Donor influence in international financial institutions: Deciphering what alignment measures measure

Christopher Kilby
Department of Economics, Villanova University, USA
chkilby@yahoo.com
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Abstract:

This paper explores U.S. influence in the World Bank using panel data on World Bank lending to 148 developing countries between 1984 and 2005. I compare a range of UN alignment variables (with differing interpretations), introduce other measures of U.S. interests, and control for voting alignment with the G7 donors. Estimation results suggest that partial correlations for U.S. UN voting alignment partly reflect vote buying and partly reflect broader alliances. The results convincingly reject the hypothesis that U.S. UN voting alignment merely proxies for G7 influence in the allocation of World Bank funds.

Key words: World Bank, United States, UN voting

JEL codes: F35, F53, F55, O19

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I. Introduction

A number of recent research papers find links between countries' UN positions and the allocation of both bilateral and multilateral aid. Looking at U.S. bilateral aid, Kuziemko and Werker (2006) demonstrate that the amount of aid a country receives jumps substantially while the country occupies a rotating seat on the UN Security Council (UNSC). Applying a similar analysis to international financial institutions (IFIs), Dreher *et al*. (2006) show that a country's probability of receiving an IMF loan increases when it is a rotating member of the UNSC; Dreher *et al*. (2009) find a similar pattern for the number of World Bank projects a country receives. The temporal link between UNSC membership and increased access to IFI resources identified in all three papers allows the authors to pin down temporary UNSC membership as the cause of privileged IFI access. That is, there is no plausible story in which temporary UNSC membership is a proxy for some more fundamental variable that drives access to IFI resources.

Other work on the IMF, such as the seminal study by Thacker (1999) and subsequent research by Andersen, Harr and Tarp (2006) and Dreher *et al*. (2008), uncover links between UN voting patterns and access to the institution's resources. Likewise, a number of interesting correlations have been discovered between UN voting and World Bank lending (Andersen, Hansen and Markussen 2006; Kilby 2009). The studies of UN voting mostly examine links between UN voting alignment with the U.S. and access to international assistance funding though a few studies have looked more broadly (Barro and Lee 2005; Dreher and Jensen 2007; Kilby 2006, 2009; Neumayer 2003).

In contrast to the work on UNSC membership, this burgeoning literature has not identified as clearly what particular donor interest variables actually measure. A number of different variables (with potentially different interpretations) have been employed. UN voting may proxy for broader alliances or simply commonality of interests (Stone 2004). Similarly, if the voting patterns of

powerful donors are correlated, the apparent impact of alignment with U.S. voting may in fact reflect the combined influence of several countries, e.g., the G7.

This paper has two goals. First, it aims to develop a better understanding of what donor interest variables measure when they are included in the analysis of flows from international financial institutions. Second, it fills a hole in the literature on UN voting alignment and IFIs by examining this link in the context of the World Bank Group. The recent studies by Andersen, Harr and Tarp (2006) and Neumayer (2003) are limited to the International Development Association (IDA), the soft window of the World Bank that accounts for about a third of total lending. Kilby (2009) does examine both branches of the World Bank but focuses on enforcement of structural adjustment conditionality rather than loan allocation *per se*.

To this end, I use panel methods to examine both eligibility for World Bank funds and the level of funding provided when funds are made available. I aggregate across the two main branches of the World Bank–the IDA and the International Bank for Reconstruction and Development (IBRD)–and focus on gross disbursement data.[1] I examine U.S. interest variables primarily because the U.S. is clearly the most influential donor in the organization and data reflecting U.S. interests are much more readily available. However, where possible, I include parallel variables for the other G7 countries. U.S. interest variables include alignment on UNGA regular session votes and alignment on just those measures designated as important by the U.S. State Department.[2] I also use data on

[1] OECD commitment data for the IBRD are not currently available since IBRD loans are not concessional enough to qualify as Official Development Assistance (ODA).

[2]Available data on UNGA voting (Voeten, 2006) include only regular session roll call votes on adopted resolutions (i.e., resolutions that passed). The data exclude emergency session votes, consensus resolutions, votes on the writing of resolutions (e.g., paragraph votes), and votes on resolutions that are not adopted. The U.S. State Department "important vote" data include all types of votes but I exclude measures adopted by consensus. Since the early 1990s, the State Department

bilateral economic aid and U.S. bilateral military aid to construct additional donor interest variables.

The next section provides a selective review of the literature using UN voting alignment to gauge donor influence in IFIs. I emphasize the rationale for the approaches taken. Section III describes the data used in my analysis while Section IV presents estimation results. The final section provides discussion and suggestions for future research.

II. Literature Review

There is a substantial body of research examining the role donor interests play in IFIs. While most IFI charters prohibit non-economic considerations in lending decisions (the notable exception being the EBRD), there is ample anecdotal evident of cases where donor geopolitical or commercial interests have been influential. Over the last decade, the literature broadened to include more statistical analysis.[3] An important issue for empirical work is how to capture geopolitical interests in a consistent fashion across countries and over time. UN voting data are particularly appealing in this regard and several different UN voting alignment measures have been constructed.

There is considerable debate about what UN voting represents – and how much it matters. One position holds that votes are reflective of geopolitics (measuring "political proximity") but are not necessarily geopolitically important themselves. In his seminal study of IMF lending in Africa, Stone puts this very clearly: "I assume that patrons are not concerned about how African countries vote in the UN General Assembly but, rather, that these votes are unimportant enough to serve as

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also reports voting coincidence separately without resolutions adopted by consensus. Note that in specifications including year fixed effects, results will not depend on how consensus votes are treated.

[3]There are a few notable early statistical analyses, e.g., Frey and Schneider (1986).

a sincere measure of countries' foreign policy preferences." (Stone 2004, 580) This contrasts with a narrowly rational view of voting where outcomes reflect vote buying rather than being a "sincere measure of countries' foreign policy preferences."[4] At least since Wittkopf (1973), there has been debate about whether some UN votes matter more for foreign aid than other votes. This may indicate that only these select votes reflect important dimensions of foreign policy preference (i.e., have meaningful geopolitical content) or that the outcome of the votes themselves is of geopolitical importance to powerful states.

A number of studies use alignment on all UNGA votes. Generally drawn from data assembled by Voeten (2006), these measures typically use average annual voting coincidence with an abstention or absence given half weight. Work on the IMF includes Barro and Lee (2005), Dreher and Jensen (2007), Dreher *et al*. (2008), Oatley and Yackley (2004), and Stone (2004). These studies generally take UN voting as a measure of political proximity although some are carefully agnostic about exactly what voting similarities measure. For example, Oatley and Yackley (2004, 425) summarize their geopolitical findings as follows: "The IMF offers larger loans to governments who regularly vote with the United States in the UN than to governments who vote less regularly with the US."

Since 1983, the U.S. State Department has published an annual report entitled *Voting Practices in the United Nations* that identifies votes considered important by the State Department. Following its mandate in Section 406 of US PL 101-246, the State Department designates as important "votes on issues which directly affected United States interests and on which the United States lobbied extensively." (U.S. State Department 2007, 123) Wang (1999) argues that U.S.

[4]I use the term "narrowly rational" because vote buying is the outcome of a rational actor model that considers only the vote at hand, not broader issues.

interests are better measured by examining just these votes; including other votes essentially adds noise. Likewise, Thacker (1999) argues that these designated votes are more indicative of support for the U.S. and that both the U.S. and other countries are well-aware of this fact. *Voting Practices in the United Nations* also includes voting coincidence figures based on these important votes, reporting the number of identical votes identical to the U.S. divided by the sum of identical and opposite votes (ignoring abstentions and absences). Wang utilizes this measure while Thacker improves on it by treating abstentions and absences as "neutral," including them with a weight of one half in the numerator and with full weight in the denominator. The resulting voting alignment variable based on these key votes (*kvotes*) ranges between 0 and 1. Andersen, Hansen and Markussen (2006) use the State Department/Wang definition while Andersen, Harr and Tarp (2006), Kilby (2009), and Vreeland (2005) use a measure similar to Thacker.[5]

In his study of IMF lending, Thacker uses *kvotes* and its change over time (*mkvotes*) to test both a political proximity hypothesis (the U.S. uses the IMF to reward friends and punish enemies) and a political movement hypothesis (the U.S. uses the IMF to reward countries that move toward the U.S. position over time). In his fully specified model, Thacker finds strong support for the political movement hypothesis only.[6]

The theory behind Thacker's political movement hypothesis is not fully spelled. We could simply take it as given that the U.S. rewards movements toward its position. However, Thacker does refer to vote buying models where the voter is compensated for costly deviations from its ideal

[5]In the context of World Bank lending, the measure including abstentions and absences yields somewhat stronger results than alternatives that omit absences, abstentions or both.

[6]Thacker uses voting alignment in year $t-2$ as his measure of political proximity but the change from year $t-2$ to $t-1$ as the measure of political movement.

position. Assuming a stable ideal position relative to the U.S. position, an increase in voting alignment with the U.S. indicates a greater deviation from the country's ideal point and hence a greater cost that needs to be compensated through an increased probability of receiving an IMF package.[7]

Andersen, Harr and Tarp (2006) (henceforth AHT) develop a formal vote buying model and propose methods to deal with the ideal point. They use UN voting alignment on all votes as a proxy for the country's ideal point (relative to the U.S. position). Differences between voting alignment on important votes and all votes reflect political movement, i.e., concessions to the U.S. (*bid* in AHT's loan allocation model). This implicitly assumes a degree of symmetry between important votes and other votes.[8] Estimating an equation with both *bid* and Thacker's *mkvotes*, ATH find that *bid* is statistically significant while *mkvotes* is not. In the context of a vote buying model, this suggests that overall voting alignment is a reasonable proxy for a country's ideal point.[9]

One way to compare Thacker and AHT is in terms of a latent variable model with vote buying. Let L_{it}* be a latent variable such that the IFI grants a loan to country i in period t if L_{it}* exceeds some critical value (normalized to 0):

$$L_{it} = 1 \text{ if } L_{it}^* > 0 \qquad (1)$$
$$= 0 \text{ if } L_{it}^* \leq 0$$

The latent variable reflects the IFI's assessment of the merits of granting a loan (the size of which

[7]Vreeland (2005) uses Thacker's political movement variable but does not indicate if it should be interpreted as linked to vote buying.

[8]Parallel to Thacker, AHT use voting alignment on all votes in year $t-2$ but voting alignment on important votes in year $t-1$.

[9]AHT's procedure allows a test of the political proximity model against the vote buying model although they do not pursue this.

may depend on other factors), an assessment that may include economic and political considerations. One such political consideration is the preference of important donors country like the United States. The donor, in turn, prefers to reward countries that have made costly concessions to its position, i.e., it uses access to IFI funds as a form of payment in its vote buying endeavors. Define $kvotes_{it}$ as country *i*'s actual voting alignment with the U.S. in year *t*. Define $Bliss_i$ as country *i*'s preferred voting alignment with the U.S.; here, I assume this is constant over time. If the cost to a country of deviating from its preferred votes is increasing in the degree of deviation, we can think of L_{it}* as determined by

$$L_{it}^* = \beta_0 + \beta_1 kvotes_{it-1} + \beta_2(kvotes_{it-1} - Bliss_i) + \beta_3 X_{it} + \varepsilon_{it} \quad (2)$$

where X_{it} captures other measured factors (including economic considerations) and ε_{it} reflects the combined effects of unobserved variables, randomly distributed with mean 0 and variance σ_ε^2 and uncorrelated with the included variables. Equation (2) specifies votes from year $t-1$ because UN votes generally happen in the last four months of the year.[10] The political proximity hypothesis is equivalent to $\beta_1>0$ while the vote buy model has $\beta_2>0$. To estimate (2), one either uses a proxy for $Bliss_i$ (e.g., AHT's UN voting alignment with the U.S. on all measures passed) or a fixed effects estimation method.

Using this vote buying framework, Thacker's specification excludes two variables. Equation (2) can be rewritten as

$$L_{it}^* = \beta_0 + \beta_1 kvotes_{it-1} + \beta_2 mkvotes_{it-1} - \beta_2 Bliss_i + \beta_2 kvotes_{it-2} + \beta_3 X_{it} + \varepsilon_{it} \quad (3)$$

Recalling that $mkvotes_{it-1} = kvotes_{it-1} - kvotes_{it-2}$, Thacker's specification omits $Bliss_i$ and $kvotes_{it-1}$.

[10]The timing of other variables is tricky as one must balance the need for timeliness against questions of endogeneity (e.g., getting an IMF loan could influence economic aggregates). Thacker and AHT use levels of the variables from year $t-1$ and changes between years $t-1$ and t. In the case of the World Bank, these issues are less critical.

In a rational actor model with a fixed ideal point, countries need to be rewarded for moving toward the U.S. position not just in the first year they do so but for as long as they maintain this costly activity.

Alternative, one could view *mkvotes* as an attempt to eliminate an unknown bliss point through first differencing (2):

$$L_{it}^* - L_{it-1}^* = \beta_1(kvotes_{it-1} - kvotes_{it-2}) + \beta_2(kvotes_{it-1} - kvotes_{it-2}) + \beta_3(X_{it} - X_{it-1}) + \varepsilon_{it} - \varepsilon_{it-1} \quad (3)$$

or

$$\Delta L_{it}^* = (\beta_1 + \beta_2)mkvotes_{it-1} + \beta_3 \Delta X_{it} + \Delta\varepsilon_{it} \quad (3')$$

This formulation presents two problems. First, the coefficient on *mkvotes* is positive under either hypothesis (proximity or vote buying) and the coefficient on the *kvotes* variable in Thacker's specification should be zero under either hypothesis. Second, the link between the new latent variable ΔL_{it}^* and the observable variable (L_{it} or even ΔL_{it}) is no longer clear if (1) is correct; it is also unclear how to estimate (3').

To justify Thacker's estimated model in terms of vote buying, political movement itself must be costly. Rather than the country incurring a cost whenever it deviates from its fixed bliss point (as above), the country incurs costs only in the first year it changes its voting behavior. Voting the same way in subsequent years is costless.[11] This scenario justifies a latent variable model parallel to Thacker's empirical specification:

$$L_{it}^* = \gamma_0 + \gamma_1 kvotes_{it-1} + \gamma_2 mkvotes_{it-1} + \gamma_3 X_{it} + \upsilon_{it} \quad (4)$$

The U.S. rewards the country (via pressure on the IFI) when the costly political movement takes

[11]This may be reasonable in the context of UN votes designated as important by the U.S.; many votes (on human rights, Israel, etc.) reappear year after year. This is mathematically equivalent to a bliss point that shift every year to last year's actual important vote alignment.

place ($\gamma_2>0$) but not in subsequent years when the country costlessly stays at the same location. Conversely, the political proximity hypothesis has $\gamma_1>0$. Thacker's specification differs slightly from (4) as it includes $kvotes_{it-2}$ rather $kvotes_{it-1}$:

$$L_{it}^* = \gamma_0 + \gamma_1' kvotes_{it-2} + \gamma_2' mkvotes_{it-1} + \gamma_3 X_{it} + \upsilon_{it} \quad (5)$$

Since $kvotes_{it-2}+mkvotes_{it-1}=kvotes_{it-1}$, equations (4) and (5) are equivalent if $\gamma_1' = \gamma_1$ and $\gamma_2' = \gamma_1+\gamma_2$. If (4) is the correct specification, the political proximity hypothesis ($\gamma_1>0$) predicts both $\gamma_1'>0$ and $\gamma_2'>0$ in (5).

While most of the existing research has focused on the IMF, UN voting alignment measures can be used to explore the same questions for lending by multilateral development banks (MDBs). Estimation for MDBs poses some slightly different problems. IMF programs are somewhat sporadic; most countries in the sample have some years with programs and some years without. This variation allows estimation of a conditional logit selection or eligibility equation with country fixed effects while still preserving a broad cross section of countries. AHT take advantage of this as an alternate approach to including the bliss point for a voting buying model. In contrast, many countries receive MDB funds every year and hence would drop from a selection equation including country fixed effects. However, this higher frequency of lending makes estimating an allocation equation (examining the level of funding for countries that do get funds) a more useful exercise for MDB lending.

Neumayer (2003) includes the IDA in his analysis of the role of governance factors in ODA. Estimating a two part model using data from the 1990s, Neumayer finds overall UN voting similarity (a DAC weighted average of voting similarity on all UN votes) insignificant in both the selection and allocation equations.

Andersen, Hansen and Markussen (2006) also examine IDA lending but focus on UN

important votes rather than overall votes. In a Heckman selection model, the authors find UN voting coincidence with the U.S. on important votes is insignificant in the selection equation but uniformly significant in the allocation equation, i.e., in determining how much IDA funding countries get. Because there is no theoretical basis for exclusion restrictions, identification relies on the inherent non-linearity of the probit in the selection equation. The estimated link between voting alignment and the size of IDA loans does not appear sensitive to selection effects as the unconditional estimate closely matches the conditional estimate in size and significance. The impact of voting alignment is sizeable with a one standard deviation increase in voting alignment corresponding to a $34 million increase in loan size.

Kilby (2006) investigates American and Japanese influence in Asian Development Bank (ADB) lending. Because one of the goals of the paper is to compare the influence of these two important donors, the UN voting alignment variable includes all votes since the list of important votes for Japan could differ from the list for the U.S. In a two part model, neither voting alignment measure (Japanese or U.S.) is significant in the selection equation. In the allocation equation, there are no links across the estimation period (1968-2002) but alignment with Japan is associated with a smaller share of ADB disbursements in the first half of the period (1968-1986) and a larger share in the second half (1987-2002).

III. Data

The data use in this analysis are described in Table 1. Variables include aid flows (from the World Bank and various bilateral donors), recipient country economic and political characteristics, UN voting alignments, and military aid. The unit of observation is the recipient country/year. The sample is determined by data availability. Important UN voting data starts in 1983 while DAC data

on aid flows ends with 2005. Given the lag structure used, this restricts the sample to 1984 to 2005. Table 1 lists descriptive statistics for the eligibility equation (2874 observations on 148 countries with an average 19 observations per country) and the allocation equation (2262 observations on 134 countries with an average of 17 observations per country).[12]

Aid flows are measured by total official gross disbursements from OECD (2006) and OECD (2007).[13] I use disbursements rather than commitments because the OECD reports the latter for ODA only; IBRD loans are at too high an interest rate to qualify as ODA. Some scholars argue in favor of using commitments because the level of disbursements is influenced by recipient government behavior (e.g., the speed at which projects are implemented, whether or not the government satisfies conditionality, etc.) but there is also evidence of donor influence beyond the commitment stage, directly on disbursements (e.g., Kilby 2009). The dependent variable in the eligibility equation (WB_elig) is equal to one if the country received any World Bank disbursements in the given year and equal to zero otherwise. The dependent variable in the allocation equation (ln_WB_tofg) is the natural log of IDA and IBRD disbursements to the country in the given year.[14]

Recipient country characteristics used in the analysis are also described in Table 1. These include a purchasing power parity measure of GDP per capita and population. The dummy variable "blend" indicates countries that have access to both IDA and IBRD funds. The Freedom House index (FH) is the simple average of the political rights and civil liberties indices; higher values indicate fewer rights/liberties. The "polity" variable ranges from −10 (complete autocracy) to +10

[12]I set the sample for each equation based on the most restrictive basic specification so that the sample size is constant. Results are the same without this restriction.

[13]I use OECD (2006) data for countries dropped from OECD (2007).

[14]The variable suffix "tofg" designates "**t**otal **of**fical **g**ross disbursements."

(complete democracy). The dummy variable "war" indicates a major conflict with more than 1000 conflict related deaths in that year. Both World Bank lending and UN voting may be related to country characteristics and hence these are important control variables.

The key right hand side variables for this analysis are measures of UN voting alignment. Data on UN voting come from two sources. As mentioned above, *Voting Practices in the United Nations* (U.S. State Department, 1983-2007) designates which UN votes are considered important by the U.S. Vote level data come from Voeten (2006) which go through 2005. The voting alignment calculation is the same as in Kilby (2006, 2009) and closely follows Thacker (1999) and Dreher *et al*. (2007). For each vote, a country scores a 1 if it follows the U.S., a 0.5 if it abstains or is absent when the U.S. votes (or vice versa), and a 0 if it opposes the U.S. A country's alignment is its mean score for the year. Applying this method directly to the Voeten data yields the UN voting alignment with the U.S. on all votes (UN1_US). I do the same with the other G7 countries as a group (UN1_G7). Repeating this procedure with the sample restricted to those votes that appear on the State Department list gives voting alignment on important votes (UN2_US and UN2_G7).[15]

I use bilateral economic and military aid as additional measures of geopolitical interests and alignments. These include bilateral economic aid from the U.S. and from the other G7 countries. However, bilateral aid could also proxy for need factors not already included in the equations (i.e.,

[15]Alternatively, the alignment measure can be calculated directly from tables in the State Department reports. The resulting variable differs from that based on Voeten (2006) because a few votes covered by the State Department are not covered in Voeten's data set and because of a few coding differences. The sample correlation between the two is 0.89; most results are qualitatively similar but slightly stronger based directly on State Department data. Note that for calculating voting alignment with other G7 countries (rather than with the U.S.), only the first method is feasible without access to the State Department's database. Therefore, I use variables base on the first method for tables 2 through 4. However, I use variables based on the second method in tables 5 through 7 to make them more comparable to Thacker and AHT (who appear to use State Department data directly).

beyond population, GDP per capita and governance) and complicate interpretation of the estimated coefficients. To mitigate this possibility, I also include aid from the "like-minded" donors known for their relatively humanitarian practices.[16] The eligibility equation includes dummy variables indicating positive levels of U.S. and like-minded donor bilateral economic aid. However, since all country/years in the sample have positive G7 aid, I use the amount of G7 disbursements (in log terms) rather a dichotomous variable. In the allocation equation, all three are included as logs of the level of aid disbursements. To avoid log of zero and thereby shrinking the sample, I add 0.01 to each value before taking logs. This figure ($10,000 or −4.065 in log terms) is the lowest positive disbursement level reported in the raw data.[17]

Although the two samples differ by about 600 observations, the mean values of the variables change relatively little. The most notable changes are the percentage receiving significant U.S. military aid which rises from 38.2 percent to 42.8 percent and the average polity score which rises from 1.50 to 1.76. The average and range for population is remarkably similar while the very highest income observations are cut. The most surprising feature is the lack of change in the UN voting alignments across the two samples. The only evident change is a fall in the maximum value for alignment with the U.S. on all UN votes (Israel and Micronesia).

IV. Estimation Results

[16]The like-minded donors are Canada, Denmark, the Netherlands, Norway and Sweden. See Fleck and Kilby (2006) for more discussion.

[17]This results in 22 changes for the like-minded donors and 221 changes for the U.S. Results are not sensitive to the choice of the "trivial" value. The alternative of dropping these observations does increase the p-value on US voting alignment from p=0.025 to p=0.059. Using the binary variable for US aid gives roughly the same results as reported in the table below.

I start by estimating the equations that follow most naturally from the discussion in section II. For the eligibility equation, this is:

$$WB\_elig_{it}^{*} = \alpha_0 + \alpha_1 UN1\_US_{it-1} + \alpha_2 UN2\_US_{it-1} + \alpha_3 X_{it} + \varepsilon_{it} \quad (6)$$

If UN2_US does capture all the relevant votes, we expect $\alpha_2>0$. If in addition, the political proximity hypothesis is correct, $\alpha_1=0$. Alternative, if UN1_US reflects true preferences (the bliss point) and UN2_US reflects the influence of vote buying, we have instead $\alpha_1<0$, $\alpha_2>0$ and $\alpha_1+\alpha_2=0$. I estimate a similar equation for allocation. If a country's foreign policy preferences are stable (constant bliss point), we can replace $UN1\_US_{it-1}$ by country fixed effects in an allocation equation. All specifications include unreported year dummies and (in the absence of country fixed effects) region dummies.

Table 2 presents estimation results for the basic eligibility equation. The results for country characteristics mostly fit *a priori* expectations and are similar across different specifications of the eligibility equation. Larger countries are significantly more likely to receive disbursements (possibly the result of having more commitments) while richer countries are less likely to do so. Higher Freedom House scores reflect fewer political rights and civil liberties and are associated with a lower probability of receiving disbursements. The estimated coefficient for polity is negative but not statistically significant. Finally, countries in the midst of major conflicts are significantly less likely to receive disbursements.

Column 1 of Table 2 includes UN1_US, alignment with the U.S. on all UN votes. The negative and significant coefficient indicates that countries voting like the U.S. on all UN votes are less likely to receive World Bank funds than others. This is not consistent with the political proximity hypothesis if these votes reflect countries' foreign policy preferences. Column 2 uses alignment on important votes only; the estimated coefficient is now positive but not statistically

significant. Thus, even if the relevant foreign policy preferences are reflected only in the important votes, we fail to reject the hypothesis that political proximity is unimportant for access to World Bank funds. Column 3 includes both alignment measures. The results are now consistent with the vote buying hypothesis outlined above. The estimated coefficient on UN1_US is negative and statistically significant. The estimated coefficient on UN2_US is positive and statistically significant. We cannot reject the hypothesis that the coefficients sum to 0, i.e., that the probability of receiving World Bank funds depends on the difference between alignment with the U.S. on important votes and on all votes. This is largely consistent with AHT's findings for access to IMF funding.

Table 3 repeats this process for the conditional allocation equation, using both ordinary least squares and fixed effects methods. As one might expect, the role of country characteristics depends to some degree on the decision stage (eligibility or allocation) and on the estimation method (OLS or fixed effects). Larger aid-receiving countries get more funds but the effect is purely cross sectional. While poorer countries were more likely to get World Bank disbursements, income has little impact on the level of funding received though countries can expect more funding when their income level is below their own average. Overall, blend countries (those drawing on both IBRD and IDA funds) do not receive significantly more funds but they do receive more than their own average while they have blend status. Aid-receiving countries with better (i.e., lower) Freedom House ratings get more disbursements. Oddly, countries receive more funding during periods of below normal polity ratings.

Turning to our variables of interest, we see again see a pattern consistent with vote buying where only the votes the U.S. designates as important matter. UN2_US is significant and positive but only in fixed effects specifications, an outcome consistent with vote buying if countries' ideal

points (in terms of the degree of alignment with the U.S. on important votes) are stable over time. The main difference from the eligibility equation is that UN1_US does not appear to be a sufficiently good proxy for a country's bliss point. Nonetheless, in the specifications that include both UN variables, we cannot reject the hypothesis that the coefficients sum to zero, i.e., that the correct specification is in terms difference between them.

Table 4 introduces additional geopolitical variables. Columns 1 (eligibility) and 2 (fixed effects allocation) include other indicators of U.S. geopolitical ties. Receiving a non-trivial amount of U.S. military aid is associated with a significantly higher probability of World Bank disbursements but has no apparent link with the level of disbursements for those countries that do get World Bank funds. Countries receiving U.S. bilateral aid are significantly more likely to also receive World Bank funds and, for countries that do receive World Bank funds, the level of funding is significantly higher when U.S. bilateral aid is higher. These results are consistent with U.S. aid proxying for U.S. geopolitical (or commercial) interests. But they are also consistent with U.S. aid as a proxy for elements of need not captured by GDP, population, etc. To account for this, I include parallel variables for the so-called like-minded donor countries. These donors have a reputation for relatively need-based aid (making these variables a better need proxy than the U.S. variable) but relatively little power within the World Bank. These variables enter with the expected sign and significance while U.S. aid variables remain significant.

With these additional geopolitical variables, the estimated coefficients for the UN variables are slightly smaller in magnitude. Individually, their signs and significance match the vote buying hypothesis as before. However, for the eligibility equation, we now reject the hypothesis that the coefficients on UN1_US and UN2_US sum to zero.

Columns 3 and 4 of Table 4 add the available geopolitical variables for the other G7

countries as a group. In the eligibility equation, G7 voting alignment on all votes enters with a negative sign (though not significant) while G7 voting alignment on important votes proves to be statistically significant, *ceteris paribus*. U.S. voting alignment on all votes continues as negative and significant but the estimated coefficient on U.S. voting alignment on important votes switches sign (from positive to negative) and becomes statistically insignificant. This does suggest that apparent U.S. influence was in fact proxying for broader G7 influence in eligibility for World Bank disbursements. However, the previous results for the allocation equation are robust to the inclusion of the G7 variables, the latter both proving insignificant in this equation.

Table 5 presents specifications more directly linked to Thacker (1999). As pointed out by AHT (2006) and in section II above, this specification may suffer from omitted variable bias if the vote buying model is correct. The first three columns are eligibility equations that more closely correspond to Thacker's analysis of the IMF. Column 1 presents a version of the political movement hypothesis. The hypothesis predicts a positive coefficient on ΔUN2_US$_{t-1}$ (equivalent to $mkvotes_{it-1}$) as the U.S. uses its influence in the World Bank to favor countries that move toward the U.S. position on important votes in the UN. However, in the World Bank case, the coefficient is negative and significant. Column 2 adds UN2_US$_{t-1}$ which I argued in section II is the correct specification of the *kvotes* variable for the political proximity hypothesis. This enters with a positive and marginally significant coefficient while political movement continues to enter with a significant, negative coefficient. Column 3 demonstrates the problem with including UN2_US$_{t-1}$ (equivalently $kvotes_{it-2}$) as the coefficient on the UN2_US variable is unchanged but the coefficient on ΔUN2_US$_{t-1}$ is now the sum of the coefficients from the political proximity and political movement hypotheses.

Columns 4 to 6 parallel the first three columns for an allocation equation without fixed effects. The political movement variable is positive and significant in the first specification; the

variables have the hypothesized signs but are not statistically significant in the other specifications. In short, these results give only weak support for the political movement hypothesis as operationalized.

Tables 6 and 7 present specifications more directly linked to AHT with eligibility equation specifications in the first of these tables and allocation equation specifications in the second. Column 1 of Table 6 reproduces the full basic specification in Table 2, Column 3 but without sample restrictions and using data directly from the U.S. State Department. Results are essentially as before. Note that this specification includes UN1_US (bliss point proxy) and UN2_US (important votes) from the same year while AHT use an additional lag of UN1_US, perhaps to match Thacker. Column 2 switches to this lagged value which results in a slight decrease in the magnitude of the estimated coefficients and the size of the t-statistics. Column 3 includes both bliss point proxies. While we might expect them to be individually insignificant but jointly significant because of a 0.88 correlation between them (suggesting that they are equally good proxies), the one from the same year as the important votes is highly significant while the other is not. Indeed, we can even reject the hypothesis that they enter with the same coefficient.

This result suggests two things. First, the bliss point proxy should come from the same year as the important vote variable. Second, a country's preferred foreign policy position may not be static, i.e., the time-varying overall vote alignment ($UN1\_US_{t-1}$) may be a better measure of the bliss point than a constant value. Column 4 pursues this idea by including $\overline{UN1\_US_i}$, the average value of UN1_US for each country. When included without $UN1\_US_{t-1}$, this constant bliss point proxy enters as negative and significant. When both variables are included, they enter with essentially the

same estimated coefficient but $UN1\_US_{t-1}$ is statistically significant while $\overline{UN1\_US_i}$ is not.[18]

Table 7 repeats these specifications for the allocation equation. The above lessons are exactly reversed. In this case, $UN1\_US_{t-2}$ appears to be the better proxy and the constant bliss point (here again set by $\overline{UN1\_US_i}$) is statistically significant even if we allow for a time varying bliss point (using either $UN1\_US_{t-1}$ or $UN1\_US_{t-2}$). This remains a theoretical puzzle though in practical terms it provides further support for using a fixed effects specification in the allocation equation.

V. Conclusions

This paper examines links between UN voting and disbursement of funds by the World Bank. Comparable past studies restricted attention to the one third of World Bank lending done by the IDA. In addition, the more sophisticated notions of UN voting alignment put forward by Thacker (1999) and Andersen, Harr and Tarp (2006) in studies of the IMF had not been applied broadly to its sister institution. This paper attempts to apply those notions in a systematic fashion that more directly links theory and empirics. The goal is to generate a better understanding of what partial correlations between UN voting alignment and lending by IFIs actually reflect. While the empirical work focuses on alignment with the US in UN voting, I include a range of other donor interest variables (bilateral aid, military aid and alignment with the other G7 countries in UN voting) to avoid a single variable reflecting the combined effect of all these factors.

The results presented in this paper are generally consistent with a vote buying model linking alignment on UN voting and the allocation of World Bank funds. Many of the details are perhaps less clear: To what extent is it U.S. influence alone rather than the combined weight of the G7? Do

[18]Interestingly, using $\overline{UN1\_US_i}$ and $UN1\_US_{t-2}$ reverses this.

the mechanisms or goals vary systematically? What does appear clear is that the major alternative models – political proximity or political movement not based on vote buying – appear broadly inconsistent with the estimation results.

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Table 1: Descriptive Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max	Description	Source
Eligibility Equation Sample							
WB_elig	2742	0.787		0	1	binary, 1 if World Bank gross disbursements > 0	
ln_pop	2742	15.469	1.994	10.600	20.989	log population	
ln_gdp	2742	8.224	0.928	6.252	10.569	log PPP GDP per capita in millions of 2006 US$	
FH	2742	3.971	1.830	1	7	average of Freedom House PR and CL scores	
polity	2742	1.500	6.915	−10	10	Polity 2 Index (autocracy to democracy)	
war	2742	0.064		0	1	binary, 1 if more than 1000 deaths from conflict in year	
$UN1\_US_{t-1}$	2742	0.351	0.120	0	0.914	0 to 1, alignment with U.S. on all UN votes	
$UN2\_US_{t-1}$	2742	0.474	0.182	0	1	0 to 1, alignment with U.S. on important UN votes	
$UN1\_G7_{t-1}$	2742	0.637	0.087	0.457	0.909	0 to 1, alignment with other G7 on all UN votes	
$UN2\_G7_{t-1}$	2742	0.662	0.144	0.161	1	0 to 1, alignment with other G7 on important UN votes	
sig_US_mil	2742	0.382		0	1	binary, 1 if U.S. military aid > $500,000	
US_elig	2742	0.844		0	1	binary, 1 if U.S. economic aid > 0	
LM_elig	2742	0.947		0	1	binary, 1 if "like-minded" donor aid > 0	
ln_G7_tofg	2742	3.584	2.441	−4.605	8.606	log other G7 bilateral aid in millions of 2005 US$[A]	
Allocation Equation Sample							
ln_WB_tofg	2262	3.626	1.959	−4.605	8.110	log World Bank disbursements in millions of 2005 US$	
ln_pop	2262	15.676	1.951	10.600	20.989	log population	
ln_gdp	2262	8.032	0.843	6.252	9.854	log PPP GDP per capita in millions of 2006 US$	
blend	2262	0.147		0	1	binary, 1 if receiving disbursements from both IDA and IBRD	
FH	2262	3.940	1.739	1	7	average of Freedom House PR and CL scores	
polity	2262	1.763	6.678	−10	10	Polity 2 Index (autocracy to democracy)	
war	2262	0.064		0	1	binary, 1 if more than 1000 deaths from conflict in year	
$UN1\_US_{t-1}$	2262	0.346	0.110	0	0.691	0 to 1, alignment with U.S. on all UN votes	
$UN2\_US_{t-1}$	2262	0.476	0.171	0	1	0 to 1, alignment with U.S. on important UN votes	
$UN1\_G7_{t-1}$	2262	0.637	0.084	0.468	0.909	0 to 1, alignment with other G7 on all UN votes	
$UN2\_G7_{t-1}$	2262	0.667	0.135	0.161	1	0 to 1, alignment with other G7 on important UN votes	
sig_US_mil	2262	0.428		0	1	binary, 1 if U.S. military aid > $500,000	
ln_US_tofg	2262	2.241	2.883	−4.605	8.959	log U.S. economic aid in millions of 2005 US$[A]	
ln_LM_tofg	2262	2.548	2.170	−4.605	6.259	log "like-minded" donor bilateral aid in millions of 2005 US$[A]	
ln_G7_tofg	2262	4.272	1.538	−3.506	8.606	log other G7 bilateral aid in millions of 2005 US$[A]	

[A]log (variable + 0.01) to avoid log of zero. All aid variables defined in terms of gross disbursements.

Table 2 – Eligibility Equation

	(1)	(2)	(3)
Dep. Var.:	WB_elig	WB_elig	WB_elig
Method:	Probit	Probit	Probit
ln_pop	0.201**	0.220**	0.192**
	(4.53)	(5.04)	(4.30)
ln_gdp	-0.817**	-0.799**	-0.837**
	(-6.02)	(-5.79)	(-5.89)
FH	-0.301**	-0.263**	-0.247**
	(-3.01)	(-2.61)	(-2.47)
polity	-0.0159	-0.0197	-0.0122
	(-0.69)	(-0.81)	(-0.53)
war	-0.864**	-0.850**	-0.814**
	(-3.32)	(-3.34)	(-3.24)
$UN1\_US_{t-1}$	-1.513*		-3.274**[A]
	(-1.88)		(-3.63)
$UN2\_US_{t-1}$		0.635	1.985**[A]
		(1.09)	(3.31)
N	2742	2742	2742

t statistics in parentheses. Computed from clustered standard errors.
* p<.1, ** p<.05

All specifications include region and year dummies.

[A]Fail to reject hypothesis that coefficients sum to zero (p=0.11)

Table 3 – Allocation Equation

	(1)	(2)	(3)	(4)	(5)	(6)
Dep. Var.:	ln_WB_tofg	ln_WB_tofg	ln_WB_tofg	ln_WB_tofg	ln_WB_tofg	ln_WB_tofg
Method:	OLS	FE	OLS	FE	OLS	FE
ln_pop	0.890**	0.0637	0.897**	0.0911	0.889**	0.0939
	(24.08)	(0.17)	(24.74)	(0.24)	(23.89)	(0.25)
ln_gdp	-0.0421	-0.339**	-0.0403	-0.339**	-0.0447	-0.357**
	(-0.42)	(-2.33)	(-0.40)	(-2.37)	(-0.45)	(-2.47)
blend	0.0594	0.155*	0.0620	0.177**	0.0713	0.180**
	(0.47)	(1.92)	(0.48)	(2.18)	(0.55)	(2.22)
FH	-0.175**	-0.148**	-0.169**	-0.133**	-0.165**	-0.133**
	(-2.79)	(-4.04)	(-2.68)	(-3.63)	(-2.65)	(-3.64)
polity	-0.0150	-0.0259**	-0.0147	-0.0244**	-0.0141	-0.0245**
	(-0.90)	(-2.87)	(-0.88)	(-2.72)	(-0.85)	(-2.72)
war	-0.377**	-0.446**	-0.377**	-0.450**	-0.371**	-0.450**
	(-2.62)	(-4.75)	(-2.60)	(-4.81)	(-2.56)	(-4.81)
$UN1\_US_{t-1}$	-0.503	0.328			-1.077[A]	-0.319[A]
	(-0.84)	(0.89)			(-1.55)	(-0.78)
$UN2\_US_{t-1}$			0.237	0.784**	0.603[A]	0.865**[A]
			(0.69)	(3.67)	(1.58)	(3.64)
N	2262	2262	2262	2262	2262	2262

t statistics in parentheses. Computed from clustered standard errors for OLS.
* p<.1, ** p<.05

All specifications include year dummies. OLS specifications include region dummies.

[A]Fail to reject hypothesis that coefficients sum to zero (Column 5: p=0.44; Column 6: p=0.14)

Table 4 – Additional Geopolitical Variables

	(1)	(2)	(3)	(4)
Dep. Var.:	WB_elig	ln_WB_tofg	WB_elig	ln_WB_tofg
Method:	Probit	FE	Probit	FE
ln_pop	0.103**	-0.0661	-0.0557	-0.00688
	(2.37)	(-0.18)	(-0.96)	(-0.02)
ln_gdp	-0.791**	-0.351**	-0.704**	-0.464**
	(-6.11)	(-2.45)	(-5.63)	(-3.25)
blend		0.220**		0.255**
		(2.74)		(3.21)
FH	-0.202**	-0.134**	-0.146	-0.133**
	(-2.08)	(-3.70)	(-1.54)	(-3.71)
polity	-0.00932	-0.0279**	-0.00840	-0.0282**
	(-0.41)	(-3.13)	(-0.38)	(-3.21)
war	-0.800**	-0.408**	-0.756**	-0.386**
	(-3.13)	(-4.41)	(-3.16)	(-4.21)
$UN1\_US_{t-1}$	-3.081**[B]	-0.286[A]	-1.871*[B]	-0.304[A]
	(-3.25)	(-0.71)	(-1.92)	(-0.71)
$UN2\_US_{t-1}$	1.377**[B]	0.719**[A]	-0.909[B]	0.917**[A]
	(2.38)	(3.03)	(-1.26)	(2.31)
$UN1\_G7_{t-1}$			-1.929[C]	0.509[C]
			(-1.35)	(0.61)
$UN2\_G7_{t-1}$			2.982**[C]	-0.533[C]
			(3.47)	(-1.10)
sig_US_mil	0.586**	-0.0135	0.454**	-0.0260
	(3.71)	(-0.25)	(2.98)	(-0.49)
US_elig	0.522**		0.480**	
	(2.83)		(2.46)	
ln_US_tofg		0.0491**		0.0357**
		(4.09)		(2.97)
LM_elig	0.760*		0.466	
	(1.93)		(1.10)	
ln_LM_tofg		0.133**		0.0878**
		(5.57)		(3.61)
ln_G7_tofg			0.298**	0.280**
			(3.74)	(7.47)
N	2742	2262	2742	2262

t statistics in parentheses. Computed from clustered standard errors for probits.
* p<.1, ** p<.05

All specifications include year dummies. Probit specifications include region dummies.
[A]Fail to reject hypothesis that coefficients sum to zero (Column 2: p=0.24; Column 4: p=0.13)
[B]Reject the hypothesis that coefficients sum to zero (Column 1: p=0.048; Column 3: p=.003)
[C]Fail to reject hypothesis that coefficients sum to zero (Column 3: p=0.45; Column 4: p=0.97)

Table 5 – Thacker-type Specifications

	(1)	(2)	(3)	(4)	(5)	(6)
Dep. Var.:	WB_elig	WB_elig	WB_elig	ln_WB_tofg	ln_WB_tofg	ln_WB_tofg
Method:	Probit	Probit	Probit	OLS	OLS	OLS
ln_pop	0.181**	0.188**	0.188**	0.893**	0.895**	0.895**
	(4.15)	(4.26)	(4.26)	(24.56)	(24.42)	(24.42)
ln_gdp	-0.955**	-0.951**	-0.951**	-0.0448	-0.0449	-0.0449
	(-7.17)	(-6.99)	(-6.99)	(-0.46)	(-0.46)	(-0.46)
blend				0.0463	0.0482	0.0482
				(0.35)	(0.36)	(0.36)
FH	-0.316**	-0.266**	-0.266**	-0.169**	-0.165**	-0.165**
	(-3.02)	(-2.47)	(-2.47)	(-2.64)	(-2.57)	(-2.57)
polity	-0.0255	-0.0272	-0.0272	-0.0152	-0.0151	-0.0151
	(-0.95)	(-0.99)	(-0.99)	(-0.89)	(-0.88)	(-0.88)
war	-0.749**	-0.737**	-0.737**	-0.370**	-0.368**	-0.368**
	(-2.55)	(-2.57)	(-2.57)	(-2.50)	(-2.48)	(-2.48)
$UN2\_US_{t-1}$		1.175*			0.164	
		(1.78)			(0.37)	
$UN2\_US_{t-2}$			1.175*			0.164
			(1.78)			(0.37)
$\Delta UN2\_US_{t-1}$	-0.674**	-1.152**	0.0233	0.374*	0.300	0.465
	(-2.73)	(-2.73)	(0.06)	(1.95)	(1.04)	(1.58)
N	2800	2800	2800	2196	2196	2196

t statistics in parentheses. Computed from clustered standard errors.
* p<.1, ** p<.05

All specifications include region and year dummies.

Table 6 – AHT-type Eligibility Equations

	(1)	(2)	(3)	(4)
Dep. Var.	WB_elig	WB_elig	WB_elig	WB_elig
Method	Probit	Probit	Probit	Probit
ln_pop	0.183**	0.188**	0.180**	0.182**
	(4.24)	(4.35)	(4.15)	(3.97)
ln_gdp	-0.954**	-0.950**	-0.968**	-0.829**
	(-7.07)	(-7.14)	(-7.24)	(-5.74)
FH	-0.267**	-0.282**	-0.272**	-0.228**
	(-2.58)	(-2.72)	(-2.63)	(-2.28)
polity	-0.0190	-0.0234	-0.0191	-0.00799
	(-0.74)	(-0.90)	(-0.74)	(-0.35)
war	-0.756**	-0.754**	-0.751**	-0.820**
	(-2.89)	(-2.82)	(-2.85)	(-3.33)
$UN1\_US_{t-1}$	-2.896**		-2.758**[B]	-2.159**[A]
	(-3.46)		(-4.16)	(-2.63)
$UN1\_US_{t-2}$		-1.756**	-0.0631[B]	
		(-2.10)	(-0.10)	
$\overline{UN1\_US_i}$				-2.187[A]
				(-1.53)
$UN2\_US_{t-1}$	2.097**	1.572**	2.088**	2.161**
	(3.86)	(3.24)	(3.88)	(3.60)
N	2913	2899	2893	2742

t statistics in parentheses. Computed from clustered standard errors.
* p<.1, ** p<.05

All specifications include region and year dummies.
$\overline{UN1\_US_i}$ indicates the average value of UN1_US by country.

[A]Fail to reject hypothesis that coefficients are equal (Column 4: p=0.99)
[B]Reject the hypothesis that coefficients are equal (Column 3: p=0.001)

Table 7 – AHT-type Allocation Equations

	(1)	(2)	(3)	(4)
Dep. Var.	ln_WB_tofg	ln_WB_tofg	ln_WB_tofg	ln_WB_tofg
Method	OLS	OLS	OLS	OLS
ln_pop	0.891**	0.889**	0.888**	0.871**
	(24.04)	(23.90)	(23.66)	(22.19)
ln_gdp	-0.0448	-0.0468	-0.0495	-0.0288
	(-0.45)	(-0.47)	(-0.49)	(-0.29)
blend	0.0716	0.0750	0.0746	0.0806
	(0.55)	(0.58)	(0.57)	(0.62)
FH	-0.167**	-0.173**	-0.170**	-0.159**
	(-2.63)	(-2.74)	(-2.68)	(-2.55)
polity	-0.0154	-0.0168	-0.0156	-0.0136
	(-0.91)	(-1.00)	(-0.93)	(-0.83)
war	-0.368**	-0.368**	-0.370**	-0.376**
	(-2.53)	(-2.53)	(-2.54)	(-2.65)
$UN1\_US_{t-1}$	-1.138		-0.507	-0.191
	(-1.65)		(-0.89)	(-0.33)
$UN1\_US_{t-2}$		-1.552**	-1.228**	
		(-2.35)	(-2.27)	
$\overline{UN1\_US_i}$				-2.967**
				(-2.58)
$UN2\_US_{t-1}$	0.703*	0.709*	0.794*	0.960**
	(1.73)	(1.92)	(1.94)	(2.34)
N	2266	2264	2259	2262

t statistics in parentheses
* p<.1, ** p<.05

All specifications include region and year dummies.
$\overline{UN1\_US_i}$ indicates the average value of UN1_US by country.

Table A1: Data Sources

Variable	Source
Economic aid flows	OECD (2006), OECD (2007)
FH	Freedom House (2007).
gdp, pop	Heston *et al.* (2002), World Bank (2008)
polity	Polity IV Project (2005)
U.S. military aid	USAID (2008)
war	Gleditsch *et al.* (2002)
UN	Voeten (2006), U.S. State Department (1983-2007)