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# How Do Political Changes Influence U.S. Bilateral Aid Allocations? Evidence from Panel Data

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**Abstract:** This paper examines the role of U.S. domestic politics in the allocation of foreign aid using panel data on aid to 119 countries from 1960 to 1997. Employing proxies for four aid allocation criteria (development concerns, strategic importance, commercial importance, and the degree of democratization), we find evidence that each influences aid allocation, although the evidence is stronger for some criteria (development concerns, commercial importance) than for others (strategic importance, degree of democratization). Furthermore, the allocation pattern depends on the composition of the U.S. government. When the president and Congress are liberal, development concerns receive more weight in the allocation process than when the president and/or Congress are more conservative. When the Congress is more conservative, commercial concerns have more weight than when the Congress is liberal. These findings have practical importance in light of current attempts to overhaul the allocation of both bilateral and multilateral aid.

JEL codes: D78, F35, O19, P45

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## **1. Introduction**

Several factors make it important for economists to understand the politics of foreign aid. First, insight into the process through which aid is distributed contributes in a very general way to the economics literature for the simple reason that foreign aid involves a substantial quantity of scarce resources. Second, there is a rapidly growing empirical literature that seeks to identify the effectiveness of aid in meeting development objectives, and much of that literature relies on the power of political variables to predict aid allocations (Boone 1996, Burnside and Dollar 2000). Third, the success or failure of attempts to reform the foreign aid process depend directly on the politics of donor countries as well as on the politics of aid-receiving countries.

This paper contributes to the understanding of the aid allocation process by analyzing the distribution of U.S. bilateral aid. Our analysis starts from the observation that aid-receiving countries differ in terms of their potential for development, commercial importance, geopolitical role, and form of government. Each year, a recipient country's share of U.S. aid may reflect these factors. The relative influence of each of these factors may change over time, however, in part because elections in the U.S. alter the composition of the U.S. government. For example, a shift from a liberal to a conservative president or Congress is likely mirrored by a shift in the objectives of foreign aid and, consequently, a shift in the emphasis given to each of the underlying criteria for aid allocation. If the objectives of these political actors have a systematic influence on the distribution of aid across recipient countries, political shifts will cause observable changes in aid allocations. Examining the effects of these political shifts illuminates the political economy of aid

allocation.<sup>1</sup>

To provide new insight into the role that these factors play in aid allocation, we analyze panel data on U.S. bilateral aid flows to 119 countries from 1960 to 1997.<sup>2</sup> We consider both the decision of whether to provide aid to a country and, conditional on the decision to provide aid, the decision of what level of aid to provide. We identify proxy variables to reflect each recipient country's importance with respect to four aid allocation criteria: development concerns, commercial importance to the U.S., strategic importance to the U.S., and the degree of democratization. To measure political shifts in the U.S., we place the president and Congress along a liberal-conservative dimension using Poole's (1998) common space data, then examine whether the estimated effects of the key proxies (development, strategic, commercial, and government type) vary systematically with the liberal-conservative locations of the president and Congress.<sup>3</sup>

The econometric results provide evidence that each of our proxies for aid allocation criteria is systematically related to the actual allocation of aid. The evidence is more conclusive for some criteria (development, commercial) than for others (strategic, democratization). Perhaps the most important finding is that the pattern of aid allocation depends on the composition of the U.S. government. Development concerns appear to have greater weight under liberal Congresses than

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<sup>1</sup>For an early paper that models the allocation of aid in a public choice context, see Dudley and Montmarquette (1976), who start with the demand for aid among donor country voters. Also see Lagae (1990), Lahiri and Raimondos-Møller (2000), Lundborg (1998), and Mosley (1985).

<sup>2</sup>All 119 countries in our data set are included in the OECD Development Assistance Committee's (2004) database on aid flows. Thus, all received bilateral or multilateral aid during at least some of the years covered in our data set. A key factor in our analysis, however, is that in any given year, only a subset received aid from the U.S. In this paper, we will use the phrase "aid-receiving countries" to refer to the countries in our data set.

<sup>3</sup>The common space data are similar to the widely used congressional data generated by Poole and Rosenthal's NOMINATE algorithm (Poole and Rosenthal, 1997).

under conservative Congresses, and, similarly, greater weight under liberal presidents than under conservative presidents, *ceteris paribus*. Furthermore, commercial interests appear to have greater weight under conservative Congresses than under liberal Congresses. We find no conclusive evidence of a systematic link between liberal-conservative shifts and the responsiveness of aid to the aid-receiving country's strategic importance or degree of democracy. Our results hold when the sample is restricted to Cold War years; thus, the results are not an artifact of the transition that occurred at the end of the Cold War. Overall, the results suggest that the importance of allocation criteria depends substantially, and in a complex manner, on domestic politics.

These findings contribute new insight into the allocation of aid. Our paper builds on recent empirical work on the political and economic determinants of bilateral and multilateral aid allocations; see, for example, Alesina and Dollar (2000), Alesina and Weder (2002), Boschini and Olofsgård (2001), Dreher and Jensen (2003), Fleck and Kilby (2005), Goldstein and Moss (2003), and Neumayer (2003).<sup>4</sup> Our paper also adds to a substantial literature debating the role of human rights and democracy in U.S. aid allocations.<sup>5</sup> While it is widely known that aid has more support

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<sup>4</sup>All these papers examine the influence of recipient country characteristics on the allocation of aid between recipients. Alesina and Dollar (2000) update the previous aid allocation literature and investigate the role of recipient country policies and political structure. Alesina and Weder (2002) examine links between recipient country corruption and aid flows. Dreher and Jensen (2003) analyze the influence of the U.S. in IMF lending, finding that countries voting with the U.S. in the UN faced fewer conditions on IMF loans. Fleck and Kilby (2005) test for the influence of U.S. interests on World Bank lending and use the same measure of need as in this paper. Boschini and Olofsgård (2001) assess the importance of the Cold War motive for providing aid, including a variable to measure political orientation of the donor government. Goldstein and Moss (2003) examine the level and share of U.S. bilateral aid to Africa under Republicans and Democrats and find that one must look jointly at the parties controlling the Administration, the House, and the Senate. Neumayer (2003) estimates the extent to which governance enters aid allocation, in aggregate and for many individual bilateral donors and multilateral agencies.

<sup>5</sup>See, e.g., Alesina and Dollar (2000), Arvin et al. (2002), Blanton (1994), Carleton and Stohl (1987), Cingranelli and Pasquarello (1985), Hofrenning (1990), Hook (1998), McCormick and Mitchell (1988), Neumayer (2003), Pasquarello (1988), Poe (1990, 1991, 1992), Poe and Sirirangsi (1993), Svensson (1999),

from liberals than from conservatives, we show in this paper that liberal-regime aid differs systematically from conservative-regime aid with respect to allocation criteria as well.<sup>6</sup> As we discuss in the conclusion, this finding is particularly important in light of current attempts to overhaul the allocation of both bilateral and multilateral aid.

## 2. Methods and Data

This section describes the data we use to measure aid allocations, recipient country characteristics, and politicians' locations on the liberal-conservative dimension. For a listing of variable definitions and data sources, see Appendix A. For descriptive statistics, see Appendices B and C.

The empirical analysis is based on an annual, country-level panel covering 1960-1997.<sup>7</sup> We analyze both the decision of whether to provide aid to a country and, conditional on the decision to provide aid, the decision of what level of aid to provide. Thus, we consider two dependent variables. The first is a binary variable equal to one for country  $i$  in year  $t$  if that country received a positive

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and Valverde (1999).

<sup>6</sup>A large literature has focused on the aid policies of the U.S., which has long had both a sizable bilateral program and substantial influence over multilateral aid agencies (Fleck and Kilby 2005, Gwin 1997, Kilby 2005). The influence of multiple interests (development, strategic, and commercial) in U.S. aid allocation is well documented (Alesina and Dollar 2000, Ball and Johnson 1996, Maizels and Nissanke 1984, McKinlay and Little 1979, Neumayer 2003). On Democratic administrations providing more aid, see Eggleston (1987), though more recent work by Goldstein and Moss (2003) finds different results for aid to Africa.

<sup>7</sup>We have excluded observations from our data set if they have a missing variable. In addition, we have excluded three pairs of countries entirely: China and Taiwan because they lack complete UN voting (and other) data, North Korea and South Korea because they also lack complete UN voting (and other) data, and Israel and Egypt because they receive such large shares of U.S. aid for reasons that differ from the focus of this paper. The panel is unbalanced, most notably because some countries came into existence, while others disappeared, during the time period covered by our data set.

amount of development aid from the U.S. in year  $t$  (and equal to zero otherwise). The second dependent variable is recipient country  $i$ 's share of total U.S. bilateral aid disbursements in year  $t$ .<sup>8</sup> The analysis focuses on proxies for four country characteristics: the development effectiveness of aid and/or the level of need; the strategic importance to the U.S.; the commercial importance to the U.S.; the type of government on an autocracy-democracy scale.

The proxy for development effectiveness and need is bilateral aid allocations by a group of small donors: Canada, Denmark, the Netherlands, Norway, and Sweden.<sup>9</sup> The variable (Small Donor Aid) is measured as country  $i$ 's share of small donor bilateral aid in year  $t$ . Numerous studies have found that these donors allocate their aid in a more development-oriented and humanitarian manner than do large donors such as the U.S., Japan, France, and the U.K. (Alesina and Dollar, 2000; Hoadley, 1980; McGillivray, 1989; Rao, 1997; Rodrik, 1995; Stokke, 1989). Thus, the share of small donor aid summarizes need and the perceived effectiveness of aid in the recipient country.<sup>10</sup> This variable

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<sup>8</sup>Defining the dependent variable and, where appropriate, the country characteristics in terms of shares provides a natural way to match units and remove the effects of trends and fluctuations in the total aid budget. Eggleston (1987), Fleck and Kilby (2005), Gang and Lehman (1990), Goldstein and Moss (2003), Kilby (2005), Neumayer (2003) and Trumbull and Wall (1994) also use aid shares. As discussed later in this section, we employ share variables not just for U.S. aid, but for aid from several other donors, imports, exports, and population. When calculating share variables, it is important to consider that some countries have missing data for some years but not other years, and that a country may have different variables missing for different years. To ensure that each share variable can be compared meaningfully to the other share variables in any given year, we calculate shares as the fraction of totals over the group of countries in our data set that have aid, import, export, and population data for that given year.

<sup>9</sup>This group is sometimes termed "liked-minded countries" (e.g., Neumayer, 2003). Similar variables have also been used by Fleck and Kilby (2005) and Kilby (2005).

<sup>10</sup>Using an aggregate measure of aid for these small donors reduces the empirical limitations that might arise from the limited geographic spread of an individual small donor's aid program (see Hoadley 1980). As discussed later, we include regional dummies in some of our econometric specifications and country fixed effects in others; this controls for the potential effects of colonial ties between the aid-receiving countries and the small donors, and it should make the small donor aid variable useful for indicating changes in aid allocation patterns resulting from liberal-conservative shifts even if the small donor aid variable is not purely a proxy for developmental and humanitarian concerns. When interpreting the empirical results, it is

offers an important advantage over direct measures of poverty and income; although variables measuring GDP and poverty may indicate the need for aid, they have no clear relationship to the effectiveness of aid since developing country government policies that cause widespread poverty can also undermine the effectiveness of aid.<sup>11</sup>

The other key country characteristics are similar to those used in previous studies. To proxy for U.S. commercial interests, we use U.S. exports to country *i* and U.S. imports from country *i*.<sup>12</sup> We measure the trade variables (U.S. Exports, U.S. Imports) as shares of total U.S. exports to and total U.S. imports from aid-receiving countries. To proxy for U.S. strategic interests, we use Gartzke, Jo, and Tucker's (1999) *S* measure of affinity in UN voting. This should reflect similarity between the policy positions of the U.S. and country *i*.<sup>13</sup> To measure the aid-receiving country's type of government, we use a variable (Democracy) based on the annual democracy-autocracy rating from the Polity IV Project (2000). The Polity rating ranges from -10 (most autocratic) to 10 (most democratic).

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also important to remember that the estimated coefficients on small donor aid are conditional on the other explanatory variables, and vice versa; we consider this again in Section 3.

<sup>11</sup>See, for example, Isham and Kaufman (1999) and World Bank (1998). An additional advantage of using Small Donor Aid is its accuracy and availability, in contrast to data on income and poverty in developing countries. Without question, Small Donor Aid is not a perfect proxy (Macdonald and Hodinott 2004), but it is not obvious that a better proxy exists.

<sup>12</sup>Trade is widely used as a proxy for donor commercial interests (Andersen et al., 2005; Fleck and Kilby, 2005; Frey and Schneider, 1986; Kilby, 2005; Maizels and Nissanke, 1986; McKinlay and Little, 1979; Meernik et al., 1998; Neumayer, 2003; Weck-Hannemann and Schneider, 1991; Wittkopf, 1972).

<sup>13</sup>For a more detailed discussion of this variable, see Gartzke, Jo, and Tucker's (1999) documentation. Signorino and Ritter (1999) discuss the advantages of *S* scores over alternative measures of similarity. Lancaster (2000) examines the role of strategic interests in U.S. aid allocations. Other work examining both UN voting and U.S. aid allocation includes Alesina and Dollar (2000), Alesina and Weder (2002), Ball and Johnson (1996), Boschini and Olofsgård (2001), Lundborg (1998), Neumayer (2003), Wang (1999), and Wittkopf (1973).



## Controlling for Other Country Characteristics

There are other country characteristics whose omission could produce spurious coefficients on the variables of interest. One key concern is that many factors that influence aid are difficult, if not impossible, to measure empirically. For this reason, when addressing the U.S.'s decision of whether to provide aid to a country, we consider specifications with and without regional dummies.<sup>14</sup> By comparing these specifications, we can gain insight into whether our results might be driven by omitted variables common to regions. When addressing the question of how much aid to allocate to countries receiving aid, we include a complete set of country dummies to account for fixed effects of geographical proximity to the U.S. and other donors, geological features, colonial and historical relationships prior to 1960, and all other country-specific factors that remain fixed over time. We include a complete set of year dummies in all of our specifications.

Another key concern is to control for inter-temporal, within-country changes whose omission could cause spurious changes over time in the coefficients on the country characteristics of interest. For this reason, we include controls for population and GDP. The population variable for country  $i$  is defined as country  $i$ 's share of the population of the set of countries in our data set. The GDP variable is real per capita GDP for country  $i$ .<sup>15</sup> Each of these variables influences aid allocations and,

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<sup>14</sup>We define our regional dummies using the World Bank's categorization of countries into six regions: East Asia and Pacific; Europe and Central Asia; Middle East and North Africa; Latin America and Caribbean; South Asia; Sub-Saharan Africa. The East Asia and Pacific region is omitted from our estimated equations in order to allow the estimation of a constant term. Note that we cannot include a South Asia dummy because the estimated probits would predict perfectly for that region. Because we cannot include a South Asia dummy, we conducted a robustness test by excluding all South Asian countries (and including the other regional dummies) from our probits; this produced results very similar to those reported in this paper.

<sup>15</sup>As discussed earlier, although lower GDP in a country may indeed reflect greater need for aid, it is also likely to reflect the results of poor policy in that country and, hence, a government that will use aid dollars in a manner that results in little help for the poor. Higher GDP may also indicate greater potential

because of cross-country differences in trends, may not be sufficiently accounted for with regional dummies, country dummies, or year fixed effects.<sup>16</sup>

### Politicians' Locations on the Liberal-Conservative Dimension

To measure politicians' locations along a liberal-conservative dimension, we use Poole's (1998) common space data, which place the president, the House, and the Senate on the same dimension.<sup>17</sup>

To measure the position of Congress as a whole, we simply average the House and Senate positions.<sup>18</sup> Higher scores on the dimension reflect more conservative positions.<sup>19</sup> Appendix C presents these data. Because government spending policies in any given year are influenced largely

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as a market (commercial motive) or importance in world politics (political motive) (Gang and Lehman, 1990; Maizels and Nissanke, 1984; McKinlay and Little, 1977).

<sup>16</sup>To test the robustness of our specifications, we controlled for nonlinear effects of population and GDP by adding the squares of the population and GDP variables to the specifications reported in this paper. This had very little effect on the results for any of our other variables.

<sup>17</sup>We obtained these three variables directly from Keith Poole. Poole generated the data using Poole and Rosenthal's NOMINATE algorithm (a technique similar to factor analysis). Poole's (1998) work complements Poole and Rosenthal's highly influential work on congressional voting (e.g., Poole and Rosenthal 1985, 1991, 1997). See Poole and Rosenthal (1997) for an excellent introduction to their methods and their widely used NOMINATE data. In general, the way members of Congress vote on major policy issues tends to fit a single dimension in NOMINATE space; that is, members with NOMINATE scores on the liberal side of some dividing point tend to vote one way, members on the conservative side of the dividing point tend to vote the other way, and most errors in prediction tend to occur among members near the dividing point. Poole and Rosenthal attribute this phenomenon to the process of logrolling over myriad dimensions of policy. Note that Poole's data for the House and Senate are averages over members in each chamber; given that NOMINATE locations reflect logrolling over many dimensions of policy (conditions under which the median voter theorem does not apply and all members can influence policy), using averages rather than median scores for each chamber is appropriate. Fleck and Kilby (2001) show that divisions in congressional voting on foreign aid issues can be described in NOMINATE space, with liberal positions predicting support for foreign aid.

<sup>18</sup>Note that liberal-conservative shifts in the House often occur simultaneously with those in the Senate. Consequently, the data do not have enough variation to allow us to estimate separate House and Senate effects.

<sup>19</sup>The NOMINATE scores are clearly functions of voter preferences and politicians' own preferences. Given the purpose of this paper, we need not sort out the determinants of NOMINATE scores. All we need is a method of placing the president, the House, and the Senate on the same liberal-conservative dimension.

by budget decisions in the previous year, we lag the common space scores by one year relative to the aid variables. For the same reason, we lag our measures of each aid-receiving country's trade variables, UN voting, and type of government; this way, these variables reflect information generally observable in the same year that we measure the liberal-conservative positions of the U.S. government.

This assumed rapid response (i.e., a one year lag) of U.S. aid disbursements to political changes fits well with the institutional literature on both the Congress and the president. The best known case of a political shift in Congress changing aid policy occurred following the November 1994 elections. By the spring of 1995, Congress was voting on issues that were of great consequence for the 1996 fiscal year aid budget (Fleck and Kilby, 2001; Lippman 1996). The tight link between aid and political change can also be seen with the current U.S. president. During his first day in office, President George W. Bush re-instated the Reagan-era "Mexico City restrictions" which cut off U.S. aid disbursements to any organization providing abortion counseling (*Economist*, 2001).<sup>20</sup>

### Causation

In view of the previous literature on aid, we consider the potential endogeneity of U.S. Exports, UN Voting, Democracy, and Small Donor Aid.<sup>21</sup> The endogeneity of U.S. Exports is perhaps most obvious because aid is often tied to purchases of donor goods and services. However, the magnitude of the influence of aid on trade is theoretically ambiguous. Some aid-driven trade may simply

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<sup>20</sup>To test whether our conclusions are sensitive to the econometric assumptions we make regarding the speed at which aid policy adjusts, we estimated AR1 and dynamic panel specifications. As noted in Section 3, these robustness tests support the paper's conclusions.

<sup>21</sup>Aid is unlikely to influence substantially the other variables of interest (imports and liberal-conservative shifts).

displace exports which would have happened without aid (fungibility); alternatively, there might be a multiplier effect. Empirically, we can get some insight by comparing the magnitudes of U.S. exports to aid-receiving countries and U.S. aid. For example, in the last year of our data set (1997), U.S. exports summed over aid-receiving countries are \$184 billion, while U.S. aid summed over these countries is \$4.7 billion. As explained in the next section (Table 1, Equation 3), a 1 percentage point increase in export share is associated with a 0.256 percentage point increase in aid share. Using the 1997 numbers, a \$1.84 billion increase in exports is associated with \$12 million increase in aid.<sup>22</sup> Thus although the issue of reverse causation is theoretically sound, it is unlikely to be of practical importance to our estimates given the relative magnitudes of trade and aid.

We follow much of the previous literature in treating UN Voting and Democracy as exogenous. In Alesina and Dollar (2000), the estimated effect of UN voting on U.S. aid are virtually the same with or without instrumenting for UN voting.<sup>23</sup> In a review of the broader literature, Palmer et al. (2002) examine conflicting results in previous studies and conclude that there is no clear evidence that aid influences UN voting. Turning to democracy, Alesina and Dollar (2000) find a pattern of democratization influencing the level of aid from some donors but no systematic tendency for aid to influence democratization. Knack (2004) examines the same measure of democracy we do and finds no evidence that aid promotes democracy.

Perhaps the most important concern with endogeneity arises from the possibility of aid coordination. In principle, Small Donors might coordinate with the U.S. (and other donors), say all

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<sup>22</sup>The figures using the sample mean are \$590 million for exports and \$11 million for aid.

<sup>23</sup>Alesina and Dollar (2000) use religion variables as instruments. These instruments are not suitable for our purposes because they vary little over time.

agreeing to cut aid to Kenya after evidence of widespread corruption. Such positive coordination fits with the developmental explanation for correlation between Small Donor Aid and U.S. Aid. But negative coordination is also possible with donors specializing in different recipients. In the academic work on the topic, however, there is no clear evidence of any systematic form of aid coordination.<sup>24</sup>

Finally, note that these issues of endogeneity raise little concern for our efforts to test for systematic changes in aid policy arising from liberal-conservative shifts in the U.S. government: it is difficult to imagine how aid policy would cause (or proxy for factors that cause) changes in Poole's measures of the liberal-conservative positions of the U.S. president and Congress.

### **3. Empirical Results**

We begin with a set of benchmark specifications that exclude the effects of liberal-conservative shifts. Then we consider a set of specifications to investigate how those shifts influence aid allocations. Finally, we examine whether our findings are driven by the end of the Cold War.

#### Benchmark Equations

Table 1 presents the benchmark equations. Equations 1 and 2 present the results of probits used

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<sup>24</sup>Rowlands and Ketcheson (2002) examine net ODA disbursement shares to countries in Sub-Saharan Africa. Up through 1990 Dutch aid is positively related to other bilateral aid (including U.S. aid) and negatively related to IMF programs while after 1990 Dutch aid is less closely linked to other bilateral aid and positively linked to presence of World Bank lending. Swedish aid is positively linked to other bilateral aid but negatively related to U.S. bilateral aid and the presence of World Bank lending in the earlier period but reverses in the later period so that the link with other bilateral aid is negative and with U.S. bilateral aid positive. Canadian aid through 1990 is positively related to other bilateral aid but negatively related to U.S. aid and unrelated to World Bank or IMF activity but also reverses after 1990 so that the link with other bilateral aid programs is negative and with U.S. bilateral aid and World Bank lending is positive. Also see Arvin et al. (1998).

to estimate the likelihood that a country would receive aid from the U.S. in year  $t$ .<sup>25</sup> The difference between the equations is that Equation 2 includes regional dummies. In both equations, the estimated coefficients on the development proxy (Small Donor Aid) and the strategic proxy (UN Voting) are positive, substantial, and statistically significant.

To illustrate the magnitudes of the estimated effects, consider how the estimated probability of receiving aid changes as a result of changes in the explanatory variables for a hypothetical country in 1997. With the values of the explanatory variables (other than the year dummies) equal to their sample means, Equation 1 predicts a .941 probability that a country would receive aid from the U.S. If that country had Small Donor Aid of zero, the predicted probability would be .750, while if it had Small Donor Aid of .0458 (the sample mean plus one standard deviation of the variable), the probability would be .99997. For UN Voting, consider a similar comparison. With the  $S$  measure of UN voting affinity at  $-.403$  (the sample mean minus one standard deviation of the variable), the probability would be .871, while with  $S$  at  $.230$  (one standard deviation above the mean), the probability would be .977. We can illustrate what this means in actual votes with the examples of India ( $S=-.395$ ) and Poland ( $S=.250$ ). Of the 54 votes cast by India, 11 were with the U.S. Of the 51 votes cast by Poland, 34 were with the U.S.<sup>26</sup>

Several other results are worth mentioning. Among the other three variables of interest (U.S.

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<sup>25</sup>We estimated standard probits, but in view of the panel nature of the data set, we report t-statistics based on standard errors adjusted for clustering with respect to countries. Without this correction, the standard errors would generally be smaller and the t-statistics correspondingly larger than those we report.

<sup>26</sup>Data on individual UN votes from Voeten (2004, 2005). In a very rough sense (because it is based on particular countries in a particular year and a varying total number of votes), this suggests that switching 23 votes to the pro-U.S. position increases the probability of getting U.S. aid by 10.1%. In an even rougher sense (because the probit function is non-linear and the mapping between votes and affinity scores is non-linear), this implies that switching one vote from anti-U.S. to pro-U.S. increases the probability of getting U.S. aid by about 0.5%.

Exports, U.S. Imports, Democracy), none is statistically significant in either equation.<sup>27</sup> One should keep in mind, however, that the estimated coefficients on U.S. Exports, U.S. Imports, and Democracy do have signs consistent with what we find in our analysis of the share of U.S. bilateral aid.<sup>28</sup> The first control variable, GDP, has a negative and statistically significant coefficient, indicating that higher income reduces the likelihood of receiving aid. The coefficients on the second control, Population, are negative, but statistically insignificant. The regional dummies are statistically insignificant (jointly as well as individually), and comparing Equations 1 and 2 shows that adding them to the specification has relatively little effect on the results of interest.

Equation 3 (in Table 1) examines the determinants of shares of U.S. aid for countries receiving U.S. aid (the allocation equation), controlling for country fixed effects.<sup>29</sup> The results are consistent

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<sup>27</sup>This appears to contrast with Klitgaard et al. (2005) where governance is statistically significant in a selection equation for U.S. bilateral aid. Estimating a similar equation for the 1990s, Neumayer (2003) finds democracy measures statistically significant and log of exports statistically insignificant. However, it is difficult to determine the reason for the difference as variable definitions, data sources, model specifications, and time periods all differ.

<sup>28</sup>To illustrate the magnitude of the estimated effects, again consider a hypothetical country in 1997 with the values of the explanatory variables (other than the year dummies) equal to their sample means. If the export share were zero, Equation 1 would predict a .929 probability that the country would receive aid, while if the export share were .0401 (the sample mean plus one standard deviation of the variable), the probability would increase to .963. If the import share were zero, Equation 1 would predict a .942 probability that the country would receive aid, while if the import share were .0447 (the sample mean plus one standard deviation of the variable), the probability would decrease to .936. A change from extreme autocracy to extreme democracy (i.e., a change from -10 to 10 in the variable Democracy) would increase the probability from .917 to .964.

<sup>29</sup>Recall that the sample here includes countries in year  $t$  only if they receive a positive amount of U.S. aid in year  $t$ . This component of the variation in aid allocations differs from the component that Equations 1 and 2 analyze. Thus, Equation 3 provides a different test and new information about aid patterns. As a robustness test, we re-estimated the share equations reported in this paper allowing the residuals to follow an AR1 process. This had little effect on our results, with the only notable change from the results reported in this paper being that U.S. Imports would not have a statistically significant effect in the share equations that exclude the effects of liberal-conservative shifts (i.e., Equation 3 in Tables 1 and 3). In another robustness test, we estimated the share equations using the full set of observations included in Equations 1 and 2; that is, we included observations with zero shares. The results are very similar to the

with those in Equations 1 and 2 in that the coefficients of interest have the same signs. There are, however, two important differences: (i) the coefficients on the commercial proxies—U.S. Exports and U.S. Imports—are now substantial and statistically significant and (ii) the coefficient on the strategic proxy—UN Voting—is now small and far from statistically significant.<sup>30</sup> Thus, where commercial interests appear clearly to matter substantially is in the decision of how much aid to give, rather than whether or not to give any aid. And, more specifically, countries to whom the U.S. exports much receive more aid, while countries from whom the U.S. imports much receive less aid, *ceteris paribus*. This practice of rewarding countries that buy much from (and sell little to) the U.S. is consistent with a common theme of political debates over imports and exports—the notion that countries buying U.S. exports are valuable commercial allies to be supported, while countries that sell goods to the U.S. (“stealing” U.S. jobs) are not.<sup>31</sup>

#### Liberal-Conservative Shifts in the U.S. Government

Table 2 is similar to Table 1, but adds ten variables to estimate the effects of liberal-conservative

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share equations presented in this paper (i.e., Equation 3 in Tables 1-4). One notable difference is that, when zero shares are included in the sample, UN Voting and Democracy have positive coefficients that approach statistical significance in the share equation that includes all years and excludes the effects of liberal-conservative shifts (i.e., in the re-estimation of Equation 3 in Table 1); this is consistent with the overall conclusions of Equations 1-3 in Table 1.

<sup>30</sup>Because the Small Donor Aid variable is measured in shares, the .23 estimated coefficient on Small Donor Aid indicates that an increase in a country’s Small Donor Aid by some given percentage of total small donor aid would increase the predicted value of the dependent variable (share of U.S. bilateral aid) by .23 times that given percentage. Similarly, the .26 coefficient on U.S. Exports indicates that an increase in a country’s purchases of U.S. exports by some given percentage of total U.S. exports would increase the predicted value of the dependent variable by .26 times that given percentage. The interpretation of the -.07 coefficient on U.S. Imports indicates that an increase in imports from that country by some given percentage of total U.S. imports would decrease the predicted value of the dependent variable by .07 times that given percentage.

<sup>31</sup>With respect to the control variables, the estimated effect of GDP is negative, as in Equations 1 and 2, while the coefficient on Population is now positive and large.



shifts in the U.S. government. The ten variables are interaction terms to allow the effects of each of our five main proxies for donor interest to vary with liberal-conservative shifts in the presidency and in Congress. For three of the five main proxies (Small Donor Aid, U.S. Exports, and U.S. Imports), the evidence shows that liberal-conservative shifts have substantial effects.

Examining first the decision of whether to provide any aid to a country, Equations 1 and 2 show a large estimated effect of liberal-conservative shifts on the econometric role of Small Donor Aid.<sup>32</sup> More specifically, for the decision of whether to provide aid, liberal regimes in the U.S. act more like the small donors than do conservative regimes, and the estimated effects are substantial in magnitude. As an illustration, consider the changes in the presidential and congressional common space locations that resulted from the conservative shift brought about by the 1980 election: the common space data indicate a shift in the presidential location from  $-.470$  for Carter to  $.479$  for Reagan and simultaneous shifts in the House location from  $-.044$  to  $-.009$  and the Senate location from  $-.071$  to  $.010$ . For a hypothetical aid-receiving country in 1997 with explanatory variables (other than Small Donor Aid and the year dummies) equal to the sample means, how much would a conservative shift of this magnitude decrease the marginal effects of Small Donor Aid? With the liberal regime's marginal effects of Small Donor Aid, changing Small Donor Aid from zero to  $.0458$  (the sample mean plus one standard deviation of the variable) would increase the probability of receiving U.S. aid from  $.772$  to over  $.99999$ . With the conservative regime's marginal effects of Small Donor Aid, the same increase in Small Donor Aid would increase the probability of receiving U.S. aid from  $.772$  to  $.789$ . Thus, a conservative shift of the magnitude brought about by the 1980 election would cause a large expected reduction in the degree of similarity between U.S. and small

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<sup>32</sup>As before, regional dummies are insignificant in Equation 2 of Table 2.

donor decisions with respect to which countries receive aid.

The results for the Democracy variable also merit some discussion. Although the coefficients on the interaction terms for Democracy are not statistically significant, the results in Table 2 raise an interesting point regarding the econometric value of incorporating measures of *donor* politics. Comparing the first two equations in Table 2 to the first two equations in Table 1 shows that controlling for liberal-conservative shifts increases the coefficients and t-statistics on Democracy. Thus, to some extent, the effects of the Democracy variable may be masked when U.S. liberal-conservative shifts are omitted from the equation. The coefficient on Democracy in Equation 1 in Table 2 is statistically significant and provides modest evidence that the variable plays a role in the U.S. decision of whether to provide aid. The evidence should be interpreted as modest for two reasons. First, at least some of the estimated effects of Democracy in Equation 1 appear to be regional effects (as a comparison with Equation 2 in Table 2 shows), and our results do not indicate whether those regional effects are driven by regional-level Democracy or by other factors. Second, the magnitude of the estimated effect is not particularly large.<sup>33</sup>

One additional point with respect to the Democracy variable is important to remember. In our estimated equations, we control for Small Donor Aid. This means that the estimated effects of Democracy are conditional on the extent to which the small donors respond to the Democracy variable. If the Small Donor Aid variables are dropped from Equations 1 and 2 in Table 2, the

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<sup>33</sup>To illustrate the magnitude, consider the same between-regime comparison we performed for a hypothetical country's change in Small Donor Aid. Under a liberal U.S. regime (i.e., Carter-era common space locations), Equation 1 predicts that changing Democracy from -10 to 10 (i.e., a switch from extreme autocracy to extreme democracy) would increase the probability of receiving U.S. aid from .969 to .986. Under a conservative U.S. regime (i.e., Reagan-era common space locations), the same change in Democracy would increase the probability of receiving aid from .945 to .993.

coefficient on Democracy is positive and statistically significant in both equations.<sup>34</sup> Thus, the coefficients on the Democracy variables reported in Table 2 should be interpreted as reflecting only the component of recipient government quality that is not already captured by the econometric role of Small Donor Aid.

Turning to the decision of what share of aid to provide to each country receiving aid, consider Equation 3 in Table 2. Again, liberal regimes in the U.S. appear to act more like small donors than do conservative regimes, and the estimated effects of liberal-conservative shifts are substantial in magnitude. For example, under a liberal president and Congress (as during the late Carter era), the estimated marginal effect of Small Donor Aid on U.S. Aid Share is .257, while under a conservative president and Congress (as during the early Reagan era), the estimated marginal effect is less than one tenth that size, at .023. Furthermore, the role of the commercial proxies differs substantially between liberal and conservative regimes, with the effect driven by Congress. The estimated liberal-regime marginal effect of U.S. Exports is .244, while the conservative-regime effect is larger, at .432. The estimated liberal-regime marginal effect of U.S. Imports is -.140, while the conservative-regime effect is larger (in absolute value), at -.251. Overall, the results in Table 2 suggest that conservative shifts tend to reduce the weight on development concerns and to increase the weight on commercial concerns.<sup>35</sup>

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<sup>34</sup>The coefficient on Democracy is .508 (t=3.09) in the re-estimated Equation 1 and .0404 (t=2.21) in the re-estimated Equation 2. The coefficients on the interaction terms for Democracy remain positive and statistically insignificant, except for the marginally statistically significant coefficient (.369 with t=1.74) on the interaction with Conservative Congress in Equation 1.

<sup>35</sup>As noted earlier, Goldstein and Moss (2003) examine the effects that U.S. regime changes have on aid to Africa. They construct dummy variables reflecting the party configuration of the presidency, the Senate, and the House. For example, RDD=1 if the president is a Republican while the Senate and House are controlled by Democrats; RDD=0 otherwise. Using the annual level or share of U.S. bilateral aid to Africa from 1961 to 2000, they find that the party of the president does not explain aid allocation but that

To investigate whether differences between the selection and allocation equations simply reflect the use of region dummies in the former and country dummies in the latter, we re-estimated the allocation equation with regional dummies.<sup>36</sup> In contrast to the selection equation, regional dummies are significant in the allocation equation. In addition, previous differences between the selection and allocation equations persist except for UN Voting in Table 1. Now positive and significant in both equations, this suggests that countries which persistently support the U.S. in the UN also have better access to U.S. aid and, conditional on access, get a greater share. Thus, this comparison supports using separate selection and allocation equations and identifies an important link between UN Voting and aid flows.<sup>37</sup> In view of the fact that the expected aid allocation depends on both the selection equation and the allocation equation, the allocation equations must be interpreted as conditional on the selection of countries receiving positive amounts of aid.<sup>38</sup>

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the three-party configuration variable does. More than depending on which party is in power, aid to Africa suffers when a president from one party faces a House and Senate controlled by the other party. In view of their results, we tested for similar phenomena with respect to our proxies for aid allocation criteria, but we found no clear evidence of a systematic one-party versus divided-government effect.

We also investigated whether changes in the size of the aid budget might drive our results. This is potentially important because the size of the aid budget could, at least in principle, have an effect on aid shares independently of whether liberal politicians differ from conservative politicians in terms of their aid objectives. To address this issue, we interacted the annual real US aid budget (aggregated over countries in our data set) with Small Donor Aid, Exports, Imports, UN Voting, Democracy, GDP, and Population. Our main conclusions (the effects of liberal-conservative shifts) are robust to the inclusion of these seven interaction terms.

<sup>36</sup>We also considered estimating the selection equation via conditional logit with country dummies. This requires dropping countries with no variation (those that either always or never get U.S. aid), about half our observations. Consistent estimation is still theoretically possible but the procedure failed to converge.

<sup>37</sup>We gratefully acknowledge an anonymous referee for suggesting the comparison.

<sup>38</sup>A Heckman selection model would yield a single equation indicating unconditional expected aid allocations. However, when the selection equation includes time-varying factors, the fixed effects estimator is inconsistent (Cameron and Trivedi, 2005, p. 801). Therefore, we estimated a sample selection model with region dummies. Comparing this to a conditional allocation equation with region dummies, we find similar coefficient estimates and levels of statistical significance. Nonetheless, we can reject the hypothesis of

## Does the End of the Cold War Drive the Results?

For interpreting the results in Tables 1 and 2, an important historical consideration is the end of the Cold War. From the 1980s to the 1990s, the nature of foreign aid changed dramatically, with a declining concern for fighting communism and a growing concern for transition economies.<sup>39</sup> Tables 3 and 4 explore whether changes accompanying the end of the Cold War drive the results presented in Tables 1 and 2.

Table 3 presents three specifications that are the same as those in Table 1, but are estimated with data from 1960-1989. The results are generally consistent with our major conclusions—namely, those with respect to Small Donor Aid, U.S. Exports, and U.S. Imports—from the whole sample. There is, however, a difference worth noting with respect to Equation 2 (the probit specification with regional dummies): dropping the post-Cold War years from the data set causes the coefficient on UN Voting to fall in magnitude and fail to reach statistical significance. Thus, with respect to the full-sample finding that strategic concerns matter through more than just regional effects, the level of confidence does depend on the end of the Cold War. Also note that with the Cold War years dropped from the data set, the U.S. Exports variable in Equation 3 is significant at the 10% level, but is significant at the 5% level for the full sample. In sum, while including the post-Cold War years strengthens some results, it does not drive the main results.

Table 4 presents results parallel to those in Table 2. Again, excluding the post-Cold War years

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independent selection and allocation equations ( $p=.032$ ). Thus, we continue to interpret our reported allocation equations as conditional on receiving aid but note that the sample selection bias introduced by an unconditional interpretation is likely to be small.

<sup>39</sup>Boschini and Olofsgård (2001) examine the drop in aggregate aid from major donors that occurred during the 1990s, and conclude that it occurred largely because of the end of the Cold War.

yields results that are generally consistent with those for the full sample. It is worth noting, however, that the level of statistical significance does fall for some variables. This is an unsurprising effect of reducing the sample size (especially because estimating the effects of liberal-conservative shifts depends on having sufficient variation over time, and Table 4 drops eight of thirty-eight years).<sup>40</sup> Overall, the similarity of the coefficients between Tables 2 and 4 shows that the coefficients of interest in Table 2 are not merely artifacts of the transition from the Cold War era to the post-Cold War era.<sup>41</sup>

#### 4. Conclusion

This paper examines the determinants of U.S. bilateral aid allocations. Our analysis of panel data

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<sup>40</sup>Although neither of the coefficients on the liberal-conservative interaction variables for Small Donor Aid is individually statistically significant in Equation 1, the coefficients remain large in magnitude and jointly significant at better than the 1% level ( $p=.005$ ). The levels of joint significance are much higher in Equations 2 and 3.

<sup>41</sup>In a final set of robustness tests, we re-estimated our allocation equations using three methods of dynamic panel estimation. These tests are particularly useful for determining the degree to which our conclusions are sensitive to our assumptions with respect to the speed at which U.S. aid policy responds to liberal-conservative shifts in the U.S. government. First, we added a lagged dependent variable to the third equation from each of Tables 1-4; Appendix D presents the results for the equations including political interactions. The most notable changes are that (i) the statistically significant coefficient on UN Voting \* Cons Pres in Equation 3 of Table 2 becomes statistically insignificant in Equation 1 of Appendix D and (ii) the statistically significant coefficient on Democracy \* Cons Cong in Equation 3 of Table 4 becomes statistically insignificant in Equation 2 of Appendix D. Overall, the results support the main conclusions of the paper. Second, in addition to including fixed effects and a lagged dependent variable, we allowed an AR1 process; again, the results supported our paper's main conclusions. The most notable change is that the dynamic specifications with AR1 residuals have statistically significant positive coefficients on U.S. Exports \* Cons Pres. Two other coefficients (UN Voting \* Cons Pres in Equation 3 of Table 2; Democracy \* Cons Cong in Equation 3 of Table 4) remain positive but become statistically insignificant. Third, we used the Arellano and Bond (1991) method and, once again, found evidence supportive of the paper's conclusions and not greatly different from the results reported in Tables 1-4. In sum, although our results are (of course) not completely independent of our assumptions with respect to speed of adjustment and lag structure, our paper's main conclusions are robust to substantial changes in the econometric treatment of dynamic changes in aid policy. All results mentioned here are available upon request.

from 1960 to 1997 indicates that several aid allocation criteria—development concerns, commercial importance, strategic importance, and the level of autocracy or democracy—play a role. Our analysis also indicates that aid allocation criteria differ systematically and substantially between liberal and conservative regimes. Under liberal regimes, the distribution of U.S. bilateral aid more closely mirrors that of small donors known for their development-oriented and humanitarian approach to aid. Commercial concerns have greater weight under conservative regimes than under liberal regimes. Specifically, under conservative Congresses (relative to liberal Congresses), the U.S. allocates aid in a manner that appears more mercantilist-oriented. That is, when conservatives allocate aid, they appear to place greater weight on whether the U.S. exports much to, and does not import much from, aid-receiving countries.

These findings contribute directly to the understanding of the domestic politics of U.S. aid and, by doing so, provide new insight into the prospects for reforming aid policy. Over the last decade, a vigorous debate over how to improve aid effectiveness has led to calls by aid agencies and scholars for a policy of *ex post* selectivity—less funding for traditional projects and structural adjustment programs, more general budgetary support for developing country governments that have already demonstrated improved governance.<sup>42</sup> Proponents of this position attribute the failure of traditional aid programs at least in part to lax donor enforcement: even when recipients flout aid conditions, donors often continue making disbursements and even new commitments (Mosley et al., 1995; Svensson, 2000, 2003; Villanger, 2004). *Ex post* selectivity may be able to solve this enforcement problem (because aid flows will not occur until after reform takes place), but only if donors consistently reward desired changes in developing countries. In other words, selectivity can work

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<sup>42</sup>See, for example, the highly influential 1998 World Bank publication *Assessing Aid*.

only if donors can credibly commit to the policy. Yet if donor policy changes with the political cycle—and in the case of the U.S. it apparently does—the ability for the donor to make a credible commitment is questionable.

Furthermore, understanding the aid allocation process is central to the debate over the effect of aid on growth. The fact that development aid is targeted toward countries with poor records of growth has long clouded the link between aid and growth. Recent attempts to solve this potential endogeneity problem make use of factors that influence aid allocations yet do not depend on recipient need; the most notable of these factors stem from the political motive for aid (Boone, 1996; Burnside and Dollar, 2000). This debate remains contentious (Beynon, 2002; Easterly, Levine, and Roodman, 2004; Hansen and Tarp, 2001; Roodman, 2004), and a more fully developed model of the political economy of aid allocation would allow more precise estimation of the effects of aid. Our findings are a step toward a more fully developed model. Furthermore, our results point to an important caveat for those attempting to instrument for aid with political variables: the political circumstances in donor countries are likely to affect not only the amounts of aid to developing countries, but the *motivation* for providing that aid—including the extent to which aid is focused on reaching development objectives. Thus, political variables may instrument, in part, for the purpose of aid. And the purpose of aid will likely influence the effects of aid on development.



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## Appendix A: Variables

Receives U.S. Aid: Takes a value of one for year  $t$  and country  $i$  if U.S. bilateral aid to country  $i$  is positive in year  $t$ . Aid measured as “Total Official Gross.” Aid data from OECD DAC database (OECD Development Assistance Committee 2004).

U.S. Aid Share: For year  $t$  and country  $i$ , U.S. bilateral aid to country  $i$ , divided by total U.S. bilateral aid in year  $t$ . The measure of total U.S. bilateral aid for year  $t$  is based on aid to countries in our data set, and, for a country to be included in that total, it must have data available to calculate all of our share variables (U.S. Aid; Small Donor Aid; U.S. Exports; U.S. Imports; Population) for that year. Aid measured as “Total Official Gross.” Aid data from OECD DAC database (OECD Development Assistance Committee 2004).

Small Donor Aid: For year  $t$  and country  $i$ , small donor bilateral aid to country  $i$ , divided by total small donor bilateral aid in year  $t$ . The measure of total small donor aid for year  $t$  is based on aid to countries in our data set, and, for a country to be included in that total, it must have data available to calculate all of our share variables (U.S. Aid; Small Donor Aid; U.S. Exports; U.S. Imports; Population) for that year. Aid measured as “Total Official Gross.” Small donors are: Canada, Denmark, Netherlands, Norway, Sweden. Aid data from OECD DAC database (OECD Development Assistance Committee 2004).

UN Voting: Gartzke, Jo, and Tucker’s (1999)  $S$  measure of UN voting affinity between the U.S. and country  $i$  in year  $t-1$ .

U.S. Exports: Exports from the U.S. to country  $i$  in year  $t-1$ , divided by total exports from the U.S. to aid-receiving countries in our data set in year  $t-1$ . For a country to be included in that total, it must have data available to calculate all of our share variables (U.S. Aid; Small Donor Aid; U.S. Exports; U.S. Imports; Population) for that year. Export data from International Monetary Fund (1999).

U.S. Imports: Imports into the U.S. from country  $i$  in year  $t-1$ , divided by total imports into the U.S. from aid-receiving countries in our data set in year  $t-1$ . For a country to be included in that total, it must have data available to calculate all of our share variables (U.S. Aid; Small Donor Aid; U.S. Exports; U.S. Imports; Population) for that year. Import data from International Monetary Fund (1999).

Democracy: Country  $i$ ’s Polity rating in year  $t-1$ . The Polity rating ranges from -10 (extreme autocracy) to 10 (extreme democracy). For details, see Marshall and Jaggers (2000). Data available from: <http://www.cidcm.umd.edu/inscr/polity/index.htm> (Polity IV Project, 2000).

Population: Population of country  $i$  in year  $t-1$ , divided by total population of aid-receiving countries in our data set in year  $t-1$ . For a country to be included in that total, it must have data available to calculate all of our share variables (U.S. Aid; Small Donor Aid; U.S. Exports; U.S. Imports; Population) for that year. Population data from Penn World Table (Heston and Summers 2002),



supplemented with population data from World Bank (2004) for observations with missing data in Penn World Table.

GDP: Real per capita GDP (chain index) in country  $i$  in year  $t-1$ , in thousands of 1996 dollars. From Penn World Table (Heston and Summers 2002).

Cons Pres and Cons Cong: Liberal-Conservative locations of the president and Congress based on Poole's (1998) common space NOMINATE locations for the president, the House, and the Senate. See, e.g., Poole and Rosenthal (1997) for a discussion of the NOMINATE algorithm. Higher scores on the dimension reflect more conservative positions. Poole (1998) calculated the House and Senate scores by averaging individual members' scores. Our congressional measure is the average of Poole's House and Senate scores. Because government spending policies in any given year are influenced largely by budget decisions in the previous year, in our empirical analysis we lag the liberal-conservative scores by one year. To address the issue of incomplete presidential terms, we treat Kennedy as if he served a full term and Nixon as if he served half of his second term. Appendix C presents the actual data. (We obtained the common space data from Keith Poole.)

Regional Dummies: We define our regional dummies using the World Bank's categorization of countries into six regions: East Asia and Pacific; Europe and Central Asia; Middle East and North Africa; Latin America and Caribbean; South Asia; Sub-Saharan Africa. The East Asia and Pacific region is omitted from our estimated equations in order to allow the estimation of a constant term. As explained in Section II, we cannot include a South Asia dummy because the estimated probits would predict perfectly for that region.

## Appendix B: Descriptive Statistics and Sample Coverage

Number of Observations: 2907

	<b>Mean</b>	<b>Std Dev</b>	<b>Minimum</b>	<b>Maximum</b>
Receives Aid	0.88235	0.32224	0	1
U.S. Aid Share	0.01177	0.02651	0	0.41916
Small Donor Aid	0.01222	0.03355	0	0.62732
U.S. Exports	0.01139	0.02866	0	0.34091
U.S. Imports	0.01302	0.03170	0	0.35618
UN Voting	-0.08664	0.31616	-0.657	0.894
Democracy	-1.47437	6.87932	-10	10
GDP	3.17538	2.72415	0.30981	24.93885
Population	0.01173	0.03732	0.00009	0.51213

**Sample Coverage:** The complete data set is an unbalanced annual, country-level panel of 119 countries over 38 years (1960-1997), with 2907 observations. The panel is unbalanced, most notably because some countries came into existence, while others disappeared, during the time period covered in our data set. We have excluded observations from our data set if they have a missing variable. In addition, we have excluded three pairs of countries entirely: China and Taiwan because they lack complete UN voting (and other) data, North Korea and South Korea because they also lack complete UN voting (and other) data, and Israel and Egypt because they receive such large shares of U.S. aid for reasons that differ from the focus of this paper. The years of our sample are determined by the availability of data: The aid data necessary to construct our aid variables are available beginning with 1960, and the UN Voting variable (which we lag one year) is available only through 1996.

### Appendix C: Liberal-Conservative Shifts

Year Elected	Executive			House		Senate	
	President	Rating	Party	Rating	Majority Party	Rating	Majority Party
1956	Eisenhower	0.267	R				
1958				-0.028	D	-0.042	D
1960	Kennedy	-0.524	D	-0.014	D	-0.026	D
1962				-0.017	D	-0.076	D
1964	Johnson	-0.412	D	-0.062	D	-0.084	D
1966				-0.025	D	-0.080	D
1968	Nixon	0.280	R	-0.027	D	-0.059	D
1970				-0.035	D	-0.053	D
1972				-0.031	D	-0.074	D
1974	Ford	0.251	R	-0.074	D	-0.093	D
1976	Carter	-0.470	D	-0.064	D	-0.090	D
1978				-0.044	D	-0.071	D
1980	Reagan	0.479	R	-0.009	D	0.010	R
1982				-0.029	D	0.010	R
1984				-0.014	D	0.007	R
1986				-0.016	D	-0.027	D
1988	Bush	0.456	R	-0.019	D	-0.027	D
1990				-0.026	D	-0.039	D
1992	Clinton	-0.363	D	-0.018	D	-0.034	D
1994				0.034	R	0.013	R

### Appendix D: Robustness Tests

Dependent Variable	(1)	(2)
	Allocation Equation 1961-1997	Allocation Equation 1961-1989
	U.S. Aid Share	U.S. Aid Share
Small Donor Aid <sub>i,t</sub>	0.0162 (0.51)	-0.0555 (2.03)*
Small Donor Aid <sub>i,t</sub> *Cons Pres <sub>t-1</sub>	-0.1503 (5.30)**	-0.0888 (3.43)**
Small Donor Aid <sub>i,t</sub> *Cons Cong <sub>t-1</sub>	-1.267 (3.25)**	-1.720 (5.12)**
U.S. Exports <sub>i,t-1</sub>	0.2927 (3.70)**	0.5619 (7.28)**
U.S. Exports <sub>i,t-1</sub> *Cons Pres <sub>t-1</sub>	0.0346 (0.59)	-0.0026 (0.47)
U.S. Exports <sub>i,t-1</sub> *Cons Cong <sub>t-1</sub>	2.533 (2.92)**	3.880 (4.92)**
U.S. Imports <sub>i,t-1</sub>	-0.1950 (2.88)**	-0.2494 (3.99)**
U.S. Imports <sub>i,t-1</sub> *Cons Pres <sub>t-1</sub>	0.0063 (0.12)	-0.0025 (0.06)
U.S. Imports <sub>i,t-1</sub> *Cons Cong <sub>t-1</sub>	-1.9444 (2.62)**	-2.571 (3.86)**
UN Voting <sub>i,t-1</sub>	-0.0013 (0.24)	0.0048 (0.95)
UN Voting <sub>i,t-1</sub> *Cons Pres <sub>t-1</sub>	0.0069 (1.38)	0.0046 (0.95)
UN Voting <sub>i,t-1</sub> *Cons Cong <sub>t-1</sub>	-0.0128 (0.18)	0.0558 (0.79)
Democracy <sub>i,t-1</sub>	0.0001 (0.81)	0.0002 (1.43)
Democracy <sub>i,t-1</sub> *Cons Pres <sub>t-1</sub>	-0.0006 (0.55)	-0.0002 (1.26)
Democracy <sub>i,t-1</sub> *Cons Cong <sub>t-1</sub>	0.0013 (0.79)	0.0025 (1.51)
GDP <sub>i,t-1</sub>	-0.0008 (1.96)	-0.0010 (1.84)
Population <sub>i,t-1</sub>	1.333 (8.02)**	1.877 (7.54)**

U.S. Aid Share <sub>i,t-1</sub>	0.2909 (14.74)**	0.3434 (15.35)**
Year Dummies	included	included
Observations	2502	1834
Number of Countries	111	77
R-squared (within)	.3310	.4759
Estimation Method	OLS with country fixed effects	OLS with country fixed effects

t statistics in parentheses      \* significant at 5%; \*\* significant at 1%

**Appendix D Continued**

**Table 1: Selection and Allocation Equations, 1960-1997**

	(1)	(2)	(3)
	Selection Equation	Selection Equation with Regions	Allocation Equation
Dependent Variable	Receives U.S. Aid	Receives U.S. Aid	U.S Aid Share
Small Donor Aid <sub>i,t</sub>	72.419 (3.11)**	66.049 (3.09)**	0.234 (12.70)**
U.S. Exports <sub>i,t-1</sub>	7.864 (1.09)	4.824 (0.80)	0.256 (6.00)**
U.S. Imports <sub>i,t-1</sub>	-1.182 (0.35)	-2.713 (0.93)	-0.074 (2.50)*
UN Voting <sub>i,t-1</sub>	1.361 (2.45)*	1.209 (2.00)*	-0.001 (0.31)
Democracy <sub>i,t-1</sub>	0.020 (1.73)	0.013 (0.89)	0.00002 (0.19)
GDP <sub>i,t-1</sub>	-0.13883 (4.55)**	-0.12658 (3.82)**	-0.00125 (2.89)**
Population <sub>i,t-1</sub>	-8.91606 (1.17)	-4.44211 (0.44)	1.28353 (13.57)**
Year Dummies	included	included	included
Observations	2907	2907	2565
Number of Countries	119	119	111
Pseudo R-squared	0.204	0.227	
R-squared (within)			0.301
Estimation Method	Probit, robust standard errors with clustering on countries	Probit, robust standard errors with clustering on countries	OLS with country fixed effects

t statistics in parentheses

\* significant at 5%; \*\* significant at 1%

**Table 2: Selection and Allocation Equations with Political Interactions, 1960-1997**

Dependent Variable	(1)	(2)	(3)
	Selection Equation Receives U.S. Aid	Selection Equation with Regions Receives U.S. Aid	Allocation Equation U.S. Aid Share
Small Donor Aid <sub>i,t</sub>	31.744 (1.46)	27.839 (1.56)	0.088 (2.92)**
Small Donor Aid <sub>i,t</sub> *Cons Pres <sub>t-1</sub>	-62.422 (2.05)*	-59.339 (1.92)	-0.134 (4.60)**
Small Donor Aid <sub>i,t</sub> *Cons Cong <sub>t-1</sub>	-1,190.471 (2.87)**	-1,115.153 (3.13)**	-1.843 (4.65)**
U.S. Exports <sub>i,t-1</sub>	11.934 (1.02)	12.720 (1.14)	0.425 (5.28)**
U.S. Exports <sub>i,t-1</sub> *Cons Pres <sub>t-1</sub>	1.659 (0.23)	0.329 (0.05)	0.012 (0.20)
U.S. Exports <sub>i,t-1</sub> *Cons Cong <sub>t-1</sub>	69.213 (0.66)	97.510 (0.98)	3.057 (3.43)**
U.S. Imports <sub>i,t-1</sub>	-8.524 (0.99)	-11.842 (1.42)	-0.271 (3.92)**
U.S. Imports <sub>i,t-1</sub> *Cons Pres <sub>t-1</sub>	3.291 (0.79)	3.714 (0.94)	0.043 (0.76)
U.S. Imports <sub>i,t-1</sub> *Cons Cong <sub>t-1</sub>	-109.023 (1.30)	-123.457 (1.53)	-2.617 (3.42)**
UN Voting <sub>i,t-1</sub>	0.605 (1.17)	0.751 (1.17)	-0.004 (0.82)
UN Voting <sub>i,t-1</sub> *Cons Pres <sub>t-1</sub>	0.002 (0.00)	-0.264 (0.56)	0.012 (2.34)*
UN Voting <sub>i,t-1</sub> *Cons Cong <sub>t-1</sub>	-14.838 (1.63)	-8.461 (1.04)	-0.076 (1.04)
Democracy <sub>i,t-1</sub>	0.038 (2.36)*	0.028 (1.62)	0.00012 (0.80)
Democracy <sub>i,t-1</sub> *Cons Pres <sub>t-1</sub>	0.010 (0.89)	0.007 (0.57)	-0.00006 (0.46)
Democracy <sub>i,t-1</sub> *Cons Cong <sub>t-1</sub>	0.279 (1.18)	0.241 (1.02)	0.00191 (1.08)
GDP <sub>i,t-1</sub>	-0.139 (4.60)**	-0.129 (3.93)**	-0.00114 (2.66)**
Population <sub>i,t-1</sub>	-8.385 (1.38)	-5.548 (0.88)	1.49698 (15.19)**
Year Dummies	included	included	included
Observations	2907	2907	2565

Number of Countries	119	119	111
Pseudo R-squared	0.224	0.244	
R-squared (within)			0.325
Estimation Method	Probit, robust standard errors with clustering on countries	Probit, robust standard errors with clustering on countries	OLS with country fixed effects

t statistics in parentheses

\* significant at 5%; \*\* significant at 1%

**Table 2 Continued**



**Table 3: Selection and Allocation Equations, 1960-1989**

	(1)	(2)	(3)
	Selection Equation	Selection Equation with Regions	Allocation Equation
Dependent Variable	Receives U.S. Aid	Receives U.S. Aid	U.S. Aid Share
Small Donor Aid <sub>i,t</sub>	76.500 (2.52)*	62.697 (2.37)*	0.186 (11.13)**
U.S. Exports <sub>i,t-1</sub>	6.398 (0.75)	2.443 (0.36)	0.604 (13.24)**
U.S. Imports <sub>i,t-1</sub>	3.010 (0.65)	-0.153 (0.04)	-0.048 (1.79)
UN Voting <sub>i,t-1</sub>	1.490 (2.43)*	0.842 (1.44)	-0.00040 (0.14)
Democracy <sub>i,t-1</sub>	0.015 (1.18)	0.012 (0.70)	-0.00004 (0.34)
GDP <sub>i,t-1</sub>	-0.157 (3.66)**	-0.146 (3.02)**	-0.00233 (4.22)**
Population <sub>i,t-1</sub>	-12.403 (1.04)	-0.935 (0.07)	1.35281 (15.09)**
Year Dummies	included	included	included
Observations	2144	2144	1886
Number of Countries	82	82	77
Pseudo R-squared	0.204	0.259	
R-squared (within)			0.411
Estimation Method	Probit, robust standard errors with clustering on countries	Probit, robust standard errors with clustering on countries	OLS with country fixed effects

t statistics in parentheses

\* significant at 5%; \*\* significant at 1%

**Table 4: Selection and Allocation Equations with Political Interactions, 1960-1989**

Dependent Variable	(1)	(2)	(3)
	Selection Equation Receives U.S. Aid	Selection Equation with Regions Receives U.S. Aid	Allocation Equation U.S. Aid Share
Small Donor Aid <sub>i,t</sub>	103.955 (1.49)	80.163 (1.49)	0.033 (1.24)
Small Donor Aid <sub>i,t</sub> *Cons Pres <sub>t-1</sub>	-173.599 (1.72)	-149.818 (1.69)	-0.073 (2.65)**
Small Donor Aid <sub>i,t</sub> *Cons Cong <sub>t-1</sub>	-935.532 (1.55)	-916.018 (1.99)*	-2.104 (5.79)**
U.S. Exports <sub>i,t-1</sub>	0.526 (0.03)	1.928 (0.11)	0.879 (11.19)**
U.S. Exports <sub>i,t-1</sub> *Cons Pres <sub>t-1</sub>	4.800 (0.40)	3.518 (0.30)	-0.068 (1.13)
U.S. Exports <sub>i,t-1</sub> *Cons Cong <sub>t-1</sub>	-26.901 (0.15)	6.829 (0.04)	4.726 (5.60)**
U.S. Imports <sub>i,t-1</sub>	1.226 (0.10)	-3.946 (0.33)	-0.347 (5.20)**
U.S. Imports <sub>i,t-1</sub> *Cons Pres <sub>t-1</sub>	3.958 (0.71)	3.106 (0.58)	0.021 (0.42)
U.S. Imports <sub>i,t-1</sub> *Cons Cong <sub>t-1</sub>	-46.771 (0.42)	-61.490 (0.56)	-3.594 (5.01)**
UN Voting <sub>i,t-1</sub>	0.829 (1.24)	0.447 (0.63)	0.00006 (0.01)
UN Voting <sub>i,t-1</sub> *Cons Pres <sub>t-1</sub>	0.045 (0.10)	-0.001 (0.00)	0.00710 (1.36)
UN Voting <sub>i,t-1</sub> *Cons Cong <sub>t-1</sub>	-14.136 (1.14)	-8.518 (0.71)	0.02949 (0.39)
Democracy <sub>i,t-1</sub>	0.027 (1.23)	0.027 (1.14)	0.00021 (1.29)
Democracy <sub>i,t-1</sub> *Cons Pres <sub>t-1</sub>	0.020 (1.22)	0.007 (0.43)	-0.00018 (1.32)
Democracy <sub>i,t-1</sub> *Cons Cong <sub>t-1</sub>	0.209 (0.69)	0.239 (0.86)	0.00397 (2.18)*
GDP <sub>i,t-1</sub>	-0.155 (3.74)**	-0.146 (3.07)**	-0.00162 (2.94)**
Population <sub>i,t-1</sub>	-10.474 (1.37)	-4.720 (0.61)	1.58047 (16.72)**
Year Dummies	included	included	included
Observations	2144	2144	1886

Number of Countries	82	82	77
Pseudo R-squared	0.237	0.285	
R-squared (within)			0.441
Estimation Method	Probit, robust standard errors with clustering on countries	Probit, robust standard errors with clustering on countries	OLS with country fixed effects

t statistics in parentheses      \* significant at 5%; \*\* significant at 1%

**Table 4 Continued**