Hawkins et al. (2006), Koremenos (2008), Bradley and Kelley (2008).
- vi. Cross-national quantitative analyses typically utilize log measures of aggregate national statistics, such as the value of aid received, in order to smooth-out high levels of variance resulting from the inclusion of highly dissimilar countries. For example, small island countries compared to large BRIC countries. The presence of such high levels of variance can bias the coefficients and increase the standard errors in regression analysis, thus undermining our ability to identify causal relationships. The use of logarithmic scales reduces this variance and allows meaningful comparison of otherwise dissimilar countries. However, in this case, the use of log transformations combines with quirks in the Bank's loan portfolio to create methodological tensions (more on the nature of these tensions will be discussed later in this section). In order to accommodate such tensions, two versions of the dependent variable are employed, an absolute assessment and log measure of the value of aid.
- vii. Alternative measures include the share of aid received (Fleck and Kilby 2006) and the number of loans received (Dreher et al. 2009b).
- viii. For details on the coding of each dimension refer to Appendix A.

- ix. The equal weighting of each dimension of donor-borrower relations is a simplifying assumption which is likely inaccurate in reality but serves as a starting point in the process of developing a holistic assessment of donor-borrower relations. Subsequent studies may alter the weighting of each dimension of donor-borrower relations once the efficacy of such measures has been established.
- x. The political affinity variables measure how often two countries vote the same way at the UNGA in any given year. Affinity scores range from (0-2), with 0 representing complete disagreement, 1 representing partial agreement—voting the same half of the time—and two representing complete agreement, or voting the same all the time. Here higher annual affinity scores indicate greater vote similarity and imply that the two countries are political allies.
- xi. All of the covariates, with the exception of annual growth rates and domestic savings, are measured on a logarithmic scale to smooth out high levels of variability in their individual distributions, as is common practice in aggregate cross-national comparisons.
- xii. Refer to Appendix B for a full list of the countries included in the sample.
- xiii. This sample selection criterion omits all countries which joined the World Bank after 1990, including former members of the Soviet Union, which gained their independence and joined the Bank gradually over the course of the early 1990s.
- xiv. Of the 88 countries included in the IBRD's loan portfolio during the study period 57 are included in the sample. For of a list of aid recipients which were omitted from the sample refer to Appendix C.
- xv. The Standard model utilizes panel-corrected standard errors (PCSEs) to account for contemporaneous correlation in the data.
- xvi. A subset of IBRD's poorest clients are also eligible for supplemental assistance from the Bank's discount lending division, the International Development Association (IDA), however, only a small number of highly impoverished nations are eligible to borrow from both sources, as such the observation that IBRD is out of sync with its humanitarian image still stands.