Sincere or Strategic?

U.S. Aid Disbursements and Voting in the

United Nations General Assembly

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May 27, 2010

Abstract

We examine the strategic relationship between U.S. foreign aid disbursements and voting in the United Nations General Assembly (UNGA). Since 1985, U.S. law has stipulated that the State Department identify important votes and that USAID take the voting behavior of recipients in the UNGA into account in its disbursement decisions. We examine the implementation of this policy and the effects of linking aid to important votes in the UNGA on aid recipients' voting decisions. We find that the strategic use of aid disbursements indeed induces strategic voting. In addition, recipient preferences, the credibility of U.S. aid linkages, and consequent voting and aid disbursement strategies vary significantly as a function of recipient regime type, level of development, and alliance relationships.

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1 Introduction

International organizations are the infrastructure of a system of international law. To the extent that they embody procedures that are generally accepted as legitimate and pursue principles that are believed to serve general interests, they facilitate international cooperation and resolution of conflicts. International organizations make use of democratic decision-making procedures, and they derive their legitimacy from the consent of the governed. On the other hand, in order to facilitate the buy-in of major powers, they incorporate deviations from majority rule, such as weighted voting in international financial institutions, qualified majority voting in the European Union, and norms of consensus in the World Trade Organization. Many international organizations are widely appreciated to suffer from democratic deficits because of deviations from majority rule, delegation to powerful secretariats, and weak and indirect links with voters. Nevertheless, their legitimacy is an important asset. Legitimacy is substantially what makes international organizations useful to the international system, because it facilitates states' voluntary participation.

The United Nations enjoys more legitimacy than any other international organization because its General Assembly is the closest approximation to a global parliament. Security issues are taken out of the General Assembly and dealt with by a Security Council whose voting rules privilege and protect the victors of World War II, but other issues are dealt with in remarkably democratic fashion. Votes are taken frequently, are contested, and are public. The rules of parliamentary procedure are open. In no other IO are comparable voting records available; and if they were made available, in no other IO would the voting records be particularly revealing. As a result of its democratic and representative procedures and generally acknowledged legitimacy, the UN has become a lynchpin of the system of international governance. Numerous other institutions have been created as subordinate to the UNGA, such as the UN functional organizations, the UNDP, UNESCO, UNEP, etc.; and the independent IGOs of the UN system, including the IFIs, the IAEA, which monitors

the NPT regime, and the IPCC, which monitors global climate change, all borrow authority from the UN.

The unique role of UNGA voting poses several interesting questions. First, how legitimate is UNGA voting, in fact? Numerous authors have found that UN voting patterns are associated with bilateral international aid and with flows from multilateral institutions such as the World Bank and the IMF, which suggests that aid may be used to corrupt the process by buying votes. It is unclear, however, whether vote buying in fact occurs. As scholars of the U.S. Congress have long argued, campaign contributions may go to candidates whose positions interest groups support without the existence of an explicit or even an implicit quid pro quo (Snyder and Groseclose, 2000). If rich countries both buy votes and give support to friendly regimes, it may be difficult to disentangle the two effects to determine how significant the effect of vote buying is in practice. Thus, it is essential to explicitly account for the strategic incentives of voters if we want to assess whether voting behavior is sincere or strategic. The literature on Congress abstracts away from the problem of strategic voting when it attempts to fix legislators' ideal points (Poole and Rosenthal, 1991). Similarly, international relations scholars have taken UNGA voting as a unique dataset revealing states' preferences over time (Gartzke, 2005; Russett and Oneal, 2001; Stone, 2004).

We introduce a statistical technique that allows us to answer these questions. We take advantage of the fact that since the mid-1980s, U.S. law has required the State Department to report how countries vote on issues that are regarded as important to U.S. interests, and has required USAID to use countries' voting records on these important issues as a criterion for disbursing aid. We estimate a strategic statistical model in which countries decide how to vote on an issue that has been designated by the United States State Department as important to U.S. interests, and then the United States decides whether to withhold a portion of committed aid, if the country votes against the U.S. position, or reward the aid recipient with additional aid, if the country votes in favor of the U.S. position. Because this model captures the strategic element of voting, we are able to evaluate the effect of anticipated

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punishments or rewards on the voting decision. We find that the United States punishes and rewards recipients very differently depending on their regime type, political orientation (i.e., left-right orientation of executive), their level of development, and alliance relationships. Additionally, we demonstrate that even amongst the small subset of UNGA votes defined as important by the United States there are significant distinctions. Specifically, issues on which the United States votes "No" are much more controversial than those on which it votes "Yes," and thus elicit divergent behavior from the United States and recipients.

2   UN Voting in International Relations

It has been widely recognized that UN voting is strongly associated with flows of foreign aid and support from multilateral donors such as the IMF and the World Bank. These correlations, however, can be explained in two distinct ways. First, it may be the case that UN voting is not intrinsically important to aid donors, but rather reflects the sincere foreign policy preferences of UN members. In that case, any relationship between UN voting and aid flows can be interpreted as evidence that aid donors prefer to contribute resources to like-minded regimes that have similar foreign policy objectives. The political implication is that UN voting is not corrupted by foreign aid flows, although perhaps only because the votes themselves are not sufficiently important to motivate aid donors. On the other hand, it may be the case that UN voting is associated with foreign aid because foreign aid is used to reward or punish countries for voting in particular ways. A similar ambiguity arises in the literature on campaign contributions in the United States Congress. One set of studies assumes that votes are sincere, which is necessary, for example, if we want to use them to identify legislators' ideal points (Poole and Rosenthal, 1991). Another literature argues that campaign contributions are made as an explicit effort to buy votes (Grossman and Helpman, 1994). A third strand of literature criticizes the vote-buying view by arguing that contributions are made to support legislators who are known to share the donors'

policy preferences–again, implying that votes are sincere rather than strategic (Snyder and Groseclose, 2000).

The hypothesis that foreign aid is conditioned on UN voting is plausible—at least in key votes that attract substantial attention from donors—given what we know about the political biases and determinants of aid flows. Need-based criteria play an important role in determining aid flows, as do broad political objectives such as promoting democracy and human rights, but it is well established that the political agendas of the donors are critical and shift aid away from need-based allocations (Boone, 1996; Alesina and Dollar, 2000; Collier and Dollar, 2002). Studies specifically focused on the distribution of aid have shown that aid is strongly related to the geopolitical interests and foreign policy preferences of the donors (e.g. Maizels and Nissanke (1984); Boone (1996); Cashel-Cordo and Craig (1997); Schraeder, Hook and Taylor (1998); Alesina and Dollar (2000); Alesina and Weder (2002)). Studies that compare the aid allocations of multiple donors find that the reasons for giving aid vary enormously and are heavily influenced, for example, by the donors' colonial ties (Svensson, 1999; Alesina and Dollar, 2000; Alesina and Weder, 2002; Neumayer, 2003). If these relationships are in fact strategic, they should hold most strongly for aid from the United States, which has the most far-flung foreign policy commitments, and they should apply particularly for the set of votes that the United States State Department designates as "important votes."

Several studies have found associations between UN voting and aid from various donors and international institutions (Barro and Lee, 2005; Oatley and Yackee, 2004; Thacker, 1999; Stone, 2004). Indeed, one of the most robust findings about participation in IMF programs is that IMF lending is significantly shaped by the geopolitical preferences of the countries that contribute the most resources, particularly the United States. UN voting is rapidly becoming recognized as an important control variable in studies that seek to explain participation in IMF programs, and as a useful instrument for selection-controlled studies of their effects, because UN voting is presumably exogenous with respect to outcome variables

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such as economic growth (Steinwand and Stone 2008). Several studies, following Thacker (1999), have used the similarity of a country's profile of votes in the United Nations General Assembly to those of the United States to measure political affinity to the United States. Thacker finds that increasing this congruence over time is associated with a higher probability of IMF lending. Barro and Lee (2005) find that IMF loans are associated with similarity to U.S. voting patterns in the UN and economic ties with the United States. This quantitative evidence therefore supports the anecdotal evidence that numerous countries that had not met the technical criteria to qualify for IMF support received it nevertheless because they played important roles in U.S. foreign policy. Prominent examples include Zaire and the Philippines during the Cold War, and Russia, Ukraine, Egypt, Pakistan and Turkey during the 1990s.

Most of these studies do not take an explicit position on the question of whether UN voting is a measure of countries' sincere preferences or evidence of strategic compliance with the preferences of major IMF shareholders intended to smooth the way for IMF programs. An exception is Stone (2004), which explicitly argues that S-scores based on the profile of all UNGA votes are appropriate measures of countries' revealed preferences because most votes are not important enough to major countries in the international system to provoke them to interfere in IMF operations:

> I measure the political affinity of African countries for potential foreign patrons by using measures of the similarity of their votes in the UN General Assembly. 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 a sincere measure of countries' foreign policy preferences (Stone, 2004, 580).

Kuziemko and Werker (2006), on the other hand, argue explicitly for vote buying, and they narrow the interpretation of their results by focusing on temporary membership in

the UN Security Council. UNSC voting is much more significant that UNGA voting, so incentives to buy votes during crises are much stronger. In addition, since temporary UNSC membership rotates and can only be held for two-year terms, it is possible to isolate the treatment effect from country fixed effects by studying changes in aid flows. The authors find that U.S. foreign aid increases significantly when a country becomes a temporary UNSC member, and drops off again after membership lapses. Dreher and Vreeland (2008) find a similar effect of temporary membership in the UN Security Council on World Bank loans. These findings suggest that the well-known cases in which the United States made extensive offers of aid in order to line up support in the Security Council for its two wars with Iraq were not idiosyncratic, and in fact tell us something important about how the institution functions.

In this paper we suggest that between the most uninformative consensus votes in the General Assembly and the high-stakes maneuvering in the Security Council lies a middle ground, where major powers count votes on important issues and weaker countries have real choices to make. In these cases, individual countries vote in ways that tell us important things both about their preferences and about the ways in which the distribution of power in the international system skews majoritarian decision-making processes. In order to assess countries' true preferences, however, we have to estimate the degree to which their voting behavior is a strategic response to monetary incentives.

Several existing studies examine the link between UNGA voting and U.S. foreign aid flows (Rai, 1980; Kegley and Hook, 1991; Wang, 1999). Rai (1980) finds an association between aid flows and UNGA voting, but cannot isolate the causal mechanism. Kegley and Hook (1991) do not find much evidence that the explicit linkage between UNGA voting on important issues and aid disbursements established in the 1980s has any effect on voting behavior. However, as Wang (1999) points out, previous work had not distinguished between important and ordinary votes. Furthermore, no existing work recognizes that the U.S. linkage of aid disbursement to voting on important issues should, if effective, induce strategic

voting behavior on the part of recipients, which could make patterns more difficult for an analyst to observe. We posit a strategic model that captures both the U.S. policy of linking disbursements to important votes as well as how essential recipient characteristics such as regime type and the left-right political orientation of the executive affect strategies.

The relationship between aid and UN voting is critical to evaluating the legitimacy of the UN as a representative forum. It also has implications that reach far beyond the United Nations. Thus, for example, our interpretation of the association between UN voting and IMF programs takes on different interpretations depending on the degree of strategic voting that takes place in the UN. Similarly, if UN voting patterns account for variations in international conflict, it is important to know whether these patterns reflect the countries' policy preferences and world views or ties of U.S. patronage (Russett and Oneal, 2001).

3   A Strategic Estimator for UN Voting

Previous studies of UN voting have been unable to disentangle strategic and sincere voting because they have not identified a voting equation and an aid provision equation and estimated the strategic relationship between them. We are able to estimate these effects by making identification assumptions and setting a structure for the strategic interaction. The model imposes the simplest possible structure that allows for strategic voting and for threats and promises to be linked to aid flows. In order to estimate the model, we add a stochastic component to the utilities of the actors, which gives us a distribution over the possible end nodes of the game. The disturbance terms over actions are assumed to be independent and identically distributed Type 1 Extreme Value, which yields a model with logit probabilities as introduced by Signorino (1999). We characterize this disturbance as agent error, which seems particularly appropriate to our context (Signorino, 1999, 2003). Agent error might occur in the voting stage, for example, because the UN ambassador is not informed, or not informed in a timely manner, of the preferences of the leader, or because disagreements

within the government give the ambassador discretion to vote his or her own preferences. Agent error might occur at the disbursement stage because of a disagreement between the United States Executive and legislative branches of government, or because of an interagency dispute, or because of some other intervening variable that is orthogonal to UN voting, such as the recipient country's policies regarding human rights, trade or the environment.
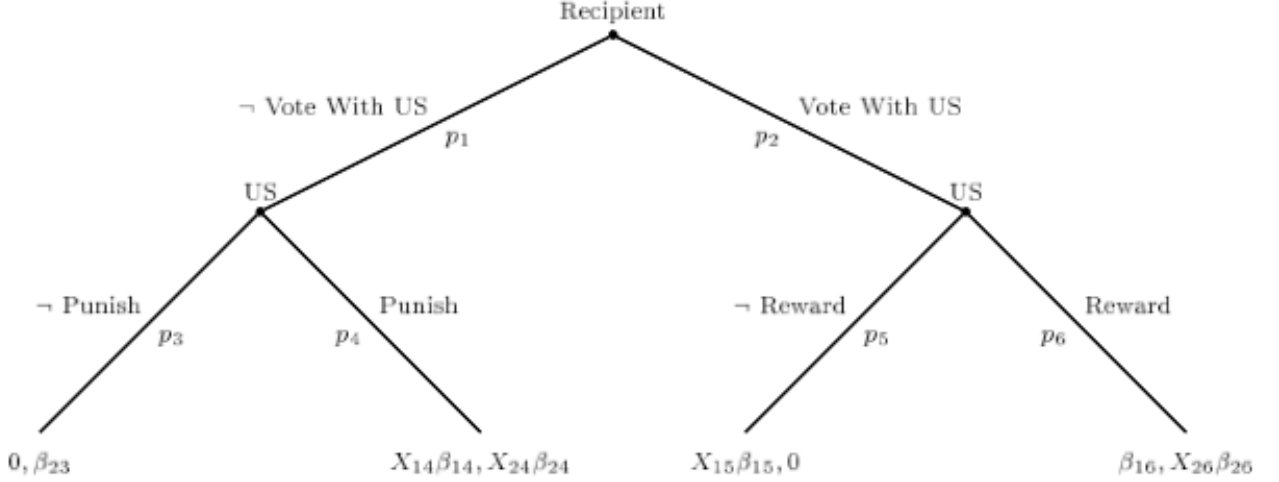

Figure 1: The Voting-Aid Game

The strategic logit model we estimate is depicted in Figure 1. Given the relatively large number of observations and non-trivial structure of the game, we utilize the statistical backwards induction technique (SBI) developed by Bas, Signorino and Walker (2007) in the estimation.[1] First, the recipient country decides whether or not to vote with the United States on a particular vote. If the recipient votes against the United States on an important vote, the United States decides whether to punish it with significant aid reductions. If the recipient's vote coincides with the United States position, the United States chooses whether to reward it with a significant increase in aid flows. In order for the model to be identified, both the recipient and the United States must have the utility for at least one outcome that is

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[1]SBI is attractive in our context because it ensures that the likelihood is concave. Thus, we are very confident that our results reflect the true maximum likelihood estimate. Additionally, computational time is decreased significantly relative to simultaneous estimation of the full system of equations.

possible at their initial information set and affects their utilities normalized to zero.[2] Also, no regressor can be estimated in every utility. We normalize both the recipient's utility for not being punished after voting in disagreement (a sincere opposition vote with no consequences) and the U.S. utility for not rewarding the recipient following a vote in agreement (harmony) to zero. Thus, all estimated coefficients for each player in each of the remaining utilities are interpreted relative to these outcomes. This model effectively captures strategic voting and allows for threats and promises about important UNGA votes to be linked to aid flows.

4   Data

We utilize data on aid flows from the United States, voting by the United States and U.S. aid recipients in the UNGA, and data on numerous other variables of interest. The data on aid flows from the United States to potential recipients are published by the OECD and cover 1960–2001. The data include both Official Development Assistance (ODA) and Official Assistance (OA) disbursements in millions of U.S. dollars.

We utilize the *Documenting Votes in the UN General Assembly, v2.0* data set compiled by Voeten (2005), and we focus on votes defined as important by the U.S. State Department in its annually published *Report to Congress on Voting Practices in the United Nations*.[3] The temporal domain starts in 1985, the year that U.S. law required the State Department to report how countries vote on issues that are regarded as important to U.S. interests, and ends in 2001.[4] Votes in which either the United States or the recipient country is absent are excluded.

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[2]In this game, an initial information set for each player is the node at which it makes its first move in the game (Lewis and Schultz, 2003).

[3]We thank Jun Xiang for help in acquiring these data.

[4]We chose 2001 as the final year of our analysis to ensure that changes in aid disbursement policy resulting from the start of the "war or terror" did not adversely affect our analysis.

4.1 Regressors

We utilize several regressors to estimate the utilities of the recipient countries and the United States over the outcomes in the model, including variables specific to the recipient country and variables that characterize the relationship the recipient has with the United States. The variables specific to the recipient are Polity IV scores, GDP per capita, and the political orientation of the executive (Keefer, 2007). Both GDP per capita and bilateral trade flows are measured in 1996 U.S. dollars to ensure comparability across the two measures and over time.[5] To measure the political orientation of the executive, we create two binary variables that indicate whether a recipient country's executive was left of center and whether it was right of center, respectively. The excluded category includes governments that are centrist and those whose orientation are not clear.

Table 1: Descriptive Statistics for Regressors

	Minimum	Median	Mean	Maximum	Standard Deviation
Recipient Polity	-10	-1	0.19	10	6.99
Allies	0	0	0.22	1	0.41
GDP pc	281.3	3358	4793	29170	4762.37
Trade	0	318.40	3869	259500	15051.09
Left-Wing Executive	0	0	0.31	1	0.46
Right-Wing Executive	0	0	0.18	1	0.39

To model bilateral relationships we include bilateral trade flows and a variable that indicates whether the recipient is in an alliance with the United States (Oneal and Russett,

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[5]Bilateral trade is measured in millions of 1996 U.S. dollars.

2005). In addition, to model specific characteristics of particular votes, we include a variable that indicates whether the United States voted "No." "Yes" and "No" votes are qualitatively different, because UNGA proposals almost always pass, so "No" votes find the United States in the minority, and usually badly isolated. In the late 1970s, after the United States lost control of the UNGA agenda to the Group of 77, the United States began to vote "No" on most roll calls, where it had previously voted "Yes" on the majority of them. Roll calls on which the United States votes "No" tend to be those on which the United States needs to buy off opposition. Table 2 demonstrates that the United States votes "No" on almost three-fourths of State Department-identified important votes.

Table 2: Distribution of U.S. Votes

Vote	Percentage
Yes	26.5
No	73.5

4.2 Dependent Variables

Our dependent variables measure whether countries voted with or against the U.S. position on important votes in the UNGA and whether there were significant deviations of U.S. aid disbursements from the trend. First, we utilize voting records on important votes and create a binary variable that indicates whether the votes of the United States and recipient countries coincide on each vote of interest. Thus, if the United States and the recipient both vote "Yes" or both vote "No," this variable equals 1, while it takes a value of 0 otherwise.[6]

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[6]We treat "Abstain" as agreement with the United States position, as the United States works hard in many cases to get countries to abstain on particularly sensitive issues. Although we think this is the right choice substantively, we also tried treating abstentions as disagreements and did not find markedly different results.

Creation of the aid disbursement variables is more difficult as we need to ensure that we do not treat aid fluctuations that result from temporal trends such as inflation or exogenous factors unrelated to particular UN votes as punishments or rewards. Note that we need two dependent variables, one to indicate whether the United States punished the recipient with a significant aid reduction following conflict on an important vote, and a second to indicate whether the United States rewarded the recipient with a significant increase in disbursement following agreement. An example of a "naive" punishment variable is one that takes a value of 1 if aid disbursements in a given year are lower than aid commitments. However, aid disbursements generally lag behind commitments for a variety of reasons unrelated to UN voting.

We account for this by estimating the predicted aid disbursement for each country in each year with a lagged fixed effects model. This approach has several important advantages. First, we use the information about projected disbursements contained in aid commitments, so our variables can be interpreted as discretionary deviations by the Executive branch from appropriated aid levels. Second, our estimation procedure explicitly controls for temporal trends in disbursement. Finally, the fixed effects account for the fact that some recipient countries receive more aid for idiosyncratic reasons. For example, we know that Egypt is a major recipient of U.S. aid for geopolitical reasons, and our approach accounts for this. For each country i, aid at time t is estimated using the following specification

$$AID_{i,t} = \beta_0 + COM_{i,t}\beta_1 + AID_{i,t-1}\beta_2 + \epsilon_{i,t}. \tag{1}$$

The inclusion of more than one lag has no effect on the fit or predictions of the model, so we exclude all but one lag. Note that the model explains the variation in yearly aid disbursements across recipients very well (R-squared > 0.99). On the other hand, more variance in aid disbursements remains to be explained for the same recipients over time (R-squared ≈ 0.53).

We utilize the model shown in table 3 to produce predicted aid disbursements with 95%

Table 3: Results of Predictive Model

Variable	Estimate	Standard Error
Constant	9.186	1.407
$Commitments_t$	0.387	0.007
Aid_{t-1}	0.332	0.010

R-Squared Within Group: 0.53
R-Squared Between Group: 0.99
F-test for Fixed Effects: $P > 0.006$

confidence intervals for each recipient in each year. The bivariate correlation between actual aid disbursements and predicted aid disbursements is 0.85, which indicates that the model's predictions are quite accurate. The punishment variable takes a value of one if the actual aid disbursement is below the lower bound of the 95% confidence interval, and zero otherwise, and the reward variable takes a value of 1 if the actual disbursement is greater than the upper bound of the 95% confidence interval, and zero otherwise. Our approach is scale invariant, so the construction of the dependent variable does not lead to spurious inferences, for example, that countries that receive relatively high levels of aid (e.g., Israel) are more likely to receive punishments or rewards. The distribution of the data across all possible outcomes in the model is depicted in figure 2.

The distribution of data across the four possible outcomes in the model is as expected: punishments and rewards are rare, because we have defined them conservatively. Punishment by the United States following disagreement on an important vote happens only about 3% of the time, while a decision not to punish takes place around 63% of the time. This distribution is similar to that found in other dependent variables in international relations that measure punishments (e.g., economic sanctions). The United States uses punishments and rewards selectively, even when we limit our analysis to important votes.
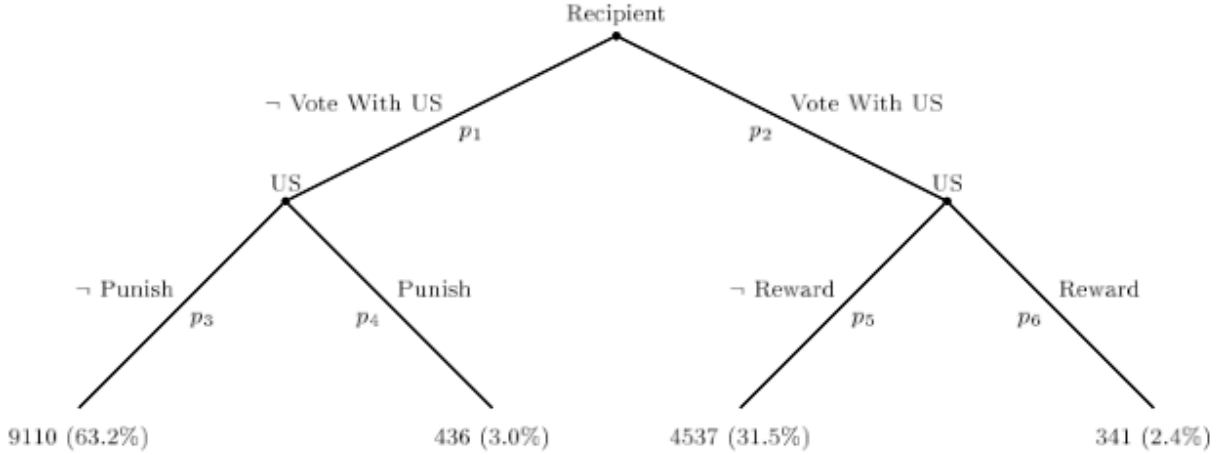
Figure 2: The Distribution of Data Across Outcomes

5   Results

The results of the full strategic model are presented in Table 4. The model correctly predicts over 84% of the observations, which indicates that it fits the data quite well. This is an improvement of 34% over predicting the modal category. Note that all of the columns of coefficients result from the same model, and each column of the table contains the estimates for either the recipient's or the U.S. utility for a particular outcome. For example, the first column contains the estimates for the recipient's utility for being punished after voting in disagreement with the United States. As noted above, all estimated coefficients for the recipient are interpreted relative to the utility for not being punished following disagreement, so the coefficients in the first column can be interpreted as representative of the cost of punishment. Similarly, all coefficients for the United States are interpreted relative to the utility for not rewarding agreement, so the coefficients in the last column can be interpreted as the cost/benefit of providing rewards for invariant recipient country policies. We first discuss the U.S. utility for punishing and rewarding, and then discuss recipient behavior. In general, we base our discussion on the substantive effects reported in tables 5–6 and figures 4–??, because the estimated coefficients in table 4 are relatively difficult to interpret.

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5.1 Punishments and Rewards: U.S. Behavior

Table 5 contains the probability that the United States punishes following disagreement and rewards following agreement at various levels of the statistically significant variables. The first row of Table 5 shows the probability of punishment and reward when all variables are held at their median values, and each subsequent row alters the value of one variable to isolate its effect on the predicted probabilities. Thus, the second row shows the probability of punishment and reward when the recipient is an autocratic country (Polity Score=-9) and all other variables are held at their median values. Specifically, the second column of table 5 shows the change in the probability of punishment relative to the median case (i.e., the first row), and the third column expresses this as a percentage change in probability. Columns 4-6 repeat this procedure for the probability that the United States rewards the recipient country when it votes in agreement. Thus, the second row indicates that a relatively autocratic recipient is 33% less likely to be punished if it opposes the United States and 63% less likely to be rewarded if it cooperates than in the median case (Polity Score=-1).

The baseline predicted probabilities in the first row of table 5 reflect the fact that the United States uses aid-based punishments and rewards sparingly (as demonstrated in Figure 2), and the fact that we have defined our reward and punishment variables conservatively. The choice of carrots or sticks depends on whether the United States votes "Yes" or "No." In the baseline case, when the United States votes "No" because it is in the minority, the probability of punishing a country that deviates from the preferred U.S. position is 0.042 when all variables are held at their median or mean, while the probability that it rewards compliance is only 0.008. In contrast, when the United States votes in favor of a resolution, it is more likely to reward members of its coalition (.042) than chastise its opponents (.005). The different U.S. strategy reflects a basic difference in the kinds of issues on which the United States finds itself in the minority: the 26.5% of important resolutions that the United States supports are not as contentious as the 73.5% that it resists. Important votes on which the

United States votes "Yes pass by large margins; on the other hand, when the United States votes "No," it is usually badly isolated, so the symbolic value of attracting some support is maximized. The United States is five times more likely to use carrots than sticks when it is trying to promote an important resolution, and eight times more likely to use sticks rather than carrots when it is isolated and trying to resist one. The distinction between "Yes" and "No" votes is one that the literature has not previously made, perhaps because it has not distinguished between punishments and rewards.

The U.S. decision to use aid as an inducement is also significantly affected by the recipient's level of development and its trade relationship with the United States. Poor countries are much more likely to be punished when they oppose the U.S. position, while more developed countries are more likely to be rewarded when they offer support. This suggests that punishments are less costly to apply to weak countries, and the United States prefers to use positive incentives with more developed countries that are better able to resist. Trade exposure has a uniform effect of reducing the credibility of U.S. aid linkages: countries that trade substantially with the United States are less likely to be punished or rewarded for their voting behavior. Some of this effect is attributable to the effects of scale, since vote buying is least expensive when it is directed at small countries whose votes are most easily bought. Furthermore, trade creates interdependence, which lowers the salience of foreign aid in bilateral relations, and apparently makes the United States reluctant to tie aid to UN voting.

The results in table 4 indicate that the left-right orientation of the executive also significantly affects the choice between positive incentives and sanctions. Relative to regimes with centrist executives, the United States is less likely to punish regimes with right-wing executives when they vote in opposition and less likely to reward regimes with left-wing executives when they vote in support. Table 5 indicates that countries with right-wing executives are 50% less likely to be punished when they oppose the United States. The United States may be averse to punishing right-wing governments for their votes in the United Nations because

right-leaning governments support policies that the United States finds beneficial on a wide range of other issues, such as economic reform. On the other hand, aid recipients with left-wing executives are 38% less likely to be rewarded by the United States when they support its position. This suggests that the United States has been reluctant to use aid policy to support left-wing governments, even when they cooperate with U.S. policy. The effect of U.S. reluctance to reward left-wing governments and to punish right-wing governments is that both face weaker incentives to comply with U.S. preferences than centrist governments.

The results reveal that the United States conditions its behavior on regime type in significant ways, but not in the way the literature typically supposes. The results in Table 5 indicate that U.S. promises and threats to condition aid on UN voting are most credible for the set of democracies. The United States is reluctant to punish autocracies, perhaps because they are more dependent on aid flows to maintain power (Bueno de Mesquita et al., 2003), and only receive aid in the first place if they are important to U.S. foreign policy (Schraeder, Hook and Taylor, 1998). The United States is also reluctant to reward autocracies with increased aid, perhaps because giving aid to dictators is unpopular in Congress. These findings contradict the argument of (Bueno de Mesquita and Smith, 2007) that aid is directed disproportionately to authoritarian countries because their narrow bases of support make it less expensive to purchase policy concessions from them. If this were the case, autocracies should be most likely to be punished when they oppose the United States and rewarded when they comply, but we find that democracies are more likely to be punished for non-cooperation and rewarded for cooperation. It is a striking finding that the United States is less nimble in its use of aid to reward and punish autocracies, and as we discuss below, this makes them less supportive of U.S. positions. The present analysis cannot offer a direct test of alternative mechanisms to explain this finding, but our conjecture is that aid to autocracies is tied to particular, long-term policy goals such as regional stability or military basing rights, and is provided primarily to prevent regime change. If this is the case, it could be excessively costly to use this aid to influence UN voting.

Although we cannot directly test this conjecture, the nonlinear effects of the variables allow us to probe a bit further. Figures 4(a) and 4(b) plot the effects of varying development and regime type simultaneously.[7] As noted above, a low level of development makes punishments more likely and rewards less likely. Figure 4(a) shows that the United States is substantially more likely to withhold aid from a relatively poor recipient than from a more highly developed recipient, and from a democracy than from an autocracy. The interaction between these two effects is significant, and the effect of regime type is strengthened in the set of poor recipients. The slope of the curve is much steeper when countries are poor, indicating that poverty is a reason for the United States to be more reluctant to punish authoritarian countries rather than democratic ones. Relatively poor autocratic regimes have high aid dependency ratios (aid to GDP) and may be vulnerable to political instability if aid is cut off. Consequently, this finding suggests that the U.S. disinclination to punish authoritarian countries may be largely attributable to concern about political stability.

Rewards have a complementary interpretation. Figure 4(b) demonstrates that democracies are more likely than autocracies to receive a reward if they cooperate by voting with the United States, and the probability that they receive a reward increases as their income increases. Again, the interaction between these effects is important. Poor countries and autocracies are unlikely to be rewarded under any circumstances, but the effect of development on the probability of being rewarded increases rapidly as countries become more democratic, and the effect of being democratic increases rapidly as countries become more developed. This suggests a political interpretation. Democratic leaders often have electoral incentives to oppose U.S. policy, and as the level of development of their countries increases, they become increasingly resistant to U.S. pressure. As a result, using negative incentives becomes less attractive, and rewards increase because they represent a substitute for sanctions.

The case of Nicaragua in the early 1990's illustrates the way in which the United States

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[7]Note that GDP per capita and trade were divided by 1000 and 10000 respectively to make estimation computationally easier. Thus, interpretation of the axis in all of the figures should be adjusted accordingly.

uses aid disbursements to punish and reward relatively poor democracies. In 1990, Nicaragua conducted multiparty elections that were won by the conservative opposition party, led by Violeta Chamorro.[8] Since Nicaragua was a poor democracy, we expect both punishments and rewards to be more likely than in the average country. Nicaragua's GDP per capita hovered around $2000 in the early 1990s, which is well below the mean of $5000 in the sample. In 1991 the Chamorro government voted in support of the United States on resolution R/46/82A, which pertained to the Middle East peace process, and was rewarded. The United States had taken note of a much more cooperative Nicaraguan government (Serafino, 1990) and subsequently released additional aid funds after observing cooperation in several areas as well as a rare instance of cooperation in the UNGA.

In the following year, the Chomorro government took a more oppositional stance relative to U.S. interests in the UNGA, voting against the U.S. position on all but one important vote. The sole exception was a resolution that the United States supported on the situation in Bosnia, which passed unanimously. In response to this lack of cooperation, the United States reversed its aid policy towards Nicaragua in 1992 and punished the Chomorro government with significant aid reductions (The New York Times, 1992; Krauss, 1992). The same pattern continued into 1993, with Nicaragua voting against a number of important resolutions and the United States continuing to withhold aid.

5.2   The Strategy of UN Voting: Recipient Behavior

We now turn to a discussion of recipient behavior. The model allows for voting behavior to be strategic, because voting decisions precede aid disbursements. Consequently, vote choices depend both on governments underlying preferences and on U.S. disbursement strategies. Table 6 presents the substantive effect of each regressor on the probability that the recipient votes in opposition to the U.S. position. As in Table 5, the first row depicts the median case for all variables, while each subsequent row isolates the effect of changing one variable.

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[8]In 1989, Nicaragua's Polity score is 6 in 1990.

The table indicates that democracies, more developed countries, and countries with weak trade ties to the United States are less likely to oppose the United States than autocracies, poor countries, and those with more substantial trade ties. The effect of left-right partisanship is ambiguous, since the residual category (centrists and governments with unidentified partisanship) seems to be most oppositional.

The results in Table 6 indicate that opposition to the United States is widespread on votes that it designates as important, but varies substantially depending on the U.S. position on particular issues. As we discussed above, the baseline probability that an aid recipient votes against the United States when the U.S. position is "No" is 0.88, while the probability that an aid recipient opposes a U.S. "Yes" vote is only 0.03.[9] The United States voted "No" on approximately three-quarters of all votes that it defined as important (i.e., table 2). When the United States votes "Yes," it finds itself in the majority. These resolutions cover issues on which the United States takes less controversial positions and is able to craft a compromise that it is able to support. Since voting is very different on "Yes" and "No" votes, it is important to control for the U.S. position, which determines the level of recipient opposition and the U.S. propensity to punish and reward recipients. The existing literature on the relationship between UNGA voting and U.S. aid flows (e.g., Kegley and Hook (1991) and Wang (1999)) has missed the significance of the distinction between "Yes" and "No" votes, and our results suggest that this is an important omitted variable in those studies.

Table 6 indicates that democracies are less likely and less developed countries are more likely to oppose U.S. positions in the UNGA. A closer look at these results suggests that the democracy effect is a strategic response to U.S. aid policy. The graphs in Figure 5 depict the relationship between wealth, regime type, and the probability of voting in opposition to the United States. Figure 5(a) depicts a non-monotonic relationship between regime type and votes against U.S. positions, which depends on the recipient's level of development. Aid

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[9]Since "No" is the median position of the United States, the first row represents a "No" vote with all other variables at their median.

recipients generally support the U.S. position on important "Yes" votes, but relatively poor countries are increasingly likely to vote against the United States if they are not democratic (i.e., Polity Score<6). Opposition by authoritarian governments is maximized among very poor countries, which are most likely to strongly oppose U.S. preferences. However, this opposition is non-monotonic, reaching a peak among weakly consolidated authoritarian countries (Polity Score=-4). The reason for this is apparently strategic voting. Democracies' preferences are inherently more oppositional than authoritarian governments' preferences. The coefficient of -5.63 for polity in the government's utility for being rewarded for compliance in Table 3 indicates that as a country becomes democratic, the benefits of opposing the United States rather than complying increase, possibly because democracies have incentives to cast symbolic votes against the United States. On the other hand, democracies are less susceptible than authoritarian governments to punishments: the coefficient of 2.75 in the first column of Table 3 indicates that the cost of punishment declines as polity increases, holding voting behavior constant. As a result, highly authoritarian countries comply with U.S. voting preferences. The only reason democracies are more compliant than moderately consolidated autocracies – in spite of more oppositional preferences and lower vulnerability to sanctions – is that democracies are more likely to be punished or rewarded.[10]

The effects of the political orientation of the government are similarly complex, and would likewise not be adequately captured by a non-strategic model. Recall that the comparison category for aid recipients is non-compliance without punishment. The significant negative coefficient for left-leaning governments, therefore, is attributable to punishment; in contrast, when right-wing governments vote against the United States, they are unconcerned about whether they are punished. This suggests that left governments are more sensitive to the fiscal or social effects of aid reductions. On the other hand, the utility in the third column combines the effect of compliance with the effect of the reward, which cancel each other out

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[10]Non-monotonicity occurs in strategic models because of countervailing strategic incentives. In this case, U.S. incentives interact with the preferences of aid recipients.

for left-wing governments, so there is no significant effect. Right-wing governments benefit from agreement with the United States and from being rewarded, so they enjoy a significant positive effect. For its part, the United States is averse to rewarding left-wing governments and to punishing right-wing governments for their votes in the United Nations, presumably because right-leaning governments support policies that the United States finds beneficial on a wide range of other issues, such as economic reform. The net effects of government partisanship on UN voting is a combination of these factors, and we find that both left and right governments are marginally more likely to oppose U.S. positions in the UN than moderate or unclassifiable governments, but for markedly different reasons. Left governments oppose the United States on principle in spite of the costs they bear when the United States reduces their foreign aid and the high probability that it will do so. Right governments tend to support U.S. positions, in contrast, and benefit from U.S. largesse when they do. However, when they are inclined to oppose U.S. positions, they do not face a credible threat of losing access to U.S. support.

Pakistan is an instructive example as it experienced a transition to democracy and back to autocracy within the analyzed time period. Specifically, Pakistan was relatively autocratic from 1984–1987 (i.e., Polity score of -4 to -7), relatively democratic from 1988–1998 (i.e., Polity score of 7 to 8), and reverted back to being relatively autocratic after a coup in 1999 (i.e., Polity score of -6). The expectation of our model is that Pakistan should be punished and rewarded more frequently while a democracy than when it was authoritarian. Figure 3 shows that this is indeed the case. The United States punished or rewarded Pakistan in only one of seven years of non-democratic government, while it punished (6 times) or rewarded (3 times) Pakistan during nine of the eleven years in which it was a democracy.[11]

Pakistan was a good candidate for punishment because it frequently voted against the U.S. position on important issues. Pakistan voted with the United States position only 24% of the time, well below the sample mean of 35%, and this voting pattern was not

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[11]Note that 2001, when Pakistan received substantial aid because of the U.S. war with Afghanistan, is not coded as a reward because Pakistan's voting was uncooperative.

Figure 3: Aid Flows to Pakistan, 1984–2001
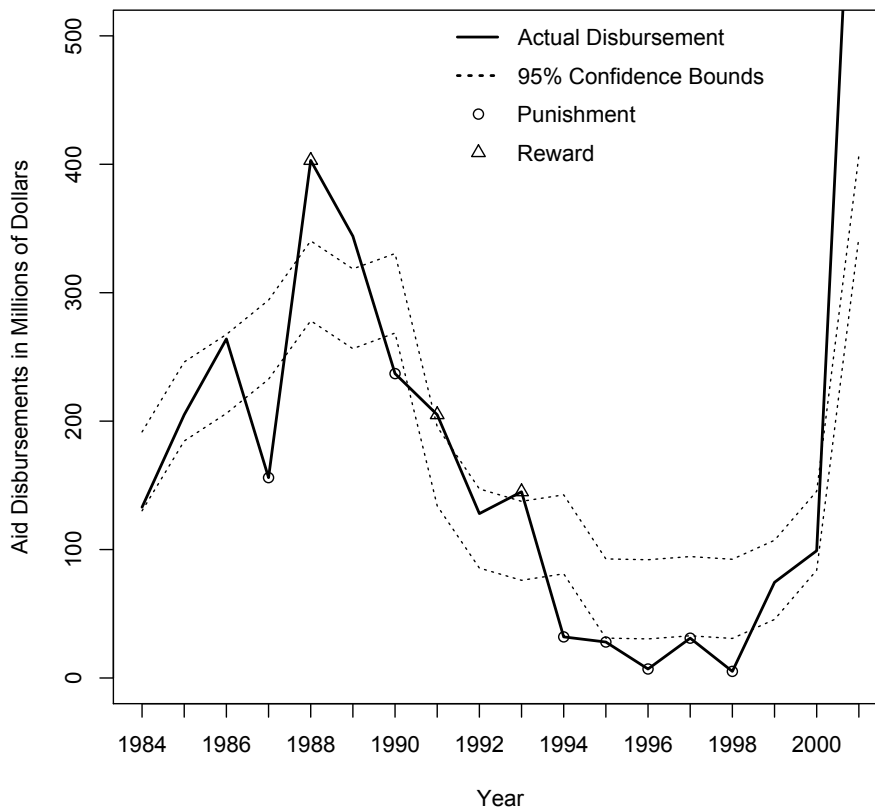
systematically altered by transitions to or from democracy. Thus, Pakistan is a good case to use to isolate the effects of regime changes on U.S. aid disbursements. In the three years that Pakistan was rewarded it voted with the United States on several important votes that pertained to the Israeli-Palestinian conflict (e.g., R/44/40A in 1988). In fact, it voted with the United States almost 35% of the time in 1988, 1991, and 1993. In contrast, during the seven years in which it was punished, it only voted with the United States 23% of the time on important votes. Several of the votes identified as important by the United States during the mid-1990s condemned nuclear testing of the kind Pakistan was conducting. For example, Pakistan voted against R/53/77G in 1997, which was one of the most popular U.S.-supported resolutions, opposed by only 8 other countries.

Figures 5(c)–5(d) explore the strategic effects of rewards and punishments by illustrating

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how the probability of recipient opposition changes as a function of GDP per capita and trade. The political orientation of the executive and alliance do not have strong effects, so graphs varying those variables are not presented. Figure 5(c) depicts "Yes" votes while 5(d) depicts more controversial "No" votes. Again, recipient behavior is markedly different on "No" votes than on "Yes" votes. In both cases, however, poor countries and those that have a high volume of trade with the United States are the most likely to oppose the U.S. position. Poor countries have preferences that are inherently opposed to U.S. preferences (Kim and Russett, 1996; Voeten, 2003). The positive coefficient in the third column of Table 4 (4.42) indicates that as countries increase in development, they come to prefer receiving U.S. rewards to voting in opposition, which implies the opposite for poor countries. As countries become poorer, in fact, the increasing preference for opposing the United States overwhelms the fact that poor countries are more vulnerable to U.S. sanctions. The positive coefficient (9.87) in the first column indicates that the cost of aid withheld is greatest for poor countries, but they nevertheless oppose U.S. positions more frequently.

It is a counter-intuitive result that high-volume trading partners are more likely to vote against the United States. The explanation is strategic. It is not the case that U.S. trade partners are inherently more oppositional than other countries, and neither are they less vulnerable to U.S. punishments. Returning to Table 4, the coefficient in the third column (11.46) indicates that significant trade partners benefit more from being rewarded than from opposing U.S. positions. The negative coefficient (-15.86) in the first column indicates that being punished is very costly for significant trade partners. The explanation for their oppositional voting behavior, therefore, can only be that the United States is unlikely to punish or reward its major trading partners. We found above that this is the case: the United States is unlikely to punish its trading partners if they vote against it, but is also unlikely to reward them if they cooperate. We are now in a position to conclude that this outweighs the inherent sympathy and vulnerability major trading partners have towards the United States, so that the net effect of trade volume is to make them more likely to oppose

U.S. positions. The substantive significance of this finding depends on the level of economic development, but trade volume has a monotonic effect that increases opposition.

5.3 Do Expected Punishments and Rewards Matter?

The results indicate that recipient countries vote strategically in anticipation of aid-based punishments and rewards. However, it is possible to question our assumption that the relationship between the substantive regressors and recipient voting behavior is strategic. Does recipient voting behavior really depend on subsequent U.S. aid disbursement decisions? The obvious way to assess this is to use comparative model testing methods to compare the strategic model to a non-strategic model of recipient voting behavior (Clarke, 2001, 2003). Such a test has two key implications. From a methodological perspective, a comparative model test will assess whether a strategic statistical model is the appropriate specification, given our data. From a substantive perspective, it represents a direct test of the hypothesis that recipient voting behavior depends on expected punishments and rewards.

In our case, we can rely on a simple likelihood ratio test, which is appropriate for nested models. The model presented in Table 4 assumes that the recipient conditions its vote choice on its anticipated effect on the U.S. aid disbursement decision. However, if it is the case that the recipient's voting decision is affected by the same covariates but is not strategic, we do not need to condition its choice on the expected response of the United States. Furthermore, if this non-strategic model is more appropriate, the results that we attribute to strategic interaction could be spurious. In this alternative model of recipient voting behavior we include the same substantive regressors included in the recipient's utilities above without conditioning their influence on U.S. behavior. This simpler model is nested within the strategic estimator as it is technically the same model with the assumption that

$p_3 = 0$, $p_4 = 1$, $p_5 = 0$, and $p_6 = 0$.[12] As Clarke (2001, 727–728) notes, two models are nested if the "unrestricted" model can be reduced to the "restricted" model by imposing a set of linear restrictions. The restriction here states that the probability the United States responds with a punishment or reward is irrelevant to the recipients' vote choices. The likelihood ratio test comparing the two models rejects the null hypothesis that the restricted model performs equally well at a high level of confidence ($p¡.005$).[13] Thus, we conclude that the non-strategic model is indeed misspecified, as we assumed at the outset, and that a properly specified model must include strategic interaction. Substantively, this means that U.S. aid policy has a significant effect on voting in the United Nations General Assembly.

6   Conclusions

UN voting records are a uniquely informative data source on the policy preferences of most of the worlds countries on a wide range of issues, and previous scholarship has frequently treated UN voting either as a measure of preferences or as an arena for vote buying. Using a strategic statistical model that explicitly allows for the possibility that voting is strategic, we find that the U.S. policy of influencing important UNGA votes with aid disbursements has important effects on the behavior of recipient countries. UN voting is not simply a sincere expression of country preferences.

The results of our model indicate that U.S. policy sometimes influences countries votes, but also point to the limits of that influence. In particular, we find evidence that relatively democratic recipients strategically alter their behavior in expectation of U.S. aid punishments

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[12]There are a few other possible assumptions that would lead to the restricted model. However, they all lead to an equivalent non-strategic version of the model. The linear restrictions should be written such that the strategic logit model is reduced to a single-equation logit model that includes one of each substantive regressor and a constant.

[13]The log-likelihood for the strategic version of the recipient vote choice model model is -4171.45, while the log-likelihood for the restricted non-strategic model is -4220.37. Since the strategic model has 8 additional parameters, the likelihood ratio test statistic is 97.83 with 8 degrees of freedom. This indicates that the strategic model is easily better than the non-strategic version as the Chi-Square distributed test statistic of 97.83 is significant at any conventional level of statistical significance. The critical value for significance at the 0.005 level is only 21.96.

and rewards. Democratic countries are generally more critical of U.S. voting positions than authoritarian countries, but the United States uses sanctions and rewards more actively towards democratic countries, so they accommodate U.S. preferences. On the other hand, our results suggest that the poorest members of the General Assembly, although they are most vulnerable to sanctions, are nevertheless the most resistant to U.S. pressure to conform. Thus, our findings are nuanced with respect to the legitimacy of UNGA voting. While our key results for regime type draw the legitimacy of voting into question, the findings about economic development suggest that many of the poorer countries place great importance on independent voting in the General Assembly.

Broadly speaking, our results draw into question the use of UNGA voting as a unique dataset revealing states' preferences over time (Gartzke, 2005; Russett and Oneal, 2001; Stone, 2004). Roll call voting is only likely to prove a useful measure of preferences if there is substantial variation, or contention, in voting behavior. This is why it is commonplace to discard near-unanimous votes in the literature on ideal point estimation (Poole and Rosenthal, 1991). The U.S. State Department's list of politically important votes identifies votes that are contentious, neither expressing a shallow consensus nor carrying out simple procedural matters. Such votes are especially important in the estimation of states' preferences or "ideal points." Our analysis indicates, however, that the use of such votes as a measure of sincere preferences is problematic, because important votes are important enough to be strategic.

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Table 4: Utilities for Statistical Strategic Model

	$U_R(Punish)$	$U_R(\neg Reward)$	$U_R(Reward)$	$U_{U.S.}(\neg Punish)$	$U_{U.S.}(Punish)$	$U_{U.S.}(Reward)$
Constant	**110.53**	**0.32**		**4.94**		**-3.20**
	(32.55)	(0.06)		(0.24)		(0.13)
Recipient Polity	**2.75**		**-5.63**		**0.05**	**0.13**
	(0.64)		(1.22)		(0.01)	(0.01)
Allies	**-30.69**		-2.99		0.19	-0.17
	(5.75)		(10.64)		(0.13)	(0.14)
Recipient GDP	**9.87**		**4.42**		-0.09	**0.06**
	(1.84)		(1.23)		(0.16)	(0.01)
Trade	**-15.86**		**11.46**		**-0.05**	**-0.11**
	(4.75)		(5.25)		(0.02)	(0.03)
Left-Wing Executive	**-9.85**		14.76		-0.07	**-0.44**
	(4.50)		(12.92)		(0.11)	(0.15)
Right-Wing Executive	6.96		**68.74**		**-0.71**	-0.28
	(10.67)		(14.57)		(0.15)	(0.16)
U.S. Votes No	**-109.71**		**-6.82**		**0.22**	**-0.16**
	(32.27)		(1.66)		(0.02)	(0.01)

Bootstrapped Standard Errors in Parentheses
Number of Observations 14337
Bold Indicates Significance at the .05 Level
Log-Likelihood 6923.28
Percent Correctly Predicted: 84.9%
Modal Percent Correctly Predicted: 63.2%

Table 5: Substantive Effects on Rewards and Punishments

	Pr(*Punish*)	Change in Pr	% Change in Pr	Pr(*Reward*)	Change in Pr	% Change in Pr
Median Values	0.042	NA		0.008	NA	
Polity=-9	0.028	-0.014	-33%	0.003	-0.005	-63%
Polity=9	0.071	+0.029	+69%	0.029	+0.021	+263%
Recipient GDP=1,000	0.051	+0.009	+21%	0.007	-0.001	-13%
Recipient GDP=12,000	0.020	-0.022	-52%	0.013	+0.005	+63%
Trade=15 million	0.042	+0.000	+0%	0.008	+0.000	+0%
Trade=10 billion	0.040	-0.002	-5%	0.007	-0.001	-13%
Left-Wing	0.039	-0.003	-7%	0.005	-0.003	-38%
Right-Wing	0.021	-0.021	-50%			
Yes Vote	0.005	-0.037	-88%	0.042	+0.035	+438%

Table 6: Substantive Effects on Votes against the U.S.

	Pr(*Vote Against U.S.*)	Change in Pr	% Change in Pr
Median Values	0.880	NA	
Polity=-9	0.942	+0.062	+7%
Polity=9	0.821	-0.059	-7%
Alliance=1	0.960	+0.080	+9%
GDP=1,000	0.946	+0.066	+8%
GDP=12,000	0.695	-0.185	-21%
Trade=15 million	0.878	-0.002	-0%
Trade=10 billion	0.928	+0.048	+5%
Left-Wing	0.906	+0.026	+3%
Right-Wing	0.892	+0.012	+1%
Yes Vote	0.031	-0.849	-96%
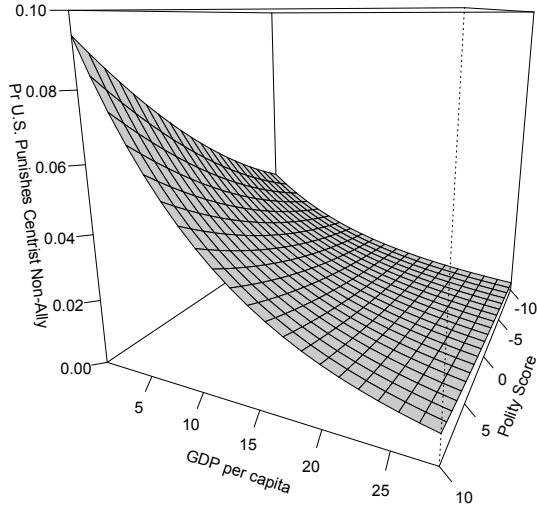
(a) Regime Type, Wealth, and Punishment
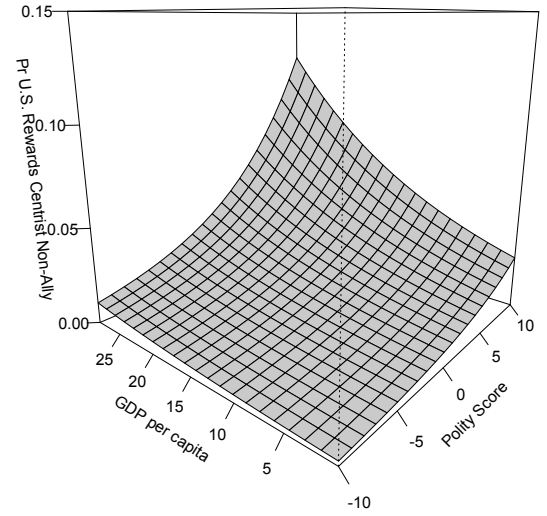
(b) Regime Type, Wealth, and Reward
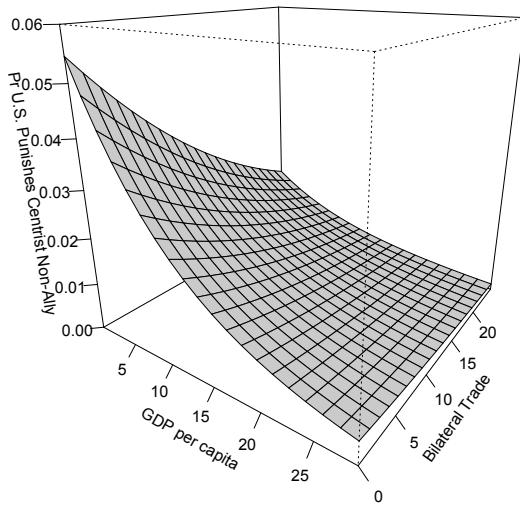
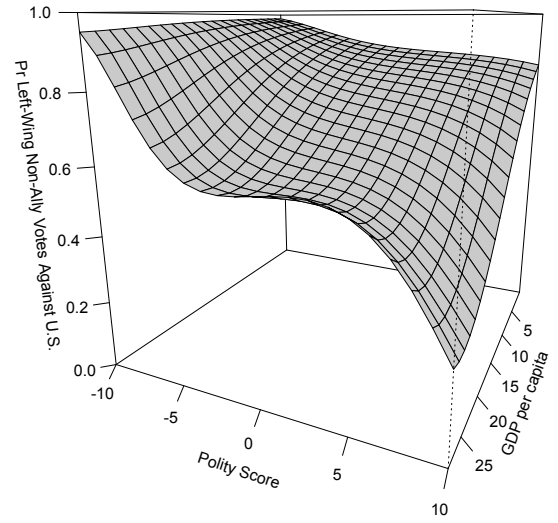(c) Regime Type, Wealth, and Punishment
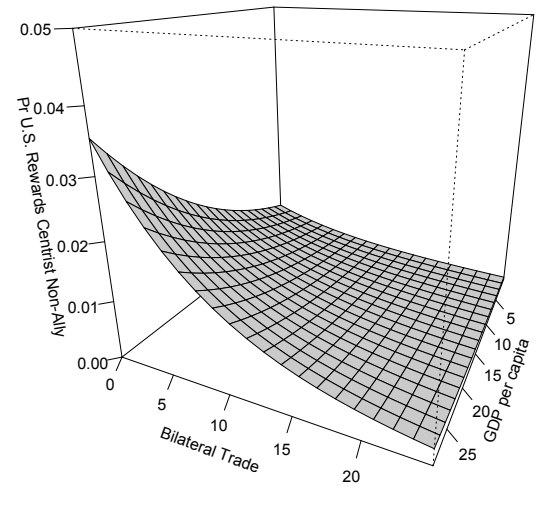
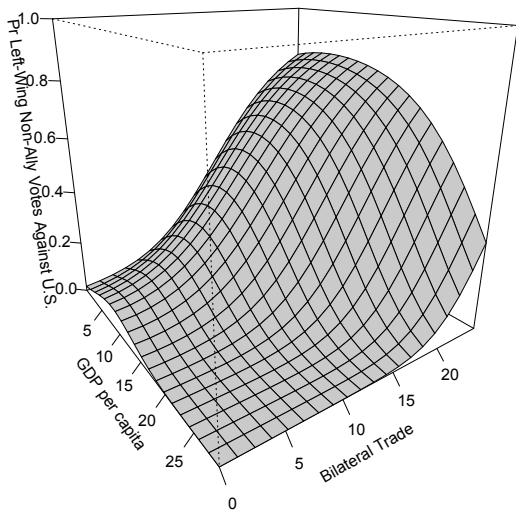
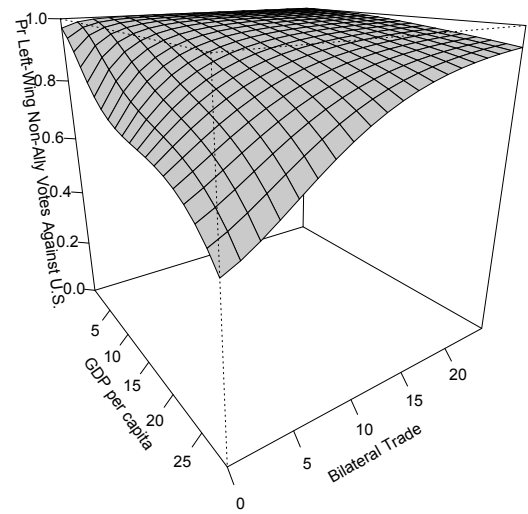(d) Regime Type, Wealth, and Reward

Figure 4: U.S. Behavior
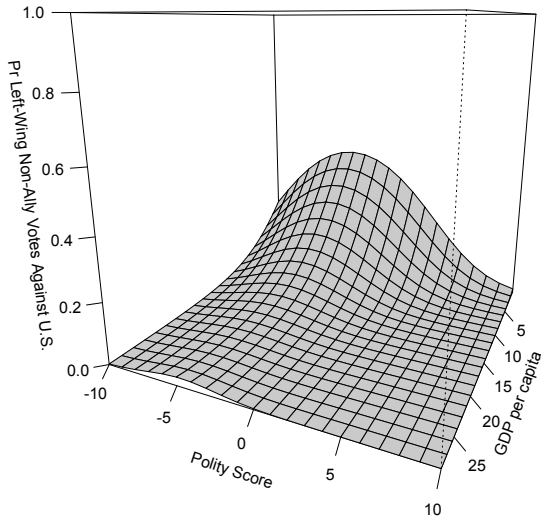
(a) Regime Type, Wealth, and "Yes" Votes

(b) Regime Type, Wealth, and "No" Votes

(c) Wealth, Trade, and "Yes" Votes

(d) Wealth, Trade, and "No" Votes

Figure 5: Recipient Voting Behavior