Democracy and Multilateralism:  
The Case of Vote Buying in the UN General Assembly

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Abstract

Democracies are more supportive of U.S. positions in the UN General Assembly than non-democracies. Is this because democracies share common perspectives, or does this pattern reflect coercion? Since 1985, U.S. law has stipulated that the State Department identify important votes and that aid disbursements reflect voting decisions. Consequently, there are three plausible explanations for the democratic voting correlation: 1) democracies share common preferences and the United States prefers to aid democracies; 2) democracies are more vulnerable than autocracies to U.S. influence attempts, and 3) democracies are subject to more credible influence attempts. To unravel these alternative explanations, we introduce a strategic statistical model that allows us to estimate voting preferences, vulnerability to influence, and credibility of linkage, which are theoretical quantities of interest that are not directly observable. The results reject the first two hypotheses: poor democracies have voting preferences that are more oppositional to U.S. positions than autocracies, and they are more willing than autocracies to take symbolic stands that may cost them foreign aid. Democracies support U.S. positions, however, because U.S. aid linkages are more credible when directed towards democratic countries. Splitting the sample into Cold War and post-Cold War segments, we find that the end of the Cold War changed the way U.S. linkage strategies treated allies and left and right-leaning governments, but the effects of democracy remained constant.

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Introduction

The relationship between multilateralism and democracy has risen in prominence in the post-Cold War period as international organizations become increasingly influential and their members become increasingly democratic. Delegation to international authorities involves some sacrifice of national sovereignty, and observers frequently lament the resulting democratic deficits. Democratic procedures ameliorate these concerns, and almost all multilateral organizations have provisions for voting, but these formal rules are often overridden by informal procedures that reflect the influence of powerful countries (Stone, 2011). On the other hand, multilateralism is conceived as a means of restraining the exercise of hegemonic power (Lake, 2002), and is widely believed to strengthen democracy. Membership in international organizations has been credited with preventing new democracies from sliding back into authoritarianism, and with improving the quality of democratic governance (Pevehouse, 2002; Pevehouse and Mansfield, 2006; Keohane, Macedo and Moravscik, 2009). A first step towards unraveling these questions is to investigate how democracies interact with each other as they seek to govern multilateral organizations. As the leading state in the international system, does the United States cooperate with other democracies, or does it attempt to coerce them?

We use vote buying in the United Nations General Assembly as a case study. The UNGA is among the most democratic of international institutions, and the low stakes involved in its non-binding resolutions have made it a relatively polite diplomatic forum. Nevertheless, U.S. foreign policy seeks to influence the vote tallies on important UN votes, so the way in which the United States interacts with other democracies in this setting may be revealing. Since the mid-1980s, U.S. law has required the State Department to report how countries vote in the UN on issues that are regarded as important to U.S. interests, and has required USAID to use countries’ voting records on these issues as a criterion for disbursing aid. Buying votes is official policy. How we interpret this, however, may depend on whose votes are being bought, and for what reasons. We start with the observation that democracies tend to support the United States on votes designated by the U.S. State Department as important to U.S. interests more frequently than autocracies. A prima facie case exists, therefore, for the interpretation that democracies support the United
States because they share common norms and a community of interests. If this is the case, the experience of cooperating on issues of common concern at the multinational level should reinforce those norms. There should be no tension between participation in multilateral cooperation and faithfully representing the preferences of national constituents, and multilateral governance should become increasingly legitimate as more of the participating governments become democratic.

Since the United States is in the market for votes, however, strategic interaction creates inference problems. Strategic votes reflect three motivations: government preferences, the susceptibility of particular regimes to international influence, and the credibility of the threats or promises that are used to influence votes. Rather than reflecting similar preferences, the voting behavior of democracies might indicate that they are more vulnerable to U.S. influence than autocracies, and consequently are more willing to comply with U.S. influence attempts. Alternatively, democracies might not be particularly vulnerable, but might still comply with U.S. preferences at higher rates if U.S. threats or promises are more credible when addressed to democracies. In order to unravel what this voting behavior means, it is essential to explicitly account for the strategic incentives facing voters and vote buyers.

We introduce a statistical technique that allows us simultaneously to estimate voting preferences, susceptibility to influence by the United States, and the credibility of U.S. influence attempts. 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 has voted against the U.S. position, or reward the aid recipient with additional aid, if the country has voted 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 punishments or rewards on voting decisions. Furthermore, we are able to differentiate which regimes are most susceptible to influence and which influence attempts are most credible.

Our findings are disappointing for advocates of multilateral governance. We find that democratic countries are in fact more strongly opposed to U.S. policy preferences than non-democratic countries, so norms or a community of interests do not explain their voting behavior. Left to their
own devices, democratic countries would oppose U.S. positions at higher rates than authoritarian countries. Democracies are presumably more likely to oppose the United States because they are more sensitive to the preferences of the median voter, which generally are not favorable to U.S. foreign policy (e.g., support of Israel, the embargo of Cuba, or wars in the Middle East). This casts U.S. efforts to cajole UN members to support its preferred positions in an unfavorable light. Nor do democratic governments comply with U.S. wishes because they are particularly sensitive to U.S. development aid disbursements; in fact, we find that democratic governments are more willing than authoritarian governments to take symbolic stands that may cost them access to foreign aid. Again, the salience of public opinion in democracies and the narrow bases of support for authoritarian governments are persuasive explanations. Instead, we find that democracies are more likely to comply with U.S. influence attempts because they are the countries that are most frequently targeted. It is costly for the United States to punish its authoritarian allies, which often depend on aid for political survival, and generally receive aid because they are strategically important rather than because they are deserving. Conversely, it can be politically embarrassing at home to reward authoritarian countries for their votes. Consequently, U.S. policy tends to target democracies when it tries to round up support. Our results indicate that the fact that U.S. threats and rewards are more credible when they are directed at democracies accounts for the high rate of compliance with U.S. preferences by democracies.

Additional results show that the United States punishes and rewards recipients for their votes differently depending on the left-right political orientations of their governments, their levels of development, and their alliance relationships, and that these variations in credibility are key to explaining the effectiveness of U.S. influence attempts. In order to further investigate these relationships, as well as to probe the robustness of our findings about democracy, we split our data into Cold War and post-Cold War samples. We find that the end of the Cold War was a watershed in U.S. vote buying strategy in the UN, although vote buying occurred in both samples. Our findings suggest that factors relevant to U.S. competition with the Soviet Union play an important role in explaining the U.S. propensity to punish aid recipients during the Cold War, but these factors lose explanatory power in the post-Cold War era. In particular, the United States was much more
willing to punish left-leaning governments and reward right-leaning governments during the Cold War, but this pattern disappeared when the Cold War came to an end. Similarly, the United States was reluctant to punish its allies during the Cold War, but became more likely to punish allies than non-allies after the Cold War. The end of the Cold War did not have substantial effects on the coefficients for recipient countries' behavior. Furthermore, our central findings about the effects of democracy are consistent during and after the Cold War. This indicates that the strategy of coercing democracies is an enduring feature of U.S. foreign policy, rather than a consequence of the special circumstances that prevailed during the Cold War. Finally, we provide a direct test of whether our strategic choice model outperforms a non-strategic model using the same covariates, which can be interpreted substantively as a test of whether recipient voting behavior is significantly influenced by U.S. aid disbursements. The result rejects the hypothesis of no strategic effect on voting.

1 Democracy and UN Voting

Democracies support U.S. positions on issues of importance to U.S. foreign policy in the United Nations General Assembly 41% of the time, while non-democracies support the U.S. position only 29% of the time.\footnote{A difference in means test and a Chi-square test of independence strongly confirm the statistical significance of this difference. We classify states with a Polity score of at least six as democracies.} Does this reflect a coincidence of preferences among democratic countries? Are democracies more responsive to U.S. influence attempts? Alternatively, are democracies more likely to support U.S. positions because they are more likely to be coerced or rewarded? We argue that democratic governments represent preferences that are more inherently opposed to U.S. policy than autocracies, that they are more resistant to efforts to influence their policies, but that they support U.S. positions nevertheless because they are targeted more systematically by U.S. policymakers for influence attempts.

The most optimistic interpretation of UN voting patterns holds that democracies vote together because they hold similar world views and pursue complementary goals in foreign policy. This is consistent with the observations that democracies are unlikely to engage in militarized interstate
disputes against each other (Bennett and Stam, 2000), and that when disputes do arise between
democracies, it is almost always possible to settle them without escalation (Dixon, 1994; Huth and
Allee, 2002). The pattern of peaceful conflict resolution among democracies is widely attributed
to common values (Russett, 1993; Russett and Oneal, 2001). Furthermore, democracies are more
likely to form alliances to support each other than to ally with non-democracies (Lai and Reiter,
2000).

Patterns of democratic affinity are not limited to security affairs. Democracies trade with each
other more intensively than with non-democracies, controlling for factors such as the size of their
economies and the distance between them, and they are more inclined to grant each other com-
mercial concessions (Mansfield, Milner and Rosendorff, 2000; Gartzke, 2007). Democracies sign more
treaties with other democracies than with non-democracies, and they share more memberships in
international organizations. Common membership in international organizations has been cred-
itied with resolving disputes and facilitating cooperation (Mitchell and Hensel, 2007). Democratic
publics have more positive assessments of other democratic countries than of non-democratic ones,
and in particular, the publics of democratic countries tend to hold more positive views of the United
States than do those of authoritarian countries.

Contradicting this rosy view is the deep division in public opinion between developed and de-
veloping countries. U.S. foreign policy is generally unpopular among democracies in the developing
world. A strong bloc of votes consistently supported the United States during the early decades of
the United Nations’ history, but by the mid-1970s the United States frequently found itself isolated,
and was on the losing side of most votes by the 1980s. Cold War themes continued to command
the allegiance of a wide range of U.S. democratic allies, but even the staunchest U.S. allies became
increasingly critical of U.S. positions on Central America, the Middle East, South Africa, and how
best to promote human rights in the Soviet bloc. Some of these disagreements were tactical and re-
solved themselves with the end of the Cold War, but new disagreements arose over how to deal with
nuclear proliferation, terrorism and the dilemmas posed by Iraq, Iran and North Korea. Meanwhile,
democracies in the developing world chafed under the Washington Consensus and became restive
under a global trade regime that appeared slanted in favor of the interests of advanced economies.
The legitimacy of the international institutions where the United States exercised decisive influence came under question, and this was reflected in voting in the international forum that the United States found hardest to control, the UNGA.

Furthermore, there is reason to believe that the leaders of democracies derive more benefits than autocrats from taking symbolic stands that are critical of the United States. Democratic leaders face re-selection through elections, so their tenure in office is intimately related to their popularity; this connection is more tenuous for autocrats. If the United States takes a position that is unpopular with the target country’s electorate, it may be politically costly for a democratic leader to vote in support. Furthermore, leaders who face domestic criticism for being too closely aligned with the United States—for example, because they have accepted IMF tutelage of their economic policies, or have supported U.S.-led military operations—may find symbolic votes in the UNGA a welcome opportunity to deflect criticism by demonstratively following public opinion. Autocrats generally rely on the support of a narrow coalition of elites to retain their positions, so they are largely insulated from the pressure to conform to public opinion (Bueno de Mesquita and Smith, 2007).

Rather than reflecting inherent preferences, it is possible that democratic countries vote more consistently with the United States because they are susceptible to U.S. influence. Several studies have found associations between UN voting and U.S. foreign aid (Wittkopf, 1973; Rai, 1980; Wang, 1999; Dreher, Nunnenkamp and Thiele, 2008). It is plausible that foreign aid is explicitly used to influence UN voting—at least in key votes that attract substantial attention from donors—because we know that the distribution of aid differs from need-based allocations (Boone, 1996; Collier and Dollar, 2002), and 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);

In contrast, Kegley and Hook (1991) find little evidence that the explicit linkage between UNGA voting on important issues and aid disbursements established in the 1980s has any effect on voting behavior. Most early work did not distinguish between important votes and ordinary votes, although Wittkopf (1973) defined “important” votes as those in which the U.S. and Soviet Union disagreed, and Wang (1999) focuses on votes identified as important by the U.S. State department. Dreher, Nunnenkamp and Thiele (2008) disaggregate aid into categories and use an instrumental variable approach that addresses some of the ambiguities in the previous literature, and find evidence in favor of a vote-buying hypothesis. Using an alternative identification strategy, Kuziemko and Werker (2006) narrow the interpretation of their empirical results by focusing on temporary membership in the UN Security Council, and find that U.S. foreign aid increases significantly when a country becomes a temporary UNSC member, and drops off again after membership lapses.
Schraeder, Hook and Taylor (1998); Alesina and Dollar (2000); Alesina and Weder (2002); Svensson (1999); Neumayer (2003)). In addition, a number of studies have found associations between UN voting and aid from the IMF and World Bank, and argue that the United States uses loans from those agencies to reward its allies (Thacker, 1999; Oatley and Yackee, 2004; Barro and Lee, 2005; Stone, 2004; Kilby, 2010).

Are democracies more willing than autocracies to change their positions as a result of foreign influence, however? One strand of literature suggests that they are: democracies are more likely than non-democracies to respond to trade sanctions by making concessions (Hufbauer et al., 2007; McLean and Whang, 2010; Whang, 2010). It is often argued that trade sanctions affect the welfare of ordinary citizens more than that of elites, so political regimes that are responsive to citizen interests should be more vulnerable to trade sanctions than those that have narrow bases of support. Saddam Hussein’s regime in Iraq is a notorious example, which resisted UN sanctions at a staggering cost to the population, and even found ways to use the sanctions to build its clientelistic network by rationing access to consumer goods. Intuitions from the sanctions experience do not transfer well to foreign aid, however, because the benefits of foreign aid, particularly in authoritarian countries, accrue more to regime insiders than to the population as a whole.

In contrast, arguments about the recalcitrance of democracies have been made in terms of audience costs, veto players, and leaders’ reselection incentives. A prominent thread in the literature on international conflict argues that democratic leaders are less willing to back down in crises because they are subject to audience costs, and this has been linked to a lower incidence of these crises involving democracies, and to a higher probability that democracies prevail in crises (Fearon, 1994; Schultz, 2001; Leventoglu and Tarar, 2005; Tomz, 2007). Similarly, the literature on two-level games concludes that countries with constitutional limits to executive authority have increased

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3UN 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 such as economic growth (Steinwand and Stone, 2008). Thacker (1999) finds that increasing the similarity of a country’s profile of votes in the United Nations General Assembly to those of the United States 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. Andersen, Harr and Tarp (2006) use important UNGA votes to explain the probability that a country obtains an IMF program, Kilby (2010) uses important UNGA votes to explain the distribution of World Bank loans, and Dreher, Sturm and Vreeland (2009) find that temporary membership in the UN Security Council increases World Bank loans.

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bargaining power, but are more likely to fail to reach agreement under incomplete information (Putnam, 1988; Tarar, 2001). Both effects should make democracies less likely to adjust their voting strategies to accommodate U.S. pressure. A selectorate perspective maintains that democratic leaders retain their tenure by providing public goods that are enjoyed by the electorate as a whole, while autocratic leaders survive in office by providing targeted private goods to narrow coalitions of supporters (Bueno de Mesquita et al., 2003). Symbolic actions in the United Nations are a classic public good. The foreign aid that the United States ties to these voting decisions, on the other hand, represents slack resources that autocratic governments tend to use to reward their supporters. Consistent with this interpretation, recent studies have found that receipt of foreign aid significantly increases the expected tenure of autocratic leaders, but has no similar effect on the survival of democratic leaders (Bueno de Mesquita and Smith, 2010). Pandering to U.S. preferences is less costly to autocrats than to democratic leaders, because they have weaker incentives to represent the preferences of the population, and the economic support that the United States offers in return is more valuable to autocrats, so autocrats should be more willing to accommodate U.S. preferences.

If it is not true that democracies are inherently more supportive of U.S. positions or more vulnerable to influence, is it instead the case that they are more frequently targeted for influence attempts? Bruce Bueno de Mesquita and Alastair Smith argue the opposite. Taking a demand-side approach to foreign aid, they argue that aid should flow to the countries whose positions are least expensive to buy. Since autocrats are more willing to accommodate U.S. preferences, they should receive the lion’s share of the rewards (Bueno de Mesquita and Smith, 2007, 2009). In contrast, we take a supply-side approach. In our view, the relevant political constraint on U.S. foreign aid is not the aggregate size of the foreign aid budget, which in any case is small, but political support in Congress for aid to particular countries. Because it is more popular to give aid to democracies than to autocrats, influence strategies are more credible when directed at democracies.

Foreign aid is supported by a coalition that includes members of Congress with altruistic and realpolitik motivations, and both sets of concerns are reflected in U.S. foreign aid allocations (Poe and Meernik, 1995; Apodaca and Stohl, 1999; Demirel-Pegg and Moskowitz, 2009). Democratic voters tend to support foreign aid that is need-based, development-oriented, delivered to countries
with attractive political regimes and channeled through international organizations; Republican voters generally prefer aid that is targeted to American strategic allies, that is connected to explicit foreign policy quid pro quos, and that is disbursed bilaterally (Milner and Tingley, 2010, 2011). In order to achieve these multiple objectives, Congress has developed a detailed aid appropriation process that allows members to influence foreign aid commitments, but has also delegated substantial discretion to the executive branch to manipulate aid disbursements. The executive branch can use this discretion to buy votes in the UN General Assembly, and the 1985 law authorizes it to do so. In practice, however, some deviations from appropriated levels are more politically costly than others, and more likely to motivate Congress to reduce executive discretion in the future. In particular, it is controversial to provide foreign aid to some autocratic countries, so when the State Department searches for a country whose vote it could buy by offering a short-term infusion of foreign aid, it looks first for democracies. As a result, democracies are more likely than autocracies to be rewarded when they vote in support of U.S. positions.

On the other hand, the domestic politics of U.S. foreign aid also ensures that it is costly to withhold aid that has been committed to autocratic countries. Because it is more controversial to aid autocracies, the set of autocracies that receive substantial aid commitments is limited to countries that play particularly important roles in U.S. foreign policy. Recent examples include Egypt under Mubarak and Pakistan under Musharraf; examples during the Cold War included Zaire under Mubutu and the Philippines under Marcos. Many of these regimes take public postures that are critical of U.S. foreign policy—in recent years, Pakistan and Egypt frequently voted against the United States in the UN—but they play important roles in U.S. policy in other ways, often as regional anchors of U.S. influence. In addition, foreign aid generally plays a key role in guaranteeing political stability in these fragile authoritarian states, so that withdrawing it could cost the United States a reliable regional supporter and bring a more oppositional regime to power. Under these circumstances, the credibility of U.S. threats to withdraw support over acts of symbolic defiance would be limited, and such threats are rarely made.

Three reasonable interpretations of democratic voting in the UN have been proposed. We argue against the hypotheses that democracies vote with the United States because they share common
values, or because they are more vulnerable than autocracies to U.S. influence attempts. On the contrary, we claim that the pattern arises because democracies are more likely to be punished or rewarded for their votes. Disentangling the hypothesized effects requires that we simultaneously estimate voting preferences, target country susceptibility to influence attempts, and the credibility of those attempts, so we turn next to this problem.

A Strategic Estimator for UN Voting

Previous studies of UN voting have been unable to disentangle strategic and sincere voting because they have not explicitly modeled voting as a strategic choice. There are two important methodological issues here. First is the familiar problem of endogeneity, and the substantive concern is that UN voting may be associated with U.S. aid either because countries comply with U.S. preferences in order to obtain aid, or because countries that sympathize with U.S. positions in the UN are likely to receive aid irrespective of how they vote. Our approach deals with endogeneity by estimating equations for U.S. aid allocations and for UN voting decisions and by making identifying assumptions, as in an instrumental variables approach, but it takes advantage of the strategic structure of the model as part of the identification strategy. The second issue is strategic misspecification bias, and the substantive concern is that the relationships among preferences, voting and aid allocations may depend upon strategic calculations. In particular, we argue that the credibility of U.S. influence strategies varies systematically across countries, which affects the relationship between aid and UN voting. Estimators that fail to account for how the U.S. influence strategy induces strategic recipient behavior will be biased and inconsistent; the effect is equivalent to omitted variable bias (Signorino and Yilmaz, 2003).

Strategic effects are important because the effectiveness of U.S. influence attempts depends upon their credibility. Suppose that the United States threatens to reduce aid to a developing country if it votes against the U.S. position on an important vote, and we observe that the country defies the U.S. demand. Two inferences are possible. It may be the case that the country’s leadership is highly motivated to resist U.S. policy preferences. Alternatively, the government might not be strongly opposed to the U.S. position, but the leadership might calculate that the U.S. threat is
unlikely to be carried out. It is impossible to accurately estimate either government preferences or the effectiveness of influence attempts without considering the effect of variations in credibility. Consequently, we use a strategic choice model that can capture this effect.

The structure of the statistical model we estimate is depicted in Figure 1. First, the recipient country decides whether to vote for or against the U.S. position. 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 U.S. position, the United States chooses whether to reward it with a significant increase in aid flows. 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 convert the formal model into a statistical model, we add a stochastic component to the utilities of the actors, which gives us a distribution over the four possible outcomes of the model. We characterize this disturbance as agent error, which seems 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 executive and legislative branches of government, 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.

The recipient and the United States make decisions in the game by weighing their expected utilities for each possible action. The model explicitly allows the recipient’s voting decision to be influenced by the expected effect it will have on aid flows. We start from the last move in the game,

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4Aid disbursements fluctuate for a variety of reasons that are not related to UN voting, so it would not be appropriate to use the difference between commitments and disbursements as a direct measure of punishments and rewards. Instead, we estimate an equation for predicted disbursements that includes current commitments, lagged disbursements and fixed effects, which has an R-squared of .99. We specify punishments and rewards as dichotomous, and we use the conservative strategy of coding a case as a punishment or reward only if it is outside the 95 percent confidence interval. The discussion of our dependent variables below provides more details.

5It is also possible to model vote choice as multinomial, where a recipient can: 1.) vote in strict accordance with the U.S., 2.) abstain from the vote, or 3.) vote against the U.S. This model is considerably more complicated and does not seem substantively warranted.
the United States' decision to punish, reward or do nothing in response to the recipient's vote, and move up the game tree to show the players' expected utility calculations. For each vote, or observation, \( i = 1 \ldots n \), the recipient decides whether to vote for or against the U.S. position. If the recipient does not vote with the United States, the United States makes the following comparison\(^6\)

\[
p_{i,4} = U^*_US(Pun|Disagree) > U^*_US(\neg Pun|Disagree) \\
= U_{US}(Pun|Disagree) + \epsilon_4 > U_{US}(\neg Pun|Disagree) + \epsilon_3.
\]

Assume the \( \epsilon \) terms are independent and identically distributed (i.i.d.) Type 1 Extreme Value, which yields

\[
p_{i,4} = \frac{e^{\exp U_{US}(Pun|Disagree)}}{e^{\exp U_{US}(Pun|Disagree)} + e^{\exp U_{US}(\neg Pun|Disagree)}} \\
p_{i,3} = 1 - p_{i,4}.
\]

In deciding whether to reward the recipient when the recipient votes in agreement, the United States makes a similar comparison which leads to expressions almost identical to those in equations

\(^6\)Note that Pun stands for punish, Rew, for reward, Agree for agreement with the U.S. position, and Disagree for disagreement with the U.S. position. The numbers on the probabilities and \( \epsilon \) terms correspond to the numbers assigned to the players' actions in figure 1.
1–4. The recipient makes its decision to vote with the U.S. position or not by calculating, with some error, its utility for voting in agreement or disagreement with the United States. The recipient’s utility is a function of its preferences over outcomes and the probability that the United States will subsequently reward or punish. The comparison of the expected utilities for voting for or against the U.S. position take the following form:

\[ p_{i,2} = \begin{cases} U_R^*(Agree) > U_R^*(Disagree) & \text{(5)} \\ U_R(Agree) + \epsilon_2 > U_R(Disagree) + \epsilon_1. & \text{(6)} \end{cases} \]

If we again assume that the \( \epsilon \) terms are i.i.d. Type 1 Extreme Value, we obtain

\[ p_{i,2} = \frac{\exp(p_{i,6}U_R(Agree,\text{Rew}) + p_{i,5}U_R(Agree,\neg\text{Rew}))}{\exp(p_{i,6}U_R(Agree,\text{Rew}) + p_{i,5}U_R(Agree,\neg\text{Rew})) + \exp(p_{i,4}U_R(Disagree,\text{Pun}) + p_{i,3}U_R(Disagree,\neg\text{Pun}))}, \quad (7) \]

\[ p_{i,1} = 1 - p_{i,2}. \quad (8) \]

We utilize the statistical backwards induction technique (SBI) developed by Bas, Signorino and Walker (2007). The SBI technique is employed by separately estimating the logit equation for each possible decision in the game rather than simultaneously estimating the full system of equations. First, we estimate the probability that the United States punishes a recipient for disagreement, i.e., \( p_{i,4} \). As indicated in equation 2 above, \( p_{i,4} \) is a function of the U.S. utility for punishing the recipient following disagreement, which we estimate with substantive variables, i.e., \( X_{24}\beta_{24} \). The U.S. compares its utility for punishing disagreement in each case \( (X_{24}\beta_{24}) \) with its utility for not punishing disagreement \( (\beta_{23}) \). The United States’ utility for rewarding agreement, i.e., \( p_{i,6} \), is estimated analogously, relative to not rewarding agreement. Second, we estimate the probability that the recipient votes with the U.S. position, i.e., \( p_{i,2} \). The probability of agreement with the U.S. is a function of the recipient’s utilities over all possible outcomes in the game, weighted by the probability that each outcome will prevail (i.e., equation 7). The probabilities that the U.S. will punish disagreement or reward agreement are obtained from the first stage logit regressions (i.e., \( p_{i,3} - p_{i,6} \)). SBI is attractive in our context because it ensures that the likelihood is concave, so our results reflect the true maximum likelihood estimate. In addition, computational time is decreased.

\footnote{Also see Carrubba, Yuen and Zorn (2007) for a very similar approach.}
significantly relative to simultaneous estimation of the full system of equations. The disadvantage of SBI is that the standard errors in the recipient’s estimates are biased downwards because the probabilities are treated as fixed data. Following the recommendations of Bas, Signorino and Walker (2007), we correct the standard errors using the bootstrap. Although the standard errors for the U.S. utilities are not affected by this issue, we also bootstrap them to be conservative. 500 bootstrap iterations are run in each model.

We take several steps to ensure that the fact that there are multiple important votes in each year is not a problem for our analysis. First, we sample by year when we calculate the bootstrapped standard errors to ensure that the standard errors are not affected by the lack of independence among votes in each year. Second, to ensure that no bias is introduced into our results by including multiple votes in each year, we randomly sample one vote from each year for each recipient country in the sample and estimate our model on this reduced set of votes. This leads to a sample size that is roughly one-third the size of the overall sample, but none of the results change when we apply this procedure. Thus, including multiple votes per year does not appear to affect either our standard errors or estimated coefficients in any substantial way.

Below, we specify the utilities of the recipient and the United States with some of the same variables. Consequently, to identify the model both the recipient and the United States must have the utility normalized to zero for at least one outcome that is possible at its initial information set and affects its utility. In addition, no regressor can be estimated in every utility. We normalize the recipient’s utility for not being punished after voting in disagreement (a sincere opposition vote with no consequences) to zero. For the U.S., we normalize the utilities for not punishing the recipient following a vote against the U.S. and 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. Normalization of a player’s utility for one possible outcome in the strategic logit model is analogous to the standard method of identifying a multinomial logit model. This model captures strategic voting and allows threats and promises

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8 This is analogous to estimating clustered “robust” standard errors, although it often yields more conservative estimates. We also tried sampling by vote, which yields similar results.

9 The results of this robustness check are included in the supplemental appendix.

10 An initial information set for each player is the node at which it makes its first move in the game.
about important UNGA votes to be linked to aid flows.

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 other variables of interest. The data on aid flows from the United States to potential recipients are published by the OECD Development Assistance Committee and cover 1966–2001. 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. The temporal domain starts in 1985, the year in which U.S. law first required the State Department to report how countries vote on issues that are regarded as important to U.S. interests, and ends in 2001. The United States is never absent for important votes. Votes in which the recipient country is absent are excluded.

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.\textsuperscript{11} Our primary quantity of interest is the effect of democracy, which we measure using Polity IV scores in the main results, and using a dichotomous measure (Alvarez et al. 2000) as a robustness check.\textsuperscript{12} Our identification assumptions are not restrictive, so we capture the effect of each regressor on each choice. This allows democracy to affect the recipient’s utilities for voting with or against the United States to capture the coincidence of interests hypothesis, the recipient’s utilities for being punished or

\textsuperscript{11}A table with descriptive statistics is presented in the appendix.

\textsuperscript{12}We replicated our results using the dichotomous measure of democracy introduced by ACLP and updated by Cheibub, Gandhi and Vreeland (2010) and found no substantive differences in our results. Polity scores are most likely to be problematic when the dependent variable measures some form of internal violent conflict, which is not the case here (see Vreeland (2008) for details).
rewarded to capture hypotheses about the compliance or recalcitrance of democratic states, and
the U.S. utility for punishing or rewarding to capture the credibility hypothesis. Two variables
specific to the recipient are GDP per capita in 1996 U.S. dollars (Russett and Oneal, 2001a; Oneal
and Russett, 2005), and the political orientation of the executive (Keefer, 2007). We expect the level
of development to affect the domestic incentives for aid recipients to take foreign policy positions,
their vulnerability to U.S. pressure, and the amount of resources required to effectively coerce
them. Similarly, we expect the political orientation of the government to reflect its preferences
to support or oppose the United States and its willingness to resist U.S. pressure, and also to
affect the attractiveness of using sanctions or rewards from the U.S. point of view. 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 orientations are not clear
(Keefer, 2007).

Interdependence may affect domestic preferences over foreign policy, vulnerability of recipients
to influence, and the cost of attempting to exert influence. We measure interdependence in terms
of bilateral trade flows in millions of 1996 U.S. dollars and a variable that indicates whether the
recipient has an alliance with the United States (Oneal and Russett, 2005). We expect intensive
trade to reflect close diplomatic relations. In addition, countries that are highly dependent on
trade with the United States should be more vulnerable to influence attempts, but interdependence
should also make them more expensive to punish or reward, making them less attractive targets
from the U.S. point of view. Similarly, we expect allies to have similar preferences to the United
States and to be vulnerable to influence attempts because of the intensity of bilateral ties, but to
be unattractive targets for punishment or rewards because of security externalities.\textsuperscript{13}

Finally, our model captures the specific characteristics of particular votes, by including 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

\textsuperscript{13}We also estimate a model with a variable that indicates whether the U.S. president is a Democrat or a Republican.
This variable has an insignificant coefficient, and its inclusion does not alter any of the key results.
UNGA agenda to the Group of 77, the United States began to vote “No” on most roll calls, where it had previously cast a majority of “Yes” votes. The United States votes “No” on almost 75% of State Department-identified important votes in the sample. We include a binary variable for each vote, which identifies whether the U.S. votes “Yes” or “No”. Thus, we are essentially including a kind of vote-specific fixed effect, which allows us to isolate variation in the other regressors within the substantively comparable vote type. This makes sense as the pattern of punishment and rewards should vary across vote type, as agreement is more common on “Yes” votes. Accordingly, if voting is strategic the effect of key variables on recipient voting behavior will also vary with vote type.14

**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 is coded 1 if the votes of the United States and the recipient country coincide on a particular vote, and 0 otherwise.15

The important votes are distributed across fourteen frequently occurring issues and numerous less frequent ones.16 Many of the important votes are specific to countries that have played a key role in U.S. foreign policy, e.g., Iraq, while others address policy areas, e.g., WMD. However, there is no one issue that dominates the set of important votes. While issues related to Israel and Palestine are among the most frequent, comprising over 15% of the votes, several other issues receive a similar degree of attention. Human rights issues occur most frequently, comprising almost 25% of the votes.

Next we code one variable to indicate whether the United States punished the recipient with a

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14 We test whether inclusion of this variable is merited with likelihood ratio tests. LR tests easily show that our model specification is improved with inclusion of the variable. Additionally, inclusion of this variable significantly improves the predictive power of the model. However, if we separately estimate regressions on “Yes” and “No” votes, we recover results that are not substantively different.

15 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. See the appendix for these alternative results.

16 See the appendix for details about the percentage of important votes on each issue.
significant aid reduction, and a second to indicate whether the United States rewarded the recipient with a significant increase in disbursement. For this purpose we could have used a naive punishment variable, such as one that takes a value of 1 if aid disbursements in a given year are lower than aid commitments. However, such a measure would include numerous false positives, because aid disbursements differ from commitments for a variety of reasons that are unrelated to UN voting. Instead, we choose a conservative coding strategy to avoid imputing political motivations to random fluctuations, coding “punishments” and “rewards” only when aid disbursements fall outside the 95% confidence interval of the level predicted by a forecasting model. We predict aid disbursement for each country in each year with a lagged dependent variable, country fixed effects model, using the full time-series of aid disbursement data from 1966–2001. The procedure is fully explained in the appendix along with a discussion of several potential methodological concerns.\footnote{We replicated the analysis using 90 and 99 percent confidence intervals as robustness checks and derived the same qualitative results. These robustness checks are also included in the appendix.}

This approach has important advantages. We use aid commitments to predict disbursements, so our variables can be interpreted as discretionary deviations by the executive branch from appropriated aid levels.\footnote{A potential concern involves cases of zero aid commitment by the U.S. Specifically, it might be the case that codings of rewards tend to occur when aid commitments are zero. However, there are only 38 observations of zero commitment and reward in the data. In fact, reward is very unlikely in cases of zero aid commitment relative to cases where the U.S. has made a commitment. Furthermore, exclusion of these observations does not affect the results.} In addition, our estimation procedure controls for temporal trends in disbursement, and the recipient country fixed effects control for unobserved country-level effects without unnecessarily complicating our main model. 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 or less likely to receive punishments or rewards. The model explains the variation in yearly aid disbursements across recipients very well (R-squared $\approx 0.99$), but more variance in aid disbursements remains to be explained for each recipient over time (R-squared $\approx 0.53$). The correlation between predicted and actual aid disbursements is 0.85. Punishments and rewards are rare under our coding procedure, representing 3% and 2.4% of the observations, respectively, because we have defined them conservatively. However, 4.6% of countries that vote against U.S. positions on important votes are coded as receiving punishment, and 7% of countries that vote with the United States on important votes receive rewards.
Results

The results of the full strategic model are presented in Table 1. The model correctly predicts over 84% of the observations, which is an improvement of 34% over predicting the modal category. All of the columns of coefficients result from the same model, and each column in 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 disagreement without consequences, so the coefficients in the first column identify the cost of losing the aid that is withdrawn, holding voting behavior constant. The significant positive coefficient for polity (2.75) indicates that punishment is less harmful to democracies than to autocracies, which rejects the hypothesis that democracies are more vulnerable than autocracies to U.S. influence attempts. The negative coefficient for polity in the utility of the recipient for complying and being rewarded (-5.63) is measured relative to non-compliance, and indicates that democracies are more likely than autocracies to prefer to defy U.S. preferences. This rejects the hypothesis that democracies are more likely than autocracies to share U.S. preferences. The coefficient for the United States for punishing is interpreted relative to the utility of not punishing following recipient disagreement with the U.S., and the coefficient for rewarding is interpreted relative to the utility for not rewarding the recipient following agreement. Consequently, these coefficients do not reflect the cost or benefit to the United States of countries’ voting decisions. The positive coefficients for polity (0.13 and 0.05) indicate that the United States prefers to both punish and reward democracies rather than to autocracies. In what follows, our discussion of these results draws on the substantive effects reported in Table 2 and Figure 3, because the substantive effects are not straightforward to interpret from the estimated coefficients in Table 1. We first discuss the U.S. utility for punishing and rewarding, and then discuss recipient behavior.

[Table 1 about here.]
1.1 Punishments and Rewards: U.S. Behavior

Table 2 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 2 shows the conditional probability of punishment or 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 a highly autocratic country (Polity Score = -9) and all other variables are held at their median values. Specifically, the third column of Table 2 shows the percentage change in the probability of punishment relative to the median case (i.e., the first row). Columns 4-5 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 highly 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 third row indicates that a democracy (Polity Score = 9) is 69% more likely to be punished when it votes against the United States and 263% more likely to be rewarded when it votes in support than the median case. The final two columns show the predicted probabilities that the recipient will vote against the U.S. position (column 6) and the associated percentage change in probability (column 7).

The baseline predicted probabilities in the first row of Table 2 reflect the fact that the United States uses aid-based punishments and rewards sparingly, and the fact that we have defined our reward and punishment variables conservatively. As we expected, 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 that the United States punishes 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 there is great symbolic value to attracting some support. 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.

[Table 2 about here.]

Our central results reveal that the United States conditions its behavior on regime type in significant ways. The results in Table 2 indicate that U.S. promises and threats to condition aid on UN voting are most credible when directed towards 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; Bueno de Mesquita and Smith, 2010), 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 stand in contrast to the argument of Bueno de Mesquita and Smith (2007) that U.S. vote-buying strategy is directed primarily at 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.
The nonlinear effects of the variables allow us to probe a bit further. Figures 3(a) and 3(b) plot the effects of varying development and regime type simultaneously. The estimates indicate that a low level of development makes punishments more likely and rewards less likely. The marginal effects reported in Table 2 indicate that when all other variables are at their medians, poor countries are two-and-a-half times as likely to be punished as middle-income countries when they oppose the U.S. position. This suggests that punishments are less costly to apply to weak countries, which are unable to retaliate, and the United States prefers to use positive incentives with more developed countries that are better able to resist. Figure 3(a) illustrates the effect of per capita GDP on punishment while allowing polity scores to vary, and also illustrates the effect of democracy, which makes punishment more likely. Plotting the curves together reveals an important interaction effect. The slope of the effect of democracy on punishment 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. This may be because 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 is attributable to concerns about political stability.

Rewards have a similar interpretation, which reflects the fact that rewards and punishments are strategic substitutes. Table 2 indicates that the median middle-income country is almost twice as likely as a poor country to be rewarded when it offers support, and consolidated democracies are two-and-a-half times more likely to be rewarded than consolidated autocracies. Figure 3(b) demonstrates that 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

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19Because this is a non-linear model, the marginal effects of our independent variables vary across the ranges of the other covariates. GDP per capita is measured in thousands of constant U.S. dollars.
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 1990s illustrates the way in which the United States 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. Since Nicaragua was a poor democracy (Nicaragua’s Polity score was 6 in 1990), 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, however, so our model predicts a preference for punishments over rewards. 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 Chamorro 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. Chamorro’s opposition to U.S. positions, including on votes involving Cuba, was apparently intended as part of an effort to build bridges to the Sandinista opposition. 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 Chamorro government with significant aid reductions. The same pattern continued into 1993, with Nicaragua voting against a number of important resolutions and the United States continuing to withhold aid. This reversal of fortune was particularly striking, given the history of U.S. opposition to the preceding Sandinista government only a few years before.

Pakistan is a good case to illustrate the effects of regime changes on U.S. aid strategy, because it experienced a transition to democracy and another back to autocracy within the time period we study. Pakistan was autocratic from 1984–1987 (i.e., Polity score of -4 to -7), was democratic from

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1988–1998 under Benazir Bhutto and Nawaz Sharif (i.e., Polity score of 7 to 8), and reverted to autocracy after a coup led by Pervez Musharraf 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 while it was authoritarian. Figure 2 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.21

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%. In the three years in which 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), and sided with the United States almost 35% of the time in 1988, 1991, and 1993. In contrast, during the six years in which it was punished, it voted with the United States only 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.

1.2 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. The final two columns of Table 2 present the substantive effect of each regressor on the probability that the recipient votes in opposition to the U.S. position, which can be thought of as the net effect of the regressor through the mechanisms of preferences, vulnerability and credibility.22 The results

21 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.

22 Note that the changes in probability are modest when expressed as a percentage because we start from a high baseline probability of disagreement (0.880). If we focused on the probability of agreement for “No” votes, the
provide ample evidence that U.S. influence strategies affect voting. For example, countries that trade extensively with the United States tend to have more closely aligned preferences, but they nevertheless vote more strongly in opposition because they are less likely to be punished.23

The results in Table 2 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 0.03.24 The United States voted “No” on approximately three-quarters of all votes that it defined as important. 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.

percentage change for the same variables would be considerably larger, because they would start from a low baseline probability.

23Turing to Table 1, the positive coefficient for Trade with the United States in the recipient’s utility for complying and being rewarded (11.46) indicates that substantial trade partners are more likely to prefer to comply. Trade partners are more vulnerable to punishment (-15.86), but are less likely to the punished (-0.05), and the net effect is that substantial trade partners are more oppositional in spite of their more closely aligned preferences and greater vulnerability.

24Since “No” is the median position of the United States, the first row represents a “No” vote with all other variables at their median.
As Table 2 indicates, democracies are less likely than autocracies to oppose U.S. positions in the UNGA. We are now in a position to answer the question with which we began: why are democracies more supportive? Is this because democracies are more sympathetic to U.S. policy positions, because democracies are more vulnerable to U.S. influence attempts, or because U.S. influence attempts are more credible among the set of democracies? Our estimates indicate that democracies’ preferences are inherently more oppositional than authoritarian governments’ preferences. The negative coefficient of -5.63 for polity in the government’s utility for being rewarded for compliance in Table 1 indicates that as a country becomes democratic, the net benefits of opposing the United States rather than complying increase. (The reference category is voting in opposition with no consequences.) This rejects the hypothesis of coincidence of preferences, and is consistent with the interpretation that democracies in developing countries are more oppositional because their publics are critical of U.S. positions, and democratically elected leaders have incentives to cast symbolic votes against the United States. The fact that we found a strong positive relationship between GDP per capita and the recipient’s estimated utility for compliance also supports this interpretation. On the other hand, democracies are less susceptible than authoritarian governments to punishments: the positive coefficient of 2.75 in the first column of Table 1 indicates that the cost of punishment declines as polity increases, holding voting behavior constant. This rejects the hypothesis that democracies are more vulnerable to U.S. influence attempts than autocracies. To the contrary, it supports the inference that autocracies are more vulnerable, because their leaders use foreign aid as an integral part of their strategy for maintaining power. The only reason for democracies to be more compliant than autocracies, in spite of more oppositional preferences and lower vulnerability to sanctions, is that democracies are more likely to be punished or rewarded for their votes. This is consistent with our argument that autocracies cannot generally be punished because the aid they receive is tied to broader U.S. strategic objectives—Egypt under Mubarak was a classic example—and it is much more palatable to reward democratic countries.

This logic is reflected in a non-monotonic relationship between polity and UNGA voting. Non-monotonicity occurs in the model because of countervailing strategic incentives, and in this case, U.S. incentives to avoid punishing or rewarding autocracies interact with the preferences of aid
recipients. The result is a non-monotonic relationship between regime type and votes against U.S. positions, which further depends on the recipient’s level of development. The graphs in the lower half of Figure 3 depict the relationship between wealth, regime type, and the probability of voting in opposition to the United States. Figure 3(c) depicts the case of “Yes” votes. Aid 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. Opposition by authoritarian governments is maximized among very poor countries, which are most likely to strongly oppose U.S. preferences. However, the effect of polity is non-monotonic. Very authoritarian poor countries are highly compliant, because they have few institutional incentives to oppose U.S. positions. Opposition increases and reaches a peak among weakly consolidated authoritarian countries (Polity score=-4), a range in which punishments and rewards remain very unlikely, but where public opinion has become more relevant to regime survival. As these regimes become more democratic, however, the incentives created by the increasing probability of punishments and rewards come to overwhelm the effects of increasing opposition and decreasing vulnerability to influence, and the probability of opposing U.S. positions again declines to very low levels. This effect is due to strategic voting. Figure 3(d) depicts a similar non-monotonic effect in the case of “No” votes.

**Does Vote Buying Change with the End of the Cold War?**

Until this point we have presented results of a model that pools data from 1985 to 2001, but we now split the sample in order to ask whether the political economy of UN voting changed significantly with the end of the Cold War. The end of the Cold War might not be expected to substantially change the incentives of aid recipients, but it represented a sea change in U.S. geopolitical strategy, so it would be surprising if there were no adjustments in aid policy. Indeed, it is often argued that foreign aid became more development-oriented with the end of the Cold War. We divided our

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25 The net effects are reported in Table 2, but their interpretation depends on the coefficients in Table 1. Returning to Table 1, the positive coefficient for Recipient GDP in the recipient’s utility for complying and being rewarded (4.42) indicates that poor countries are more likely to prefer to oppose U.S. positions, in spite of the cost of forgoing rewards. Punishment is painful to poor countries (GDP per capita coefficient=9.87), and punishment is more likely (coefficient for U.S. utility for punishment=-0.09), but poor countries nevertheless resist U.S. positions at higher rates than middle-income aid recipients.
sample into Cold War (1985-89) and post-Cold War (1990-2001) subsamples to test the robustness of our results, and found several differences in the samples that shed light on the interpretation of vote buying in the United Nations.\textsuperscript{26} Our main findings remain robust across both time periods, so we present the full results in the appendix and describe the key differences here.

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\caption{Table 3 about here.}
\end{table}

There are no significant differences in our estimates of recipient preferences between the post-Cold War sample and the pooled model, which indicates that none of the pooled results described above were driven by peculiarities of the Cold War period.\textsuperscript{27} Comparing the estimates for the Cold War and post-Cold War periods, standard errors are larger in the smaller, Cold War sample, leading to fewer significant coefficients. Most of the signs of coefficients are unchanged; a few coefficients change sign as we move back to the Cold War period, but none of these is significant. These results provide reassurance about our interpretation of the pooled results above.

On the other hand, the U.S. vote-buying strategy changed in several significant ways after the Cold War. To illustrate these effects, Table 3 presents the marginal effects of key regressors on U.S. punishment strategies during and after the Cold War. First, U.S. treatment of allies changed sharply. The United States was slightly more likely to punish allies than non-allies in the pooled sample, although this coefficient was not significant. During the Cold War, however, the United States was significantly less willing to punish its allies, which reflected the constraints imposed by a tense global rivalry with the Soviet Union. Alliance with the United States during the Cold War reduced the probability of punishment after voting against the United States by over two-thirds. After the end of the Cold War, by contrast, the United States became significantly more willing to punish allies than non-allies, as systemic constraints relaxed. In the post-Cold War era, allies were 60 percent more likely to be punished than non-allies if they voted in opposition. The pooled results concealed a sharp change in U.S. policy. During the Cold War the United States felt compelled to woo its allies; after the Cold War, it expected its allies to tow the line or face the consequences.

\textsuperscript{26}We also code 1991 as being the last year of the Cold War and find very similar results. See the supplemental appendix for details.

\textsuperscript{27}We also estimate a model in which a Cold War variable is interacted with each regressor, and find similar results. We focus on the split-sample approach here as the full interactions model makes interpretation of a somewhat complicated model even more complicated. See Ai and Norton (2003) or Braumoeller (2004) for details.
During the Cold War, the United States was much more willing to punish left-leaning governments than either right-leaning or centrist governments. Left-leaning governments were 125 percent more likely to be punished if they voted against a U.S. position than the baseline centrist category, and they were twelve times more likely to be punished than right-leaning governments. During the post-Cold War era, in contrast, leftist governments were treated no differently than right-leaning governments, and were actually less likely to be punished for defying the United States than centrist ones. The reduced salience of left-leaning political orientation after the end of the Cold War reflected the collapse of the left as a global challenge to the capitalist economic model. Finally, there is a marked shift after the end of the Cold War in the effect of wealth. During the Cold War, the effect of wealth on the U.S. punishment strategy is only marginally significant, but it appears to be the case that wealthier countries are punished at a higher rate than poorer ones. On the other hand, after the Cold War poor countries are over seven times more likely to be punished than middle-income countries if they vote against U.S. positions. It is logical to target poor countries, since they are more dependent on foreign aid than wealthier countries, and their behavior indicates that they are more vulnerable to influence attempts. The fact that U.S. strategy did not target poor countries in this way until the end of the Cold War suggests that the Cold War competition for the allegiance of the developing world undermined the credibility of U.S. influence attempts.

Our central result about the role of democracy does not change with the end of the Cold War. In both the Cold War and the post-Cold War subsamples, as in the pooled model, the United States is much more likely to punish and reward democracies than autocracies. There is no statistical difference between the coefficients in the separate samples. This suggests that, although many other features of U.S. foreign policy shifted dramatically with the end of the Cold War, the relationship between U.S. foreign aid and authoritarian regimes did not. Certain authoritarian regimes lost U.S. support because the Cold War ended, but the same logic applies during the Cold War and after: autocratic regimes that receive U.S. foreign aid do so because they play key roles in U.S. foreign policy. Consequently, they cannot be punished when they defy U.S. preferences. The U.S. public is sympathetic towards democracies, so democracies receive foreign aid that is not critical to foreign policy and can be used strategically to buy votes. Furthermore, it is politically
acceptable to give democracies additional aid when that becomes expedient, so it is credible to offer to increase aid as an inducement. Consequently, it is more credible for the United States to punish and reward democracies.

**A Direct Test of Strategic Voting**

The results we have presented provide substantial evidence that recipient countries vote strategically in anticipation of aid-based punishments and rewards. However, it is possible to directly test the proposition that the relationship between the substantive regressors and recipient voting behavior is affected by strategic interaction in the way that we propose. 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 that uses the same regressors (Clarke, 2001, 2003). Such a test has two key implications. From a methodological perspective, a comparative model test will assess whether the additional machinery that the strategic model requires improves model fit enough to be justified, 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.\(^28\)

In our case, we can rely on a simple likelihood-ratio test, which is appropriate for nested models. The model presented in Table 1 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 not strategic (or, equivalently, is unaffected by aid disbursement decisions), 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. Thus, the restricted model is a logit model with each of the regressors in table 1 included once. This simpler model is nested within the strategic estimator as the full model can be reduced

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\(^{28}\) Alternative strategic models could be formulated that might fit the data better. However, from our perspective the substantively interesting question is whether threatened punishments and rewards are effective at influencing UNGA voting. Therefore, the relevant null hypothesis is a model using the same covariates that assumes that this is not the case.
to the restricted model with a set of linear restrictions (Clarke, 2001, 727–728). 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 < 0.005). 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.

The comparative model test also allows us to assess where in the data our strategic model gives us greater leverage. In order to assess this, we classify observations according to whether the strategic or the non-strategic model makes a more accurate prediction of the observed outcome. The strategic model makes more accurate predictions in 61 percent of the observations. An additional implication of our explanation for strategic voting by democracies is that a strategic model should particularly improve the fit for democratic countries, because democratic countries’ votes are affected more by anticipated punishments and rewards than are the votes of autocratic countries. Table 4 presents a cross-tabulation of the results, and we find that this is indeed the case. The strategic model improved the fit for 52 percent of observations of non-democracies. On the other hand, over 75 percent of predictions for democratic observations improved.

We used the case of Pakistan to illustrate our argument in an earlier section, arguing that Pakistan was a case in which punishments and rewards occurred much more frequently during democratic regime years than during autocratic years, so it seems appropriate to return to that example here. We find an improvement in our predictions in 60 percent of non-democratic observations using our strategic model, but we find an improvement in 98.9 percent of observations in which Pakistan had a democratic regime. Since the only difference between the models relates to predicted voting behavior, this indicates that Pakistan’s UN voting record was in fact more consistently influenced by the U.S. vote-buying strategy during the democratic years.

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

\[ \text{The data are presented in the supplemental appendix.} \]
Conclusions

A simple strategic model reveals layers of interaction that lie beneath the radar of conventional analysis. The empirical analysis leads to several important substantive findings. Our central finding regards the relationship between democracy and support for U.S. foreign policy. We started with the observation that democratic countries vote with the United States more often than autocratic countries on important votes. Is this because democracies have inherently aligned preferences, because democracies are more vulnerable to U.S. pressure than autocracies, or because the United States punishes and rewards democracies more frequently than autocracies? These alternative interpretations have quite different normative implications, and it is impossible to distinguish among them without a model that allows recipient governments to strategically alter their votes in anticipation of punishments or rewards.

Thus, a key advantage of modeling the strategic relationship between voting and aid flows is that it is possible to estimate important quantities of interest that are not directly observable. Consequently, it is possible to sort out causal explanations that would otherwise be observationally equivalent. Our results are inconsistent with the first two possibilities: democracies in the developing world are in fact more critical of U.S. positions in the United Nations than autocracies, probably because they are sensitive to public opinion, and they are less vulnerable than autocracies to U.S. influence attempts, presumably because foreign aid plays a less central role in regime survival. Nevertheless, democracies comply more with U.S. voting preferences than do autocracies, because the United States is more likely to carry out threats and promises to manipulate aid if the target country is a democracy. This is attributable to the credibility problems that frustrate U.S. efforts to link aid to autocratic countries with UN voting.

These findings have profound normative implications, and they can only be disheartening for students of U.S. foreign policy or of multilateral institutions. In a parliament of parliaments and dictators, it is disturbing that the United States disproportionately uses changes in aid disbursements to manipulate the voting behavior of poor democracies. Further, to the degree that the legitimacy of UN decisions depends on the democratic legitimacy of its members, it is unfortunate that U.S. foreign policy systematically coerces the votes of democracies.
On the other hand, while our results indicate that U.S. policy influences countries' votes, they also point to the limits of that influence. While the important resolutions that the United States supports generally pass, these represent a small minority of important votes, and resolutions that the United States opposes almost always pass as well. In addition to democracy, our results suggest that economic development is a fault line in the General Assembly. 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. Poor countries appear to resist because they have strongly held preferences that clash with U.S. objectives. Similarly, countries that trade intensively with the United States are highly vulnerable to U.S. influence attempts, but are nevertheless more resistant to U.S. influence. In this case, however, resistance is not due to deep-seated conflict of interest, because countries that trade with the United States tend to share U.S. preferences. Instead, countries that trade intensively vote against the United States more frequently because it is too costly for the United States to link their votes in the UN to punishments or rewards. The fact that many countries defy U.S. pressure indicates that the votes are regarded as sufficiently important to justify bearing some costs, and they therefore retain substantial informational content.

Nevertheless, an important methodological implication of our findings is to draw into question the use of UNGA voting as a straightforward index of states’ preferences (Gartzke, 2005; Russett and Oneal, 2001b; Stone, 2004). UN voting records are a uniquely informative data source on the policy preferences of most of the world’s 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. Our innovation is to use a strategic statistical model that explicitly allows for the possibility that voting is strategic, and we find that the U.S. policy of influencing important UNGA votes with aid disbursements has important effects on the voting behavior of recipient countries. A model specification test rejects the hypothesis that voting decisions are unaffected by subsequent aid disbursement strategies with a high degree of confidence (p=.005). This result rejects the hypothesis that UN voting on issues of political significance to major aid donors is simply a sincere expression of country preferences.
References


Figure 3: Democracy and Development
Table 1: Utilities for Statistical Strategic Model

<table>
<thead>
<tr>
<th></th>
<th>$U_R(Punish)$</th>
<th>$U_R(\neg Reward)$</th>
<th>$U_R(Reward)$</th>
<th>$U_{U.S.}(Punish)$</th>
<th>$U_{U.S.}(Reward)$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>110.53</td>
<td>0.32</td>
<td>4.94</td>
<td>-3.20</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(19.23)</td>
<td>(0.06)</td>
<td>(0.24)</td>
<td>(0.13)</td>
<td></td>
</tr>
<tr>
<td>Recipient Polity</td>
<td>2.75</td>
<td>-5.63</td>
<td>0.05</td>
<td>0.13</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.60)</td>
<td>(1.25)</td>
<td>(0.01)</td>
<td>(0.01)</td>
<td></td>
</tr>
<tr>
<td>Allies</td>
<td>-30.69</td>
<td>-2.99</td>
<td>0.19</td>
<td>-0.17</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(4.90)</td>
<td>(4.63)</td>
<td>(0.13)</td>
<td>(0.14)</td>
<td></td>
</tr>
<tr>
<td>Recipient GDP</td>
<td>9.87</td>
<td>4.42</td>
<td>-0.09</td>
<td>0.06</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(1.76)</td>
<td>(0.94)</td>
<td>(0.16)</td>
<td>(0.01)</td>
<td></td>
</tr>
<tr>
<td>Trade</td>
<td>-15.86</td>
<td>11.46</td>
<td>-0.05</td>
<td>-0.11</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(6.03)</td>
<td>(6.93)</td>
<td>(0.02)</td>
<td>(0.03)</td>
<td></td>
</tr>
<tr>
<td>Left-Wing Executive</td>
<td>-9.85</td>
<td>14.76</td>
<td>-0.07</td>
<td>-0.44</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(4.55)</td>
<td>(5.18)</td>
<td>(0.11)</td>
<td>(0.15)</td>
<td></td>
</tr>
<tr>
<td>Right-Wing Executive</td>
<td>6.96</td>
<td>68.74</td>
<td>-0.71</td>
<td>-0.28</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(10.24)</td>
<td>(9.88)</td>
<td>(0.15)</td>
<td>(0.16)</td>
<td></td>
</tr>
<tr>
<td>U.S. Votes No</td>
<td>-109.71</td>
<td>-6.82</td>
<td>0.22</td>
<td>-0.16</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(17.89)</td>
<td>(1.15)</td>
<td>(0.02)</td>
<td>(0.01)</td>
<td></td>
</tr>
</tbody>
</table>

Bootstrapped Standard Errors in Parentheses
Number of Observations 14337
Bold Indicates Significance at the .05 Level
Percent Correctly Predicted: 84.9%
Modal Percent Correctly Predicted: 63.2%
Table 2: Marginal Effects of Regressors on U.S. and Recipient Choices

<table>
<thead>
<tr>
<th>Polity=-9</th>
<th>Pr(Punish)</th>
<th>% Change in Pr</th>
<th>Pr(Reward)</th>
<th>% Change in Pr</th>
<th>Pr(Vote Against U.S.)</th>
<th>% Change in Pr</th>
</tr>
</thead>
<tbody>
<tr>
<td>Median Values</td>
<td>0.042</td>
<td>NA</td>
<td>0.008</td>
<td>NA</td>
<td>0.880</td>
<td>NA</td>
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<tr>
<td>Polity=9</td>
<td>0.028</td>
<td>-33%</td>
<td>0.003</td>
<td>-63%</td>
<td>0.942</td>
<td>+7%</td>
</tr>
<tr>
<td>Alliance=1</td>
<td>0.071</td>
<td>+69%</td>
<td>0.029</td>
<td>+263%</td>
<td>0.821</td>
<td>-7%</td>
</tr>
<tr>
<td>Recipient GDP=1,000</td>
<td>0.051</td>
<td>+21%</td>
<td>0.007</td>
<td>-13%</td>
<td>0.946</td>
<td>+8%</td>
</tr>
<tr>
<td>Recipient GDP=12,000</td>
<td>0.020</td>
<td>-52%</td>
<td>0.013</td>
<td>+63%</td>
<td>0.695</td>
<td>-21%</td>
</tr>
<tr>
<td>Trade=15 million</td>
<td>0.042</td>
<td>+0%</td>
<td>0.008</td>
<td>+0%</td>
<td>0.878</td>
<td>-0%</td>
</tr>
<tr>
<td>Trade=10 billion</td>
<td>0.040</td>
<td>-5%</td>
<td>0.007</td>
<td>-13%</td>
<td>0.928</td>
<td>+5%</td>
</tr>
<tr>
<td>Left-Wing</td>
<td>0.039</td>
<td>-7%</td>
<td>0.005</td>
<td>-38%</td>
<td>0.906</td>
<td>+3%</td>
</tr>
<tr>
<td>Right-Wing</td>
<td>0.021</td>
<td>-50%</td>
<td>0.005</td>
<td>-38%</td>
<td>0.906</td>
<td>+1%</td>
</tr>
<tr>
<td>Yes Vote</td>
<td>0.005</td>
<td>-88%</td>
<td>0.042</td>
<td>+438%</td>
<td>0.031</td>
<td>-96%</td>
</tr>
</tbody>
</table>

Missing Cells Indicate Statistical Insignificance
Table 3: Marginal Effects of Regressors on U.S. Punishment Decision

<table>
<thead>
<tr>
<th></th>
<th>Cold War U.S. Punishment Decision</th>
<th>Post-Cold War U.S. Punishment Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pr((Punishment))</td>
<td>% Change in Pr</td>
</tr>
<tr>
<td>Median Values</td>
<td>0.032</td>
<td>NA</td>
</tr>
<tr>
<td>Polity=9</td>
<td>0.046</td>
<td>+44%</td>
</tr>
<tr>
<td>Polity=-9</td>
<td>0.024</td>
<td>-25%</td>
</tr>
<tr>
<td>Alliance=1</td>
<td>0.010</td>
<td>-69%</td>
</tr>
<tr>
<td>Left-Wing</td>
<td>0.072</td>
<td>+125%</td>
</tr>
<tr>
<td>Right-Wing</td>
<td>0.006</td>
<td>-81%</td>
</tr>
<tr>
<td>GDP per capita=1,000$</td>
<td>0.029</td>
<td>-9%</td>
</tr>
<tr>
<td>GDP per capita=12,000$</td>
<td>0.044</td>
<td>+38%</td>
</tr>
<tr>
<td>Trade=Low</td>
<td>0.031</td>
<td>-3%</td>
</tr>
<tr>
<td>Trade= High</td>
<td>0.038</td>
<td>+19%</td>
</tr>
</tbody>
</table>

Bold Cells Indicate Statistical Significance