When Do Allies Receive More American Foreign Aid? Hegemonic Foreign Policy in a World of Regions*

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Abstract

As the global hegemon, the United States can use foreign aid to pursue its strategic goals. When should one expect the United States to use foreign aid to support its allies, instead of buying support and extracting policy concessions from non-allies? We examine this question in today's world, where the United States faces emerging regional challengers, such as Brazil and India. We argue that in these circumstances, the hegemonic power's regional foreign policy depends on the concentration of economic power in that region. If power is highly concentrated, the hegemon focuses on supporting its allies. If power is dispersed, the hegemon focuses on buying support and extracting concessions from non-allies. Empirically, this means that the hegemon should only offer more foreign aid to its allies than to non-allies if power in a region is highly concentrated. We develop a new measure of regional power concentration and examine how the value of this measure influences U.S. foreign aid to allies and non-allies after the Cold War. We find that U.S. allies receive more aid in regions where economic power becomes more concentrated, and less aid where economic power becomes more dispersed. These findings shed light on the role of regions in international political economy and highlight the contingent nature of hegemonic foreign policy.

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1 Introduction

In contemporary world politics, foreign aid remains an important instrument of hegemonic statecraft. According to some scholars, the hegemonic United States uses foreign aid to support its allies around the world, such as Israel (Alesina and Dollar, 2000; Stone, 2004). However, others contend that the hegemon could also use foreign aid to buy support or extract policy concessions from countries that would otherwise not collaborate with the hegemon (Bueno de Mesquita and Smith, 2009).

These alternative perspectives raise the question of when one should expect a hegemonic country to favor its allies in the allocation of foreign aid. When should allies receive more American aid than other countries? When should they receive less? Answering this question could both improve our understanding of the determinants of foreign aid allocation and illuminate the logic of hegemonic foreign policy more generally. While previous studies have shown that such relationships as military alliances and colonial history affect foreign aid allocation (Alesina and Dollar, 2000; Stone, 2004), it remains unclear whether these effects are universal or somehow dependent on the broader political-economic context.

We argue that in today's world, the hegemon's incentive to prioritize allies in the allocation of foreign aid depends on the *regional balance of power*. Following the collapse of the Soviet Union, the United States has not faced a global competitor, but its influence in different regions is being challenged by emerging regional powers, such as China and India. We hypothesize that in regions where power is heavily concentrated, so that the global hegemon faces a formidable regional competitor, the hegemon has incentives to support its existing allies in order to avoid losing influence to the regional competitor. In regions where power is dispersed, however, the hegemon's preferred strategy is to use foreign aid to buy support and extract policy concessions from non-allies. Given the dispersion of power, the hegemon simply need not support otherwise loyal allies to maintain influence in the region.

To test the theory, we analyze the allocation of United States foreign aid after the Cold War, 1990-2009. The focus on this time period is warranted because our theory focuses on a situation wherein the hegemon's primary challengers are regional instead of global. We show that as the concentration of power increases within a region, the United States increases foreign aid to allies. This result supports our hypothesis that in regions characterized by a highly uneven distribution of power, the hegemon's primary motive for giving foreign aid is to support allies. Conversely, in regions characterized by an even distribution of power, the

hegemon focuses on buying influence from non-allies. Also consistent with the theory, these patterns are not to be found in the data when we instead analyze the allocation of American foreign aid during the Cold War.

In addition to illuminating the logic of hegemonic foreign policy, our theory and empirics highlight the importance of regional dynamics in a world with a single hegemon. These findings shed light on how the United States can be expected to respond to changing regional power balances around the world. As the ascendancy of regional powers, such as Brazil and India, continues, the United States is faced with a new strategic environment. Our findings suggests that in the future, the United States will increasingly offer foreign aid to allies at the expense of other countries. The strategic support motivation emphasized by Alesina and Dollar (2000) will become increasingly relevant, while the policy concessions motive emphasized by Bueno de Mesquita and Smith (2009) will lose its relevance.

From a policy perspective, the findings are also important. If China's rise in East Asia continues, the United States should further increase its support to traditional allies, such as the Philippines. Similarly, India's ascendancy in South Asia can be expected to cause the United States to increase its support to Pakistan, even beyond the currently high levels undergirded by Pakistan's central role in the war on terror and the campaign in Afghanistan.

For empirical scholarship, the findings also have some notable implications. In the past, bilateral foreign aid has sometimes been used as an indicator of strategic ties (Stone, 2004; Kilby, 2009). Our findings suggest that this strategy may lead to biased predictions. In regions characterized by power dispersion, core American allies should receive less, not more, foreign aid. More generally, bilateral foreign aid may overall be higher to allies than to other countries, but the strength of this relationship varies across regions and over time, with inflows of foreign aid being endogenous to donor strategic interests.

To illustrate the implications of the argument, consider recent U.S. policy vis-à-vis Vietnam. When President Obama's Secretary of State, Hillary Clinton, visited Hanoi in July 2012, she was faced with a difficult choice between concessions and support.[1] On the one hand, Clinton criticized Vietnamese Prime Minister Nguyen Tan Dung's government for failing to respect basic human rights, such as freedom of expression; on the other hand, U.S. officials were keen to promote cordial relations with Vietnam, so as

[1] See "Clinton Presses Vietnam on Rights Record." *Wall Street Journal* July 10, 2012.

to contain China's expanding influence in the region. Our model suggests that as China's power continues to grow, the evolution of U.S. policy vis-à-vis Vietnam depends on whether policy makers in Washington consider Vietnam a valuable strategic partner in the long run. Should this be the case, we expect the U.S. to increasingly offer unconditional support to Vietnam. But, if the U.S. does not consider a strategic partnership with Vietnam a realistic possibility, we expect the U.S. to increasingly shift its focus to other allies in the region, such as South Korea and The Philippines.

2 Hegemony, Foreign Aid, and Regions

To situate our argument in the literature, we review previous studies of foreign aid allocation and regional power politics. In the foreign aid literature, donors are assumed to give foreign aid to promote their interests, but scholars disagree on whether donors use foreign aid to bolster friendly regimes or to influence policy choices in other regimes. Furthermore, the role of regional power dynamics as modifying factor has been largely neglected.

2.1 Support or Policy Influence?

There are two main theories of how hegemons, and wealthy donors more generally, use foreign aid. First, some scholars argue hegemons use their resources to support their allies in different regions of the world. For example, Stone (2004) argues that the United States uses the International Monetary Fund to support American allies in Africa. According to his results, the United States prevents the Fund from enforcing conditions on America's key allies in Africa. Similarly, Alesina and Dollar (2000: 55) find that United States foreign aid favors key allies, such as Egypt and Israel. American foreign aid "may be very effective at promoting strategic interests, but the result is that bilateral aid has only a weak association with poverty, democracy, and good policy."

The use of foreign aid to support allies drew scholarly attention especially during the Cold War (McKinlay and Little, 1977; Lebovic, 1988), yet it has also been the subject of contested debates since the end of the Cold War. While Lai (2003) finds the continuing importance of security concerns in aid allocation, Meernik, Krueger, and Poe (1998) and Demirel-Pegg and Moskowitz (2009) report that regime and human rights considerations gained more importance and replaced security motives during the post-Cold War years.

A common pitfall in the literature is the assumption that the strategic importance of allies is constant regardless of regional power dynamics. Our study contributes to the literature by articulating the conditions under which strategic considerations prevail and a hegemon increases its support for allies in a unipolar world.

Second, some scholars argue that hegemons can use their influence to extract concessions from other countries. For example, Bueno de Mesquita and Smith (2009: 310) argue that large donors give foreign aid to recipients so as to extract policy concessions: "aid-for-policy deals are a rational allocation of resources and effort by both recipients and donors that advance the interests of political elites in each nation." In a similar vein, Dunning (2004) argued that ever since the end of the Cold War, the United States has offered foreign aid conditional on human rights and other policy changes. This strategy has been more successful than during the Cold War, he maintains, because the Soviet Union no longer offers an alternate source of support for developing countries. Much earlier, Morgenthau (1962: 309) offered a similar argument: "The problem of foreign aid is insoluble if it is considered as a self-sufficient technical enterprise of primarily economic nature. It is only soluble if it is considered as an integral part of the political policies of the giving country ... devised in view of the political conditions, and for its effects upon the political situation, in the receiving country."

2.2 Regional Concentration of Power

Our analysis focuses on a situation wherein an undisputed global hegemon exists, such as the two decades following the end of the Cold War. In these circumstances, we argue, the global hegemon's primary considerations in foreign aid allocation pertain to the hegemon's ability to influence regional politics. In particular, we expect the hegemon's choice between offering support and extracting concessions to depend on the concentration of power in different regions.

To our understanding, this argument has not been made in the extant literature. However, two strands of the literature are directly relevant. First, the general literature on power dynamics is important. Already in tradional realist scholarship, many scholars have argued that multipolarity causes conflict (Waltz, 1979; Walt, 2009). However, others note that the concentration of capabilities is more important. For example, in regard to the probability of war onset, Mansfield (1993: 124) notes that many scholars of balance of power have noted "the level of inequality *among the poles* may be an important determinant of war ... the

number of poles provides no insight into the dynamics that these theorists emphasize." This insight is key to understanding our theory and hypotheses.

Second, international relations scholars have recently begun to examine the implications of regional power shifts. With the ascendancy of rapidly industrializing countries, such as Brazil and India, regional power relations are in flux (Christensen, 2006; Schirm, 2010; Young, 2010). This literature is mostly descriptive; as such, it contains few general analytical models. Mearsheimer (2001: 236-237) contends that great powers ultimately seek to achieve hegemony in their regions and block the rise of peer competitors in distant regions. The hegemon, as an offshore balancer, uses military force to restore a rough balance of power in other regions when "passing the buck" is not a feasible strategy. However, his theory pays little attention to the possible use of non-military strategies, including foreign aid, as a response to changing regional power dynamics. We could conjecture that the hegemon's offshore balancing strategy might include increasing foreign aid to its allies, but it remains unclear how the hegemon should use foreign aid vis-à-vis non-allies. Building on the notion that the global hegemon has good reasons to worry about the ascendancy of regional hegemons, we examine the hegemon's strategic response to changing power concentrations, as regards foreign aid to both allies and non-allies.

3 A Theory of Hegemonic Foreign Aid in a World of Regions

We present a simple, informal decision-theoretic model of the hegemon's allocation of foreign aid. In our model, a hegemon selects the level of support for a partner country. Our primary interest is in examining how the hegemon's strategy varies across countries and regions. Does the hegemon direct foreign aid to its current allies or instead favor non-allies?

The model is based on several key assumptions worth discussing here. First, we assume the hegemon holds the initiative. This assumption allows us to focus on the hegemon's decisions. In the context of power politics, the premise also seems plausible: not only does the hegemon's resource advantage allow it to set the agenda for negotiations with other countries, but the hegemon generally also has more credible outside options than its partner countries.[2]

[2]If we relaxed the assumption, so that the hegemon's partners would issue demands, they would extract more concessions from the hegemon. However, this change would not undermine any of the main hypotheses, as the hegemon's willingness to support allies and non-allies would continue to depend on the hegemon's underlying strategic interests.

Second, we assume there are two types of countries in the world: the hegemon's allies and other countries. By a hegemon's ally, we refer to a country that has formed a permanent strategic partnership. This is a more demanding requirement than similarity of foreign policy. For example, the United States and the Republic of Korea can be considered allies: they have a formal military alliance, their interests in the East Asian theater are closely aligned, they benefit tremendously from economic exchange with each other, and their political systems are aligned. Other scholars have used less demanding definitions, such as trade ties or similar voting in the United Nations General Assembly (Stone, 2004; Kilby, 2009), but our focus on regional power politics suggests that such soft forms of collaboration are hardly relevant. Neither economic exchange nor symbolic voting commits a country to cooperation on core security issues, while a formal military alliance does.

3.1 How Regional Power Concentration Modifies the Hegemon's Foreign Aid Allocation

The model we analyze is a simple decision-theoretic model. For concreteness, a hegemon selects a level of *foreign aid* to a partner country. Since our focus is on the hegemon's decision, the partner country is not an active player in the game. As usual, we assume foreign aid is costly to the hegemon: every dollar spent on foreign aid is a dollar not spent on something else. Moreover, we assume the hegemon's cost of providing foreign aid is increasing on the margin: small amounts of foreign aid are neither politically nor economically costly, whereas large amounts carry a disproportional costly.

The hegemon's choice of foreign aid depends on several factors. First, the hegemon can use foreign aid to support a friendly regime. This support motivation reflects the idea that the hegemon may prefer to bolster the security of another country, especially an ally, in a hostile region. Consider, for example United States foreign aid to Israel. According to Congressional Research Service (2010), America's steady and generous support to Israel is driven by the perception that "Israel was continually under siege ... Congress, supported by broad U.S. public opinion, committed to strengthening Israel's military and economy through large increases in foreign aid."

Building on the literature review above, we argue that the hegemon's incentive to support allies is amplified in regions characterized by an uneven distribution of power. Before we present the argument for this assumption, it is important to emphasize two issues. First, by power we refer to capabilities and re-

sources, as opposed to vague, relational definitions of power (Baldwin, 1979). We do not attempt to refine the theoretical characterization of these capabilities in any detail, but in the empirics we use a country's size of the economy as a basic measure of capabilities. Second, we assume the partner country in focus is *not* the region's leading power. Much of our argument emphasizes the hegemon's incentive to support allies in regions with a dominant hegemon. Therefore, the partner country should be thought of as another country than the region's leading power. In the empirics, for example, we account for this by analyzing United States foreign aid to all other countries except each region's largest economy.

Why assume that the hegemon's incentive to support an ally depends on the concentration of capabilities? The reason is twofold. On the one hand, the hegemon's own influence in the region decreases if capabilities are highly concentrated. In the presence of a strong regional competitor, the hegemon has a strong incentive to support its allies, so as to ensure that the hegemon is able to influence regional politics through the ally. For example, consider India's rapid economic growth in South Asia. As India becomes increasingly powerful, the ability of the United States to influence political and security outcomes in the Indian subcontinent and surrounding areas declines. Thus, the United States would have a strong incentive to engage in indirect balancing by supporting even generally hostile countries, such as Pakistan.[3]

On the other hand, the hegemon may also worry about the ally's security and bargaining power. If capabilities are highly concentrated, the ally is surrounded by one or more powerful actors. Therefore, the ally is vulnerable to blackmail. This, in turn, means that the hegemon has an incentive to bolster the ally through foreign aid. For example, consider the implications of China's replacing Japan as the hegemon in East Asia. This would induce the United States to increase support to loyal countries around China, such as South Korea and, to a lesser extent, the Philippines.

In addition to supporting allies, the hegemon can use the foreign aid to extract policy concessions or curry favors from regimes that would not otherwise implement policies that benefit the hegemon (Morgenthau, 1962; Bueno de Mesquita and Smith, 2009). Instead of providing foreign aid to allies, the hegemon could offer money to non-allies.

On the one hand, the money could be used to purchase specific policy changes, such as a permit to build a military base within the country's borders. The United States could offer a foreign aid package conditional

[3]This is not to say that American foreign aid to Pakistan is primarily a result of India's rise. Another important factor is the military campaign in the neighboring Afghanistan.

on certain policy changes (Dunning, 2004). To the extent that the demanded policy changes, be they related to human rights or investment liberalization, advance Washington's domestic or foreign policy goals, the offer of foreign aid can be thought of as purchasing a policy concession (Bueno de Mesquita and Smith, 2009). On the other hand, the money could be used to simply signal interest to the government and public of the country. A foreign aid offer could send a costly signal to the recipient government about America's interest in deeper strategic ties and purchase the hearts and minds of the population.

3.2 Propositions

Based on these assumptions, we derive several empirically testable hypotheses. Our emphasis is on the difference between allies and non-allies at different levels of capability concentration in their regions. To begin with, consider a region characterized by highly concentrated capabilities. In such circumstances, the hegemon's incentive to support allies should dominate over the motivation to extract concessions. As argued above, the regional competitor's powerful position means that the global hegemon must supports its allies in the region to avoid a loss of influence.

The regional competitor uses its resources to influence policy formation in the region, and the global hegemon is worried about its inability to counter this influence where it is expected to go against the hegemon's interests. By supporting its allies, the hegemon can both pursue its own policy goans and help the allies strengthen their bargaining position vis-à-vis the hegemon's regional competitor.

Proposition 1 (foreign aid to allies under high regional concentrations of capabilities)**.** *For high values of the regional concentration of capabilities, allies receive more foreign aid than do non-allies.*

Based on the theory, it is not possible to say exactly how concentrated regional power capabilities must be. However, such a level of concentration should exist. Below, we attempt to estimate this level of concentration.

According to our theory, it is clear that the global hegemon should be less interested in supporting allies with generous foreign aid when regional power is not heavily concentrated. While the hegemon has some incentive to continue such support, perhaps to avoid internal threats to a friendly government's political survival, the role of regional power politics is diminished. Since the global hegemon does not have a strong

regional competitors, it can use foreign aid to pursue other goals, such as forming new strategic partnerships with current non-allies and/or to purchase policy concessions from them.

Beyond this effect, our prediction is less clear for lower levels of concentration. On the other hand, it may be that the hegemon simply reduces foreign aid to allies, and yet allies continue to receive more foreign aid than non-allies. Alternatively, it could also be that the need to support allies disappears. In this case, the hegemon would give *less* foreign aid to allies, because the need to extract concessions from allies is less pronounced than the need to do so for non-allies.

Proposition 2 (foreign aid to allies under low regional concentrations of capabilities)**.** *As the regional concentration of capabilities C decreases, allies receive less foreign aid. For the lowest levels of concentration, allies may even receive less foreign aid than do non-allies.*

While partly in line with the implications of offshore balancing, the hypotheses are new. From Mearsheimer's (2001) discussion of offshore balancing, one might infer that a global hegemon would provide more foreign aid to its allies in an effort to balance against the rise of competitors in distant regions. While this accords with out first proposition, neither Mearsheimer (2001) nor other works imply that an offshore balancer would provide less foreign aid to its allies than non-allies. This is where our theoretical novelty lies. Our second proposition states that allies might receive less foreign aid than non-allies, depending on the regional power distribution. Together, these propositions shed light on the importance of regional power shift in a global hegemon's foreign aid allocation. In the next section, we present our statistical research design for testing these hypotheses.

4 Research Design

This section describes our empirical approach. To test our theory, we examine how U.S. foreign aid to its allies changes in response to changes in the regional power distribution. Since foreign aid is an important tool of foreign policy, this analysis allows us to illuminate the determinants of hegemonic foreign policy. Specifically, our dependent variable is the annual change in U.S. foreign aid. Our main independent variables are the regional power distribution, the presence of military alliance with the United States, and their interaction term.

We analyze a dataset of the U.S. foreign aid to non-OECD members during years 1991-2008. Our unit of analysis is country-year and we have up to 2,322 observations, depending on the model specification. We focus on the post-Cold War era because our theory is mainly focused on the global hegemon's foreign aid allocation in a unipolar system under the possibility of regional competition. We would not expect regional power dynamics to play a central role in a bipolar system, such as the one that characterized the Cold War era. We exclude OECD members because they are foreign aid donors rather than recipients. We also exclude all regional hegemons (defined as the country with the largest GDP in a region, as explained below) because our theory focuses on "small" countries in the region.

The analysis of foreign aid is appropriate because this policy instrument allows the United States to both purchase concessions (Bueno de Mesquita and Smith, 2009) and support allies (Alesina and Dollar, 2000). We are interested in the relative importance of these two motivations across recipient countries in different regional settings. Foreign aid is uniquely suitable for an empirical test of our hypotheses because the United States can use it for two very different purposes.

Focusing on foreign aid has several additional advantages in exploring how the United States responds to the shift in regional power distribution. First, the allocation of U.S. foreign aid is an easily quantifiable indicator of American commitment to other regions. Second, foreign aid can adjusted more flexibly adjusted than other foreign policy instruments, such as military deployments. This allows us to observe whether, and to what extent, the goals of the United States change in different regions.

Our theory does not generate predictions on conditionality, so we do not attempt to evaluate the degree to which American foreign aid requires policy concessions. On the one hand, Washington could use foreign aid to purchase policy concessions from non-allies. On the other hand, American foreign aid could be used to buy the recipient government's support and people's goodwill. The role of such conditionalities has been analyzed in previous research (Dunning, 2004; Stone, 2004), but the choice between policy concessions and buying political support is beyond the scope of our theory.

4.1 Dependent Variable

Our dependent variable is the annual change in the logarithmized foreign aid from the United States, measured in USD using 2009 prices. Since we estimate error-correction models to allow for dynamics in the

data, we use the annual *change* as the dependent variable. The logarithmic transformation is used due to some outliers on both sides of the distribution; moreover, the logarithmized value allows us to interpret substantive effects as elasticities. The data are provided by AidData2.0, which records annual foreign aid from different donors to recipient countries (Hicks et al., 2008).[4] The data contain some missing values, but since the data are based on a comprehensive overview of actual projects by all donors, the missing values can be interpreted as zeros.[5]

4.2 Independent Variables

Our main independent variables are regional power distribution, a binary indicator for an alliance with the United States, and their interaction term. First, regional power distribution is measured by the Herfindahl Index. For a sufficiently refined regional classification, we classified countries into 15 regions and calculated the Herfindahl Index for each region *j* as follows:

$$H_j \quad = \quad \frac{\sum_{i=1}^{n} gdp_i^2}{\left(\sum_{i=1}^{n} gdp_i\right)^2},$$

gdp_i is the gross domestic product of country i. The Herfindahl Index ranges from 0 to 1. A higher value indicates that regional power is concentrated in a smaller number of countries, while a lower value indicates a dispersed power distribution among countries in the region. The infimum 0 would be a region with an infinite number of tiny countries, while the supremum 1 would be a region with only one country.

This measure of power distribution is superior to initially plausible alternatives, notably the largest economy's share of regional GDP. This measure captures the major regional power's importance, but it does not tell us how powerful third parties in the region are. Given that our index captures both aspects of the problem, it offers a more accurate understanding of how easily the major regional power can throw its weight around to pursue its strategic goals, to the detriment of the global hegemon's interests.

Our regional classification follows the United Nations Statistics Division's composition of geographical sub-regions.[6] It classifies countries into 22 sub-regions according to geographical basis. Since our empirical testing focuses on non-OECD countries, the sub-regions of Northern America, Northern Europe, Western

[4] See `http://www.aiddata.org/content/index`. Accessed April 15, 2012.

[5] The results also hold if we do not interpret missing values as zeros.

[6] See `http://unstats.un.org/unsd/methods/m49/m49regin.htm`. Accessed June 16, 2012.

Europe, and Australia/New Zealand are excluded from the analysis. Also, we exclude the sub-regions of Melanesia, Micronesia, and Polynesia because countries in these sub-regions have rarely received U.S. foreign aid, and because these regions show no signs of influence competition.

We choose to measure regional power distributions based on sub-regional classification instead of broader regional classification comprised of five regions. First, broader regional classification might not capture change in power dynamics that is important for a hegemon's strategic calculation. Even if power becomes more dispersed at the regional level, sub-regional power could become more concentrated and this could be a concern for a hegemon. Second, a hegemon's strategic incentive in foreign aid allocation is more directly influenced by the power dynamics of the recipient country's neighboring region than by that of broad region. For instance, we can expect that foreign aid allocation for Pakistan is more influenced by the power distribution of Southern Asia than by that of the entire Asia.

Figure 1 describes the trends in regional power distribution, as indicated by the Herfindahl Index, for selected subregions. Clearly, variation exists both across regions and over time. For instance, a low level of Herfindahl Index has characterized the Caribbean region since the early 1990s, which indicates an equally distributed economic power in the region. On the contrary, the East Asian region had a high value in Herfindahl Index in the early 1990s due to Japan's unrivaled economic power. However, the region's Herfindahl Index has decreased over time with the rise of China and other middle powers. Given that regional power shifts are slow in most regions, we verify in a robustness test that our results are not driven by any particular region, such as East Asia, by dropping individual regions, one by one.

[Figure 1 about here.]

Second, we use the Alliance Treaty Obligations and Provisions (ATOP) data to indicate whether a country has a military alliance with the United States (Leeds, Mattes, and Vogel, 2009).[7] Here, an alliance is defined as a formal treaty that prescribes active military assistance in the case of a conflict. This binary variable is coded 1 if a country has a bilateral military alliance with the U.S. or is a member of multilateral military alliance that the U.S. is a member of, and 0 otherwise.

Table 1 lists U.S. allies among non-OECD members. Since the ATOP dataset is based on the formal alliance treaty, informal U.S. allies are excluded from the sample. For instance, Israel, although one of

[7] See `http://atop.rice.edu`. Accessed April 15, 2012.

the most important American strategic partners, is included in the sample only for the year 1991 because the formal alliance treaty was terminated on December 26, 1991. Also, some of the important U.S. allies are excluded because we restrict our sample to non-OECD members. Republic of Korea, for example, is excluded from the sample since it joined the OECD. For this reason, the OAS members account for the majority of the U.S. allies in our sample. However, we also estimate the model excluding all OAS members, with no difference in the results.

[Table 1 about here.]

Another notable feature of U.S. alliances is how slowly they change over time. This is reassuring because major changes in the American alliance portfolio cannot be considered endogenous to foreign aid allocation itself. Accordingly, considering military alliances endogenous to annual changes in foreign aid appears warranted.

An alternative approach that some scholars, such as Stone (2004), have employed focuses on similarity of voting patterns in the United Nations General Assembly. However, voting patterns can be similar even if the U.S. does not have a strategic partnership with a country. Therefore, this measure would not capture the substance of our theory. Indeed, if we replace the alliance indicator with a measure of United Nations voting similarity (Voeten, 2004), the posited hypotheses no longer hold, as shown in the supplementary appendix. This suggests that our substantive focus on alliances is warranted.

Third, we are primarily interested in the effects of the interaction between regional power distribution and alliance with the United States. Our theory expects this term to be positive and statistically significant because U.S. allies are expected to receive more foreign aid when regional power is concentrated in the hands of a few countries.

4.3 Control Variables

To account for variables that may confound the relationship between our main variables of interest and U.S. foreign aid allocation, we control for a range of political and economic factors. To account for variation not captured by these control variables, we also use country fixed effects and time trends. Summary statistics is provided in the appendix.

First, a country's regime type might be an important consideration for the United States in the allocation of foreign aid. Democracy promotion has become an important foreign policy goal for the United States, especially after the Cold War. Since the United States is interested in promoting democracy abroad, it can reward democracies with more aids or grant aid to newly democratizing states to prevent backsliding to a non-democratic system and encourage democratic consolidation (Demirel-Pegg and Moskowitz, 2009; Lai, 2003; Meernik, Krueger, and Poe, 1998). To control for this effect, we use the binary **?** variable, which equals 1 if a country has a democratic regime in a given year, and 0 otherwise.

Second, we also control for the recipient's need for foreign aid by including a variable for per capita GDP. A country with higher level of per capita GDP tends to have a more developed economy, so it is less in need of foreign aid. Lower level of per capita GDP indicates higher need of foreign aid. The data for GDP are from the World Development Indicators.

Third, we include the logarithm of population to control for recipient country size. As Bueno de Mesquita and Smith (2009) argue, this variable is a good proxy for the salience of a recipient country. Our population data are also from the World Development Indicators.

Fourth, we also control for the logarithm of foreign aid that a country received from other donor countries excluding the United States in a given year. This is to account for unobservable factors that attract more foreign aid. For instance, natural disasters might increase the need of foreign aid, yet per capita GDP cannot capture the increased demand for foreign aid. Since these types of contingent factors generally increase the level of foreign aid granted by other donors, the inclusion of this variable can account for the contingent effects. These data are also from AidData2.0.

To account for unit heterogeneity among countries, we implement country fixed effects in all of our models. To account for overall increase or decrease in foreign aid over time, we include a time trend, its squared term, and its cubed term. Summary statistics are found in the supplementary appendix, and additional control variables found in the foreign aid literature are included in further models provided in the supplementary appendix.

4.4 Model Specification

We employ the Error Correction Model (ECM) to capture the dynamic process of U.S. foreign aid allocation. Testing our theory requires a dynamic statistical model because a hegemon might respond to a changing regional power distribution with delay. Since the ECM allows permanent changes materialize slowly over time, we can examine the long-run effects of our independent variables on U.S. foreign aid allocation (De Boef and Keele, 2008). Unlike models with lagged dependent variables, the ECM also allows us to distinguish between temporary and permanent changes in foreign aid allocation. This is important because temporary changes would not be consistent with our focus on the formation of permanent strategic partnerships.

We estimate the following model:

$$\begin{aligned}
\Delta\text{US Foreign Aid}_{i,t} \quad = \quad & \alpha_{i,t} + \delta\text{US Foreign Aid}_{i,t-1} \\
& + \beta_1\text{H.Index}_{i,t-1} + \beta_2\text{US Ally}_{i,t-1} + \beta_3\text{H.Index} * \text{US Ally}_{i,t-1} \\
& + \gamma_1\Delta\text{H.Index}_{i,t} + \gamma_2\Delta\text{US Ally}_{i,t} + \gamma_3\text{H.Index} * \text{US Ally}_{i,t} \\
& + \tau^{'}\mathbf{X}_{i,t-1} + \omega^{'}\Delta\boldsymbol{X}_{i,t} + \varepsilon_{i,t}
\end{aligned}$$

where coefficients β captures the long run effects, γ models the the short term effects, and $\mathbf{X}$ is a vector of control variables. We include year and country fixed effects for all models. Our primary parameter of interest is the long-run effect of interaction term, β_3. A positive and statistically significant interaction term would support our hypothesis: increased concentration of regional power should increase U.S. foreign aid to allies, because the United States has strong incentives to support allies in need if a strong regional hegemon is present.

A one-year lag to the U.S. foreign aid allocation is included in all models, as must be done to estimate an ECM. We also include a second lag for some models. Also, serial correlation could be an issue for our estimation. Thus, we estimate a model that corrects for AR(1) and computes panel-corrected standard errors using pairwise inclusion.

5 Findings

This section presents our main results and describes a series of robustness tests.

5.1 Main Results

The main results are reported in Table 2, which summarizes the estimation of eight models. Model (1) includes only a binary regime type as a control variable, and Model (2) contains other economic control variables, such as per capita GDP, population, and foreign aid by other donor countries. Model (3) checks whether the estimation results hold for the years 1991-2000 only. Models (4) and (5) exclude Asian countries and American countries, respectively. For estimating Model (6), which examines the role of influential outliers, we calculated Cook's distance scores, and then excluded observations with Cook's D scores higher than $4/N$, as is commonly done in the literature (Bollen and Jackman, 1990). Model (7) accounts for complex temporal dynamics by including two lags for the logarithm of U.S. foreign aid. Finally, Model (8) is a placebo test for our theory. By estimating the same model for Danish foreign aid and alliances, we verify that the interaction of alliance status and regional power distribution does *not* influence the behavior of a small donor country.

We find that the interaction between the lagged levels of U.S. ally status and the Herfindahl Index is positive and statistically significant across different estimations. Given that U.S. ally status is a binary variable, this shows that an increase in the Herfindahl Index has a positive impact on foreign aid to U.S. allies. The coefficients for "Herfindahl Index (t-1)" are negative and statistically significant in Models (2)-(7), as expected This shows the U.S. foreign aid decreases for non-allies as the Herfindahl Index increases. Also important, the placebo test in Model (8) on Danish foreign aid and alliances does *not* produce a statistically significant interaction.

[Table 2 about here.]

To illustrate the magnitude of the interactive effects, we present the estimated marginal effect for the lagged levels based on the Model (2), with all controls included, in Figure 2. The *x*-axis gives the level of Herfindahl Index and the *y*-axis gives the marginal effect of being the U.S. ally on the long-run change in the logarithm of foreign aid from the U.S. The figure shows that being an U.S. ally has a negative effect

on receiving foreign aid when the Herfindahl Index is below 0.4 but the effect becomes positive once the Herfindahl Index crosses a threshold of slightly above 0.4. For example, this means that in Eastern Europe, U.S. allies would receive less aid than non-allies. Conversely, in Southern Asia, U.S. allies would receive more aid than non-allies.

[Figure 2 about here.]

We also present the computed long-run effects on U.S. foreign aid, as illustrated in Figure 3. The first figure illustrates the simulated trajectory of change in the U.S. foreign aid as a response to large increase of two standard deviations in the Herfindahl Index for an U.S. ally and a non-U.S. ally. The response occurs at time $t = 10$. The second figure describes the response to the small increase of one standard deviation in the Herfindahl Index. Both figures clearly demonstrate that a substantial shift in the Herfindahl Index generates a long-run positive effect for a U.S. ally. Conversely, the long-run effect is clearly negative for a non-ally.

[Figure 3 about here.]

To summarize, the data analysis confirms our theoretical expectations. The effect of regional power concentration on U.S. foreign aid depends on whether the country in focus is an ally or not. When regional power is heavily concentrated, the U.S. has a strong interest in supporting its allies. But as regional power decreases, the U.S. can afford to reduce support to allies, and so the allies' foreign advantage diminishes, or even disappears.

5.2 Robustness and Additional Placebo Tests

To check whether our main result is sensitive to model specification, we estimate other models, as reported in the supplementary appendix. First, as placebo tests, we estimate our main replacing foreign aid with military aid, and exclusively focusing on the Cold War period. Since our theory explicitly focuses on a global hegemon's foreign aid allocation, we do not expect statistical significance from the interaction term from these models.

Second, we also address the exogeneity of U.S. ally status by replacing our current alliance measure with its value lagged by 20 years. While an instrumental variable model would be ideal, it cannot be used here

because the inclusion of interaction terms in an ECM would necessitate the use of six separate instruments, which is implausible given the data we use. However, U.S. ally status changes only slowly over time, so the 20-year predictor is an excellent predictor of current ally status. Our results remain unchanged, suggesting that endogenous alliance formation does not induce bias.

Third, we add more control variables to our main model that could influence foreign aid allocation decision. Following Bueno de Mesquita and Smith (2009), we control for the trade alignment between the donor and the recipients with the bilateral trade volume between the US, and each recipient country. Also, we control for life expectancy at birth, which can be a good proxy for humanitarian motivation for giving foreign aid as suggested by Bueno de Mesquita and Smith (2009).

Next, we estimate the same model including Israel as an ally. In our main analysis, which uses the ATOP dataset, Israel is not treated as an ally after the termination of formal alliance treaty. Given that Israel is strategically one of the most important allies, despite the lack of formal treaty, we test whether our theory still holds with Israel coded as the U.S. ally throughout the years in the analysis and find empirical support for our theory.

Finally, we estimate our models excluding the United States allies, one by one. The results were indistinguishable from our main findings, suggesting that the evidence for our hypotheses does not depend on any particular ally.

6 Conclusion

Since the end of the Cold War, the United States has retained a hegemonic position in international relations. However, this position is continually undermined by the ascendancy of regional powers, such as Brazil and India. We live in a world of regions, and the hegemonic United States conducts foreign policy in the shadow of regional power dynamics.

In this article, we have examined the hegemon's incentive to use foreign aid to extract concessions from recalcitrant countries and to support allies without demanding anything in exchange. Our formal analysis showed that as the concentration of power in a region intensifies, the hegemon increasingly begins to emphasize support to allies, as opposed to buying influence among non-allies. What is more, our empirical analysis of U.S. foreign aid allocation to allies and non-allies after the Cold War provides robust support to

this theory.

This article contributions to international relations scholarship in two important ways. First, we *unify* previously proposed partial approaches to hegemonic foreign policy. While some scholars have argued that the hegemon can use foreign aid to buy influence (Bueno de Mesquita and Smith, 2009), others have proposed that the hegemon's primary incentive is to support allies without conditionality (Stone, 2004; Thacker, 1999). Clearly, these are competing motivations that result in very different patterns of aid allocation. Our game-theoretic model and empirical evidence show that in a unilateral world, the relative strength of these two motivations depends on the degree of regional power concentration. We believe this a major step toward a more complete model of hegemonic foreign policy.

Second, our approach helps examine the hegemon's response to ascending regional challengers. In international relations theory, there is a large body of literature on the consequences of "power transitions" in the international system (Organski, 1958; Powell, 1999). This literature categorically ignores the role of third parties. As the hegemon faces increased competition across the world, third parties play an important role. Specifically, if small countries abandon the hegemon, then regional challengers can more readily gain dominance in their regions. Our argument sheds light into the hegemon's incentives to respond regional challenges. In particular, we find that increased regional competition induces the hegemon to circle the wagons: the hegemon begins to increasingly use foreign aid to support existing allies, as opposed to using foreign aid to buy influence among non-allies.

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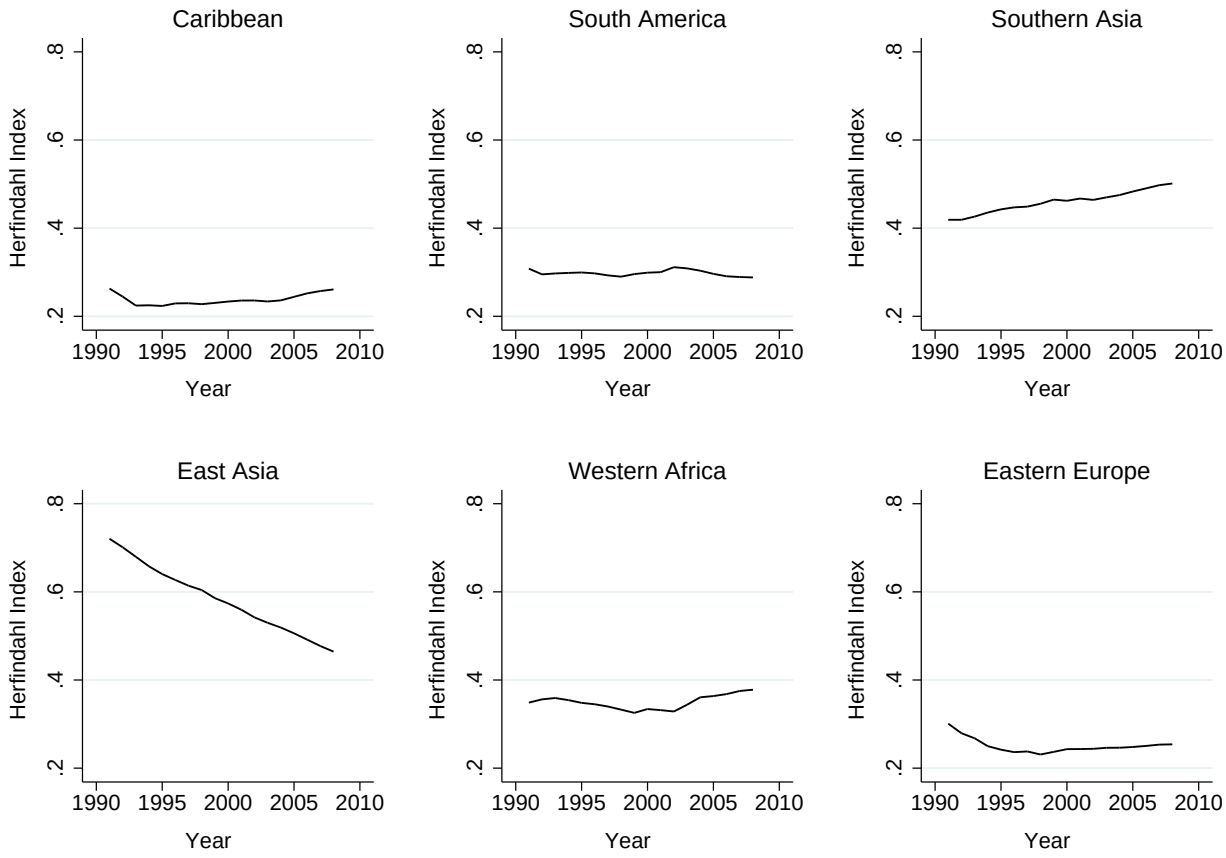

Figure 1: Herfindahl Index for Six Select Sub-regions.

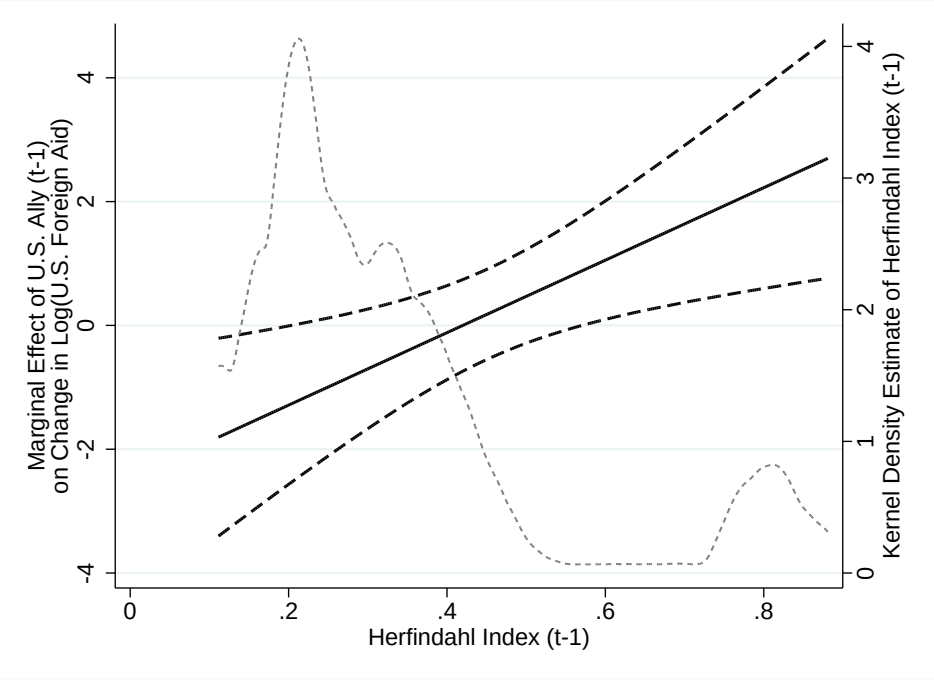

Figure 2: Marginal effect of being an American ally on change in the U.S. foreign aid given the level of Herfindahl Index. Estimates based on Model (2).

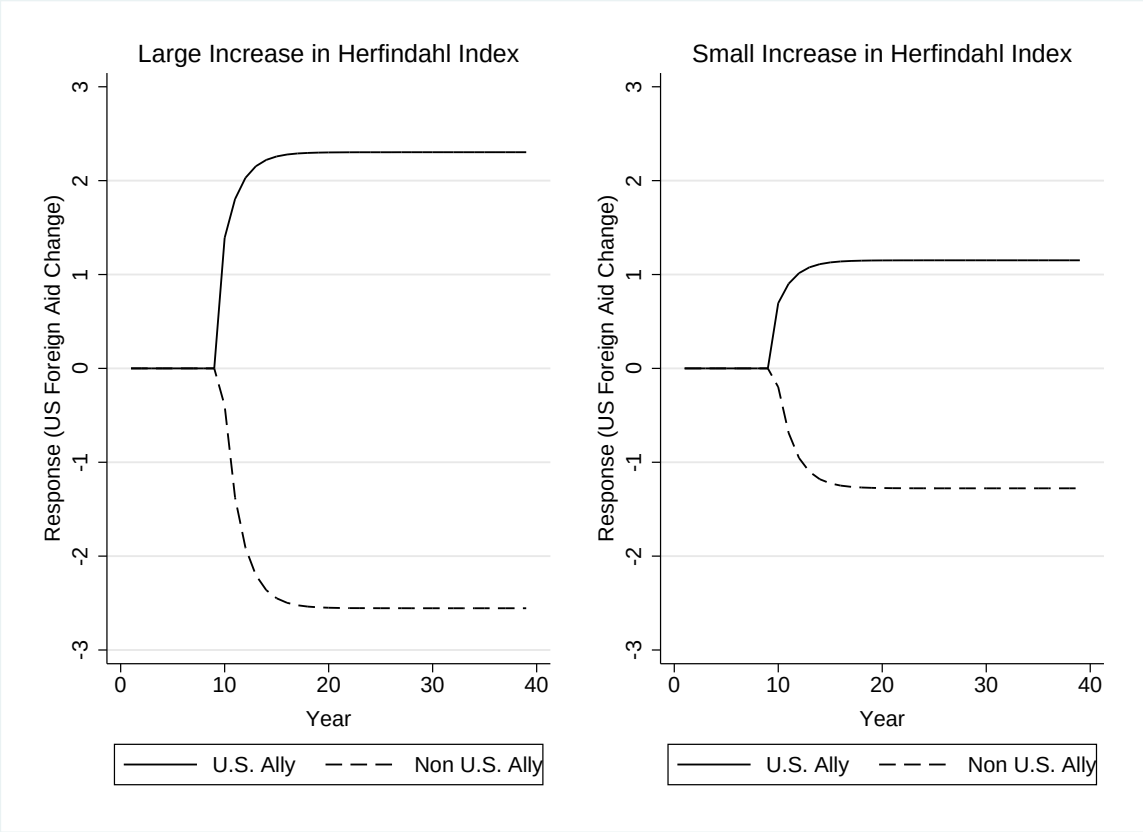

Figure 3: Unit Response Functions. (i) The effect of a large increase in the Herfindahl Index (0.376; 2σ) on change in U.S. foreign aid for an U.S. ally and for non-U.S. ally. (ii) The effect of a small increase in the Herfindahl Index (0.188; σ) on change in U.S. foreign aid for an U.S. ally and for non-U.S. ally.

Table 1: List of U.S. Allies among Non-OECD Members (1991-2008)

Country	Years	Alliance Treaty
Argentina	1991-2008	OAS
Bahamas, The	1991-2008	OAS
Barbados	1991-2008	OAS
Bolivia	1991-2008	OAS
Bulgaria	2003-2008	NATO
Chile	1991-2008	OAS
Colombia	1991-2008	OAS
Costa Rica	1991-2008	OAS
Dominica	1991-2008	OAS
Dominican Republic	1991-2008	OAS
Ecuador	1991-2008	OAS
El Salvador	1991-2008	OAS
Estonia	2003	NATO
Grenada	1991-2008	OAS
Guatemala	1991-2008	OAS
Haiti	1991-2008	OAS
Honduras	1991-2008	OAS
Israel	1991	Bilateral Treaty
Korea, Rep.	1991-1995	Bilateral Treaty
Latvia	2003-2008	NATO
Lithuania	2003-2008	NATO
Nicaragua	1991-2008	OAS
Pakistan	1991-2008	Bilateral Treaty
Panama	1991-2008	OAS
Paraguay	1991-2008	OAS
Peru	1991-2008	OAS
Philippines	1991-2008	Bilateral Treaty
Romania	2003-2008	NATO
Slovenia	2003-2008	NATO
St. Knitts and Nevis	1991-2008	OAS
St. Lucia	1991-2008	OAS
St. Vincent and the Grenadines	1991-2008	OAS
Trinidad and Tobago	1991-2008	OAS
Uruguay	1991-2008	OAS
Venezuela, RB	1991-2008	OAS

Table 2: Empirical Analysis of U.S. Foreign Aid 1991 - 2008

	(1) Main	(2) Controls	(3) Year>2000	(4) Non-Asia	(5) Non-America	(6) Cook's D <4/N	(7) Lag	(8) Placebo
Herfindahl Index (t-1)	-1.327	-3.079**	-4.731***	-3.817**	-3.243**	-2.631***	-3.135**	0.556
	(1.575)	(1.296)	(1.811)	(1.836)	(1.416)	(0.812)	(1.361)	(1.292)
U.S. Ally (t-1)	-2.150**	-2.458**	-4.191***	-2.049*	-2.864**	-1.536**	-2.576**	
	(1.042)	(1.032)	(1.258)	(1.121)	(1.168)	(0.603)	(1.089)	
Interaction (t-1)	3.683*	5.854***	10.899***	4.937**	7.042***	3.704**	6.155***	
	(2.062)	(2.132)	(2.801)	(2.401)	(2.493)	(1.694)	(2.270)	
Log(U.S. Foreign Aid) (t-1)	-0.363***	-0.453***	-0.483***	-0.432***	-0.460***	-0.312***	-0.562***	
	(0.056)	(0.059)	(0.115)	(0.058)	(0.064)	(0.032)	(0.074)	
Log(U.S. Foreign Aid) (t-2)							0.130*	
							(0.067)	
Danish Ally (t-1)								-0.157
								(0.138)
Interaction: Denmark (t-1)								0.118
								(0.468)
Log (Danish Foreign Aid) (t-1)								-0.986***
								(0.068)
Democracy Control	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Other Controls	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R-Squared	0.210	0.267	0.326	0.262	0.266	0.258	0.293	0.504
Countries	136	131	126	113	102	129	131	136
Observations	2322	2171	984	1867	1650	2025	2171	2202

Standard errors in parentheses

ECM Model. Dependent Variable: Δ U.S. Foreign Aid for models (1) - (7) Δ Danish Foreign Aid for model (8)

AR(1) Correction. Panel-corrected standard errors using pairwise inclusion

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

When Do Allies Receive More American Foreign Aid?"

Supplementary On-Line Appendix

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Contents

A1 Data Description

The following figures and tables provide additional descriptions on the variables used in our main analysis.

- Figure A1 displays the trend of Herfindahl Index for 15 sub-regions.
- Table A1 displays the regional classification. We include all listed countries in calculating Herfindahl Index but OECD member states and regional hegemons are excluded from the analysis.
- Table A2 provides the summary statistics.
- Table A3 displays the bivariate correlations among variables.
- Table A4 lists the regional hegemons for all regions and years under our study.

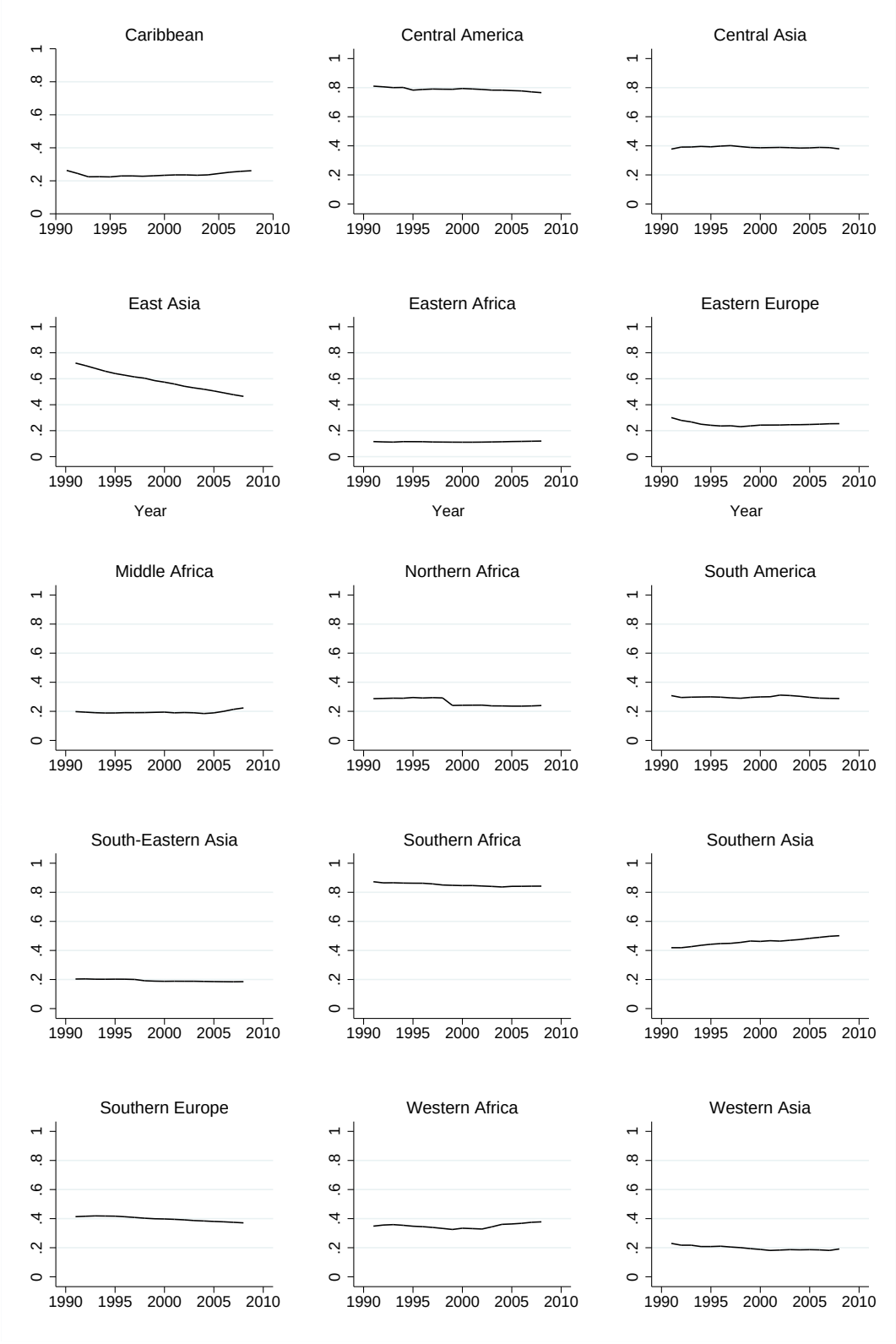

Figure A1: Herfindahl Index for Sub-regions.

Table A1: Regional Classification

Carribean	Central America	Central Asia	East Asia	Eastern Africa	Eastern Europe	Middle Africa
Bahamas, The	Belize	Kazakhstan	China	Burundi	Belarus	Angola
Barbados	Costa Rica	Kyrgyz Republic	Dem. People's Rep. of Korea	Comoros	Bulgaria	Cameroon
Cuba	El Salvador	Tajikistan	Japan	Djibouti	Czech Repulic	Central African Republic
Dominica	Guatemala	Turkmenistan	Mongolia	Eritrea	Hungary	Chad
Dominican Republic	Honduras	Uzbekistan	Rep. of Korea	Ethiopia	Moldova	Dem. Republic of Congo
Grenada	Mexico			Kenya	Poland	Equatorial Guinea
Haiti	Nicaragua			Madagascar	Romania	
Jamaica	Panama			Malawi	Russian Federation	
St. Kitts and Nevis				Mauritius	Slovak Republic	
St. Lucia				Mozambique	Ukraine	
St. Vincent and the Grenadines				Rwanda		
Trinidad and Tobago				Seychelles		
				Somalia		
				Tanzania		
				Uganda		
				Zambia		
				Zimbabwe		

Northern Africa	South Africa	South America	South-Eastern Asia	Southern Asia	Southern Europe	Western Africa	Western Asia
Algeria	Botswana	Argentina	Brunei Darussalam	Afghanistan	Albania	Benin	Armenia
Arab Rep. of Egypt	Lesotho	Bolivia	, Cambodia,	Bangladesh	Andorra	Burkina	Azerbaijan
Libya	Namibia	Brazil	Indonesia,	Bhutan	Bosnia and Herzegovina	Faso	Bahrain
Morocco	South Africa	Chile	Lao PDR,	India	Croatia	Cape Verde	Cyprus
Sudan	Swaziland	Colombia	Malaysia,	Islamic Rep. of Iran	Greece	Cote d'Ivoire	Georgia
Tunisia		Ecuador	Myanmar	Maldives	Italy	The Gambia	Iraq
		Guyana	Philippines	Nepal	Macedonia, FYR	Ghana	Israel
		Paraguay	Singapore	Pakistan	Malta	Guinea	Jordan
		Peru	Thailand	Sri Lanka	Montenegro	Guinea-Bissau	Kuwait
		Suriname	Timor-Leste		Portugal	Liberia	Lebanon
		Uruguay	Vietnam		San Marino	Mali	Oman
		Venezuela, RB			Serbia	Mauritania,	Qatar
					Slovenia	Niger	Rep. of Yemen
					Spain	Nigeria,	Saudi Arabia
						Senegal,	Syrian Arab Republic
						Sierra Leone,	Turkey
						Togo	United Arab Emirates

Table A2: Summary statistics

	mean	sd	min	max
Δ Log(U.S. Foreign Aid)	0.067	0.937	-6.445	8.324
Δ Herfindahl Index	-0.001	0.007	-0.052	0.017
Herfindahl Index (t-1)	0.318	0.188	0.112	0.881
Δ U.S. Ally	0.002	0.057	-1.000	1.000
U.S. Ally (t-1)	0.240	0.427	0.000	1.000
Δ Interaction	0.000	0.021	-0.230	0.438
Interaction (t-1)	0.094	0.197	0.000	0.811
Δ Democracy	0.007	0.137	-1.000	1.000
Democracy (t-1)	0.493	0.500	0.000	1.000
Δ Per Capita GDP	92.766	382.631	-2197.664	6191.484
Per Capita GDP (t-1)	3811.144	7651.701	62.237	82133.766
Δ Log(Population)	0.017	0.015	-0.083	0.128
Log(Population) (t-1)	15.304	1.799	10.275	20.999
Δ Log(Foreign Aid by Others)	0.061	1.015	-5.518	6.574
Log(Foreign Aid by Others) (t-1)	5.340	1.919	0.000	10.510
Log(U.S. Foreign Aid) (t-1)	2.232	1.976	0.000	9.283
Log(U.S. Foreign Aid) (t-2)	2.179	1.964	0.000	9.283

Table A3: Correlation matrix

	Δ Aid	Δ HIndex	HIndex	Δ USAlly	USAlly	Int.	Δ Int.	Aid	Δ Dem.	Dem.	Δ GDPpc	GDPpc	Δ Pop.	Pop.	Δ OtherAid	OtherAid
Δ Aid	1.00															
Δ HIndex	-0.25	1.00														
HIndex	-0.02	-0.06	1.00													
Δ USAlly	0.01	0.01	0.01	1.00												
USAlly	-0.02	-0.04	0.21	-0.04	1.00											
Int.	-0.03	-0.05	0.47	-0.03	0.85	1.00										
Δ Int.	-0.01	0.11	-0.00	0.92	-0.04	-0.05	1.00									
Aid	-0.30	0.08	0.05	-0.03	0.04	0.13	-0.03	1.00								
Δ Dem.	0.01	0.03	-0.00	-0.00	-0.02	-0.02	-0.00	0.02	1.00							
Dem.	-0.04	-0.04	0.18	0.04	0.47	0.42	0.02	-0.02	-0.14	1.00						
Δ GDPpc	-0.01	-0.02	-0.02	0.01	-0.01	-0.01	0.01	-0.09	-0.01	0.04	1.00					
GDPpc	0.01	0.01	-0.07	-0.01	-0.02	-0.04	-0.00	-0.27	-0.02	0.10	0.45	1.00				
Δ Pop.	-0.01	0.04	-0.07	-0.06	-0.12	-0.06	-0.06	0.11	0.01	-0.22	-0.00	-0.00	1.00			
Pop.	-0.04	0.01	-0.02	-0.00	-0.06	0.01	-0.01	0.48	-0.00	-0.24	-0.14	-0.37	0.11	1.00		
Δ OtherAid	0.26	-0.14	0.01	-0.03	-0.04	-0.03	-0.06	-0.08	0.03	-0.01	-0.04	-0.01	0.01	0.00	1.00	
OtherAid	-0.07	0.01	-0.00	0.03	0.09	0.12	0.02	0.57	0.00	-0.06	-0.14	-0.48	0.09	0.67	-0.26	1.00

Table A4: List of Regional Hegemons (1991-2008)

Region	Regional Hegemon	Years
Carribean	Cuba	1991-2008
Central America	Mexico	1991-2008
Central Asia	Kazakhstan	1991-2008
East Asia	Japan	1991-2008
Eastern Africa	Kenya	1991-2007
	Tanzania	2008
Eastern Europe	Russian Federation	1991-2008
Middle Africa	Cameroon	1991-2003
	Angola	2004-2008
Northern Africa	Egypt, Arab Rep.	1991-2008
South America	Brazil	1991-2008
South-Eastern Asia	Indonesia	1991-2008
Southern Africa	South Africa	1991-2008
Southern Asia	India	1991-2008
Southern Europe	Italy	1991-2008
Western Africa	Nigeria	1991-2008
Western Asia	Turkey	1991-2008

A2 Full Results Tables

- Table A5 presents the main results table, with all controls and country fixed effects included.

Table A5: Empirical Analysis of U.S. Foreign Aid 1991 - 2008

	(1) Main	(2) Controls	(3) Year>2000	(4) Non-Asia	(5) Non-America	(6) Cook's D<4/N	(7) Lag	(8) Placebo
Δ Herfindahl Index	-4.017	-1.057	-1.197	-2.615	-2.104	1.120	-1.251	2.862
	(4.212)	(4.270)	(4.549)	(4.622)	(5.728)	(3.078)	(4.326)	(2.476)
Herfindahl Index (t-1)	-1.327	-3.079**	-4.731***	-3.817**	-3.243**	-2.631***	-3.135**	0.556
	(1.575)	(1.296)	(1.811)	(1.836)	(1.416)	(0.812)	(1.361)	(1.292)
Δ U.S. Ally	-1.392	-1.803	-0.324	-1.670	-1.465	-0.578	-2.020	
	(2.090)	(2.018)	(1.883)	(2.029)	(2.242)	(1.813)	(2.034)	
U.S. Ally (t-1)	-2.150**	-2.458**	-4.191***	-2.049*	-2.864**	-1.536**	-2.576**	
	(1.042)	(1.032)	(1.258)	(1.121)	(1.168)	(0.603)	(1.089)	
Δ Danish Ally								-0.015
								(0.163)
Danish Ally (t-1)								-0.157
								(0.138)
Δ Interaction	3.255	4.755	1.729	4.505	3.816	1.866	5.284	
	(4.324)	(4.233)	(3.631)	(4.274)	(4.737)	(4.262)	(4.263)	
Interaction (t-1)	3.683*	5.854***	10.899***	4.937**	7.042***	3.704**	6.155***	
	(2.062)	(2.132)	(2.801)	(2.401)	(2.493)	(1.694)	(2.270)	
Δ Interaction: Denmark								0.962**
								(0.449)
Interaction: Denmark (t-1)								0.118
								(0.468)
Log(U.S. Foreign Aid) (t-1)	-0.363***	-0.453***	-0.483***	-0.432***	-0.460***	-0.312***	-0.562***	
	(0.056)	(0.059)	(0.115)	(0.058)	(0.064)	(0.032)	(0.074)	
Log (Danish Foreign Aid) (t-1)								-0.986***
								(0.068)
Δ Democracy	0.104	0.027	-0.060	0.129	0.041	-0.008	0.022	0.159
	(0.149)	(0.143)	(0.134)	(0.139)	(0.152)	(0.108)	(0.140)	(0.129)
Democracy (t-1)	-0.145	-0.201*	-0.187	-0.087	-0.228*	-0.115	-0.207*	0.263**
	(0.114)	(0.108)	(0.133)	(0.094)	(0.118)	(0.076)	(0.111)	(0.119)
Δ Per Capita GDP		-0.000**	-0.000	-0.000*	-0.000**	-0.000	-0.000*	0.000
		(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Per Capita GDP (t-1)		-0.000***	-0.000	-0.000***	-0.000***	-0.000***	-0.000***	-0.000
		(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Δ Log(Population)		5.404***	5.813**	4.860**	6.370***	2.643	5.561***	2.284
		(2.023)	(2.557)	(2.016)	(2.116)	(1.779)	(2.101)	(2.424)
Log(Population) (t-1)		0.857*	1.619*	0.897*	0.827	0.412	0.997**	0.265
		(0.482)	(0.828)	(0.463)	(0.588)	(0.288)	(0.499)	(0.309)
Δ Log(Foreign Aid by Others)		0.159***	0.166***	0.183***	0.182***	0.085***	0.154***	
		(0.029)	(0.045)	(0.031)	(0.035)	(0.016)	(0.029)	
Log(Foreign Aid by Others) (t-1)		0.203***	0.210***	0.230***	0.227***	0.125***	0.198***	
		(0.038)	(0.069)	(0.038)	(0.044)	(0.022)	(0.038)	
Δ Log(Non Dannish Foreign Aid)								0.076***
								(0.016)
Log (Non Dannish Foreign Aid) (t-1)								0.126***
								(0.023)
Log(U.S. Foreign Aid) (t-2)							0.130*	
							(0.067)	
Time trend	0.042***	-0.188*	4.220***	-0.192*	-0.171	-0.142**	-0.191	0.007
	(0.010)	(0.111)	(1.220)	(0.114)	(0.115)	(0.072)	(0.116)	(0.032)
Time trend squared		0.024*	-0.297***	0.024*	0.021	0.019**	0.024*	-0.003
		(0.013)	(0.085)	(0.013)	(0.014)	(0.009)	(0.014)	(0.004)
Time trend cubed		-0.001*	0.007***	-0.001*	-0.001	-0.001**	-0.001*	0.000
		(0.000)	(0.002)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
R-Squared	0.210	0.267	0.326	0.262	0.266	0.258	0.293	0.504
Countries	136	131	126	113	102	129	131	136
Observations	2322	2171	984	1867	1650	2025	2171	2202

Standard errors in parentheses

ECM Model. Dependent Variable: Δ U.S. Foreign Aid for models (1) - (7) Δ Danish Foreign Aid for model (8)

AR(1) Correction. Panel-corrected standard errors using pairwise inclusion

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

A3 Robustness

- Tale A6 presents the placebo test replacing the alliance indicator with a measure of United Nations voting similarity.
- Tale A7 presents the placebo test with military aid as a dependent variable, and foreign aid allocation during the Cold War period.
- Table A8 presents the models replacing alliance indicator with a twenty-year lag of the alliance status (1), with more controls[1] (2), and including Israel as an ally in the analysis (3).
- Table A9 presents the re-estimated main model excluding the three supra-regions (Africa, Europe, and Middle East) one by one, the OAS member countries, and all other U.S. allies one by one.
- Table A10 presents the re-estimated main model excluding the U.S. allies one by one.

[1]The dataset on trade volumne with the US is from the Correlates of War project's trade data (Barbieri, Keshk, and Pollins., 2009; Barbieri and Keshk, 2012); The dataset on life expectancy at birth dataset is from the World Bank data available online at `http://data.worldbank.org/indicator/SP.DYN.LE00.IN`.

Table A6: Placebo Test with UN Voting Similarity

	(1) UN Regular Voting Similarity	(2) UN Important Voting Similarity
Δ Herfindahl Index	-0.041	-1.746
	(3.642)	(3.592)
Herfindahl Index (t-1)	-2.850**	-3.121**
	(1.192)	(1.217)
Δ UN Regular Voting Similarity	0.264	
	(0.551)	
UN Regular Voting Similarity (t-1)	-0.054	
	(0.586)	
Δ Interaction: UN Regular Voting Similarity	-3.849***	
	(1.387)	
Interaction: UN Regular Voting Similarity (t-1)	-1.140	
	(1.157)	
Δ UN Important Voting Similarity		0.074
		(0.475)
UN Important Voting Similarity (t-1)		0.526
		(0.481)
Δ Interaction: UN Important Voting Similarity		0.460
		(0.987)
Interaction: UN Important Voting Similarity (t-1)		-0.144
		(0.794)
Log(U.S. Foreign Aid) (t-1)	-0.471***	-0.473***
	(0.060)	(0.060)
Δ Democracy	0.033	0.018
	(0.130)	(0.130)
Democracy (t-1)	-0.196**	-0.212**
	(0.096)	(0.097)
Δ Per Capita GDP	-0.000**	-0.000**
	(0.000)	(0.000)
Per Capita GDP (t-1)	-0.000***	-0.000***
	(0.000)	(0.000)
Δ Log(Population)	4.928***	4.705**
	(1.842)	(1.899)
Log(Population) (t-1)	0.864*	0.849*
	(0.493)	(0.492)
Δ Log(Foreign Aid by Others)	0.178***	0.173***
	(0.028)	(0.029)
Log(Foreign Aid by Others) (t-1)	0.228***	0.225***
	(0.036)	(0.037)
Time trend	-0.182	-0.222*
	(0.118)	(0.114)
Time trend squared	0.022	0.029**
	(0.014)	(0.014)
Time trend cubed	-0.001	-0.001*
	(0.000)	(0.000)
R-Squared	0.278	0.273
Countries	135	135
Observations	2238	2238

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

ECM Model. Dependent Variable: Δ U.S. Foreign Aid for models (1) - (2)

AR(1) Correction. Panel-corrected standard errors using pairwise inclusion

Table A7: Placebo Tests with Military Assistance, and the Cold War Period

	(1) U.S. Military Aid	(2) Cold War Period: Year<1991
Δ Herfindahl Index	2.185	-2.209
	(2.648)	(1.432)
Herfindahl Index (t-1)	-1.072	-2.791**
	(0.662)	(1.344)
Δ U.S. Ally	1.058	-0.689
	(0.684)	(1.302)
U.S. Ally (t-1)	-0.482	-0.853
	(0.499)	(0.734)
Δ Interaction	-1.823	2.171
	(1.867)	(4.204)
Interaction (t-1)	1.215	3.259
	(1.311)	(2.262)
Log(U.S. Military Assistance) (t-1)	-0.383***	
	(0.063)	
Log(U.S. Foreign Aid) (t-1)		-0.528***
		(0.076)
Δ Democracy	0.093	0.165
	(0.118)	(0.158)
Democracy (t-1)	-0.079	0.379***
	(0.109)	(0.144)
Δ Per Capita GDP	-0.000	-0.000
	(0.000)	(0.000)
Per Capita GDP (t-1)	-0.000***	-0.000
	(0.000)	(0.000)
Δ Log(Population)	-2.440	10.184*
	(2.695)	(5.219)
Log(Population) (t-1)	0.133	0.701
	(0.332)	(0.591)
Δ Log(Foreign Aid by Others)		0.044**
		(0.020)
Log(Foreign Aid by Others) (t-1)		0.027
		(0.024)
Time trend	-0.070	-0.150*
	(0.059)	(0.083)
Time trend squared	0.011	-0.019
	(0.007)	(0.013)
Time trend cubed	-0.000*	-0.001
	(0.000)	(0.001)
R-Squared	0.218	0.293
Countries	131	98
Observations	2171	1408

Standard errors in parentheses

ECM Model. Dependent Variable: Δ U.S. Military Aid for model (1), Δ U.S. Foreign Aid for model (2)

AR(1) Correction. Panel-corrected standard errors using pairwise inclusion

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table A8: Other Robustness Checks

	(1) 20-Years Lag	(2) More Controls	(3) Israel as Ally
Δ Herfindahl Index	0.155	-1.478	0.762
	(3.614)	(4.449)	(4.217)
Herfindahl Index (t-1)	-2.225*	-3.202**	-3.522***
	(1.263)	(1.318)	(1.275)
Δ U.S. Ally		-2.337	-1.029
		(2.019)	(2.277)
U.S. Ally (t-1)		-2.466**	-3.659***
		(0.994)	(1.203)
Δ U.S. Ally (t-20)	-1.336*		
	(0.783)		
U.S. Ally (t-21)	-2.533***		
	(0.522)		
Δ Interaction		6.396	2.965
		(4.285)	(4.374)
Interaction (t-1)		6.026***	8.701***
		(2.020)	(2.482)
Δ Interaction with U.S. Ally (t-20)	5.155*		
	(2.800)		
Interaction with U.S. Ally (t-20)	6.968***		
	(1.719)		
Log(U.S. Foreign Aid) (t-1)	-0.476***	-0.463***	-0.464***
	(0.059)	(0.059)	(0.059)
Δ Democracy	0.031	0.028	0.027
	(0.140)	(0.141)	(0.143)
Democracy (t-1)	-0.203*	-0.202*	-0.197*
	(0.104)	(0.110)	(0.108)
Δ Per Capita GDP	-0.000*	-0.000***	-0.000*
	(0.000)	(0.000)	(0.000)
Per Capita GDP (t-1)	-0.000***	-0.000***	-0.000***
	(0.000)	(0.000)	(0.000)
Δ Log(Population)	4.918**	4.952*	5.153**
	(1.942)	(2.670)	(2.031)
Log(Population) (t-1)	0.657	1.100**	0.795
	(0.485)	(0.516)	(0.485)
Δ Log(Foreign Aid by Others)	0.163***	0.147***	0.154***
	(0.028)	(0.028)	(0.029)
Log(Foreign Aid by Others) (t-1)	0.213***	0.178***	0.201***
	(0.037)	(0.036)	(0.038)
Δ Trade Volume with the US		0.042	
		(0.046)	
Volume with the US (t-1)		0.024	
		(0.038)	
Δ Life Expectancy at Birth		0.175***	
		(0.060)	
Life Expectancy at Birth (t-1)		-0.006	
		(0.010)	
Time trend	-0.201*	-0.213*	-0.177
	(0.107)	(0.114)	(0.111)
Time trend squared	0.026**	0.026*	0.023*
	(0.012)	(0.013)	(0.013)
Time trend cubed	-0.001*	-0.001*	-0.001
	(0.000)	(0.000)	(0.000)
R-Squared	0.281	0.278	0.273
Countries	128	125	130
Observations	2056	2072	2169

Standard errors in parentheses

AR(1) Correction. Panel-corrected standard errors using pairwise inclusion

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table A9: Main Model without Some Regions or Countries

	(1) Africa	(2) Europe	(3) Middle East	(4) OAS	(5) Israel	(6) Korea, Rep.	(7) Pakistan
Δ Herfindahl Index	-2.481	-8.062*	6.072	-2.552	0.696	-1.076	-1.763
	(5.193)	(4.410)	(4.900)	(5.152)	(4.217)	(4.280)	(4.367)
Herfindahl Index (t-1)	-3.129**	-2.957**	-4.329***	-3.162**	-3.917***	-3.086**	-3.681***
	(1.403)	(1.328)	(1.377)	(1.389)	(1.299)	(1.306)	(1.263)
Δ U.S. Ally	-1.677	-3.460	-0.101	-1.455	-0.956	-1.797	-1.532
	(2.071)	(3.089)	(2.280)	(2.238)	(2.279)	(2.024)	(2.023)
U.S. Ally (t-1)	-2.508**	-0.540	-3.714***	-2.860**	-3.411***	-2.460**	-2.044*
	(1.076)	(1.701)	(1.194)	(1.162)	(1.187)	(1.042)	(1.098)
Δ Interaction	4.349	17.328**	0.235	3.807	2.682	4.740	4.035
	(4.371)	(8.007)	(4.445)	(4.725)	(4.389)	(4.250)	(4.223)
Interaction (t-1)	5.873***	6.596*	8.453***	7.045***	7.721***	5.866***	4.662**
	(2.224)	(3.952)	(2.482)	(2.477)	(2.411)	(2.150)	(2.310)
Log(U.S. Foreign Aid) (t-1)	-0.454***	-0.421***	-0.552***	-0.456***	-0.498***	-0.454***	-0.444***
	(0.064)	(0.055)	(0.063)	(0.063)	(0.061)	(0.059)	(0.058)
Δ Democracy	-0.265	0.035	0.013	0.033	0.028	0.027	0.115
	(0.312)	(0.141)	(0.144)	(0.152)	(0.143)	(0.143)	(0.133)
Democracy (t-1)	-0.368	-0.204*	-0.217**	-0.215*	-0.194*	-0.201*	-0.093
	(0.228)	(0.106)	(0.109)	(0.118)	(0.110)	(0.108)	(0.097)
Δ Per Capita GDP	-0.000*	-0.000**	0.000	-0.000**	-0.000*	-0.000**	-0.000**
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Per Capita GDP (t-1)	-0.000***	-0.000***	-0.000***	-0.000***	-0.000***	-0.000***	-0.000***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Δ Log(Population)	4.879	4.019*	6.051***	6.138***	4.801**	5.384***	5.134**
	(3.189)	(2.058)	(2.234)	(2.099)	(2.010)	(2.028)	(2.031)
Log(Population) (t-1)	0.523	0.839**	1.165*	0.799	0.874*	0.855*	0.829*
	(0.623)	(0.346)	(0.601)	(0.558)	(0.506)	(0.482)	(0.474)
Δ Log(Foreign Aid by Others)	0.130***	0.169***	0.120***	0.184***	0.129***	0.161***	0.154***
	(0.032)	(0.030)	(0.029)	(0.034)	(0.028)	(0.029)	(0.029)
Log(Foreign Aid by Others) (t-1)	0.165***	0.196***	0.183***	0.226***	0.182***	0.205***	0.198***
	(0.041)	(0.039)	(0.037)	(0.044)	(0.038)	(0.038)	(0.038)
Time trend	-0.099	-0.215**	-0.261**	-0.180	-0.212*	-0.188*	-0.195*
	(0.129)	(0.103)	(0.114)	(0.114)	(0.111)	(0.112)	(0.111)
Time trend squared	0.016	0.026**	0.033**	0.022	0.027**	0.024*	0.024*
	(0.015)	(0.012)	(0.013)	(0.013)	(0.013)	(0.013)	(0.013)
Time trend cubed	-0.001	-0.001*	-0.001**	-0.001	-0.001*	-0.001*	-0.001*
	(0.001)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
R-Squared	0.266	0.260	0.316	0.265	0.290	0.267	0.262
Countries	89	110	110	106	130	130	130
Observations	1454	1885	1828	1722	2153	2166	2153

Standard errors in parentheses

ECM Model. Dependent Variable: Δ U.S. Foreign Aid for models (1) - (7)

Each model excludes the specified country, or the region

AR(1) Correction. Panel-corrected standard errors using pairwise inclusion

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table A10: Main Model without Some Regions or Countries (Continued)

	(1) Philippines	(2) Bulgaria	(3) Estonia	(4) Latvia	(5) Lithuania	(6) Romania	(7) Slovenia
Δ Herfindahl Index	-1.138	-2.952	-1.281	-0.972	-0.828	-2.141	-1.210
	(4.282)	(4.102)	(4.332)	(4.347)	(4.332)	(4.225)	(4.288)
Herfindahl Index (t-1)	-3.070**	-2.827**	-3.034**	-3.135**	-3.174**	-2.888**	-3.018**
	(1.295)	(1.281)	(1.301)	(1.301)	(1.298)	(1.299)	(1.296)
Δ U.S. Ally	-1.790	-2.380	-1.869	-1.832	-1.864	-2.243	-1.837
	(2.018)	(2.047)	(1.996)	(2.067)	(2.051)	(2.175)	(2.008)
U.S. Ally (t-1)	-2.449**	-1.993**	-2.369**	-2.510**	-2.586**	-2.038**	-2.477**
	(1.034)	(0.944)	(1.006)	(1.060)	(1.043)	(1.018)	(1.039)
Δ Interaction	4.724	6.114	5.125	4.861	5.002	5.780	4.906
	(4.235)	(4.589)	(4.357)	(4.512)	(4.296)	(4.902)	(4.117)
Interaction (t-1)	5.825***	4.828**	5.450**	6.102***	6.447***	4.952**	5.753***
	(2.138)	(2.036)	(2.123)	(2.299)	(2.119)	(2.238)	(2.077)
Log(U.S. Foreign Aid) (t-1)	-0.452***	-0.445***	-0.453***	-0.451***	-0.451***	-0.445***	-0.455***
	(0.059)	(0.057)	(0.059)	(0.059)	(0.059)	(0.058)	(0.059)
Δ Democracy	0.027	0.030	0.027	0.026	0.025	0.028	0.026
	(0.143)	(0.143)	(0.143)	(0.143)	(0.143)	(0.143)	(0.143)
Democracy (t-1)	-0.202*	-0.203*	-0.201*	-0.201*	-0.199*	-0.201*	-0.201*
	(0.108)	(0.108)	(0.108)	(0.108)	(0.108)	(0.107)	(0.108)
Δ Per Capita GDP	-0.000**	-0.000**	-0.000**	-0.000**	-0.000**	-0.000**	-0.000*
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Per Capita GDP (t-1)	-0.000***	-0.000***	-0.000***	-0.000***	-0.000***	-0.000***	-0.000***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Δ Log(Population)	5.398***	5.317***	5.344***	5.468***	5.359***	5.270***	5.422***
	(2.021)	(2.018)	(2.033)	(2.036)	(2.026)	(1.997)	(2.034)
Log(Population) (t-1)	0.859*	0.917**	0.872*	0.852*	0.844*	0.903*	0.830*
	(0.481)	(0.459)	(0.481)	(0.474)	(0.475)	(0.464)	(0.480)
Δ Log(Foreign Aid by Others)	0.159***	0.154***	0.159***	0.163***	0.166***	0.162***	0.163***
	(0.029)	(0.029)	(0.029)	(0.030)	(0.029)	(0.028)	(0.029)
Log(Foreign Aid by Others) (t-1)	0.202***	0.201***	0.204***	0.204***	0.206***	0.202***	0.206***
	(0.038)	(0.038)	(0.038)	(0.038)	(0.038)	(0.037)	(0.038)
Time trend	-0.184	-0.186*	-0.192*	-0.187*	-0.190*	-0.188*	-0.190*
	(0.112)	(0.108)	(0.111)	(0.111)	(0.111)	(0.109)	(0.111)
Time trend squared	0.023*	0.023*	0.024*	0.024*	0.024*	0.024*	0.024*
	(0.013)	(0.013)	(0.013)	(0.013)	(0.013)	(0.013)	(0.013)
Time trend cubed	-0.001*	-0.001*	-0.001*	-0.001*	-0.001*	-0.001*	-0.001*
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
R-Squared	0.266	0.263	0.266	0.266	0.267	0.263	0.268
Countries	130	130	130	130	130	130	130
Observations	2153	2153	2154	2154	2154	2153	2154

Standard errors in parentheses

ECM Model. Dependent Variable: Δ U.S. Foreign Aid for models (1) - (7)

Each model excludes the specified country, or the region

AR(1) Correction. Panel-corrected standard errors using pairwise inclusion

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Supplementary Appendix: References

Barbieri, Katherine, and Omar Keshk. 2012. "Correlates of War Project Trade Data Set Codebook, Version 3.0. Online: `http://correlatesofwar.org`.".

Barbieri, Katherine, Omar M. G. Keshk, and Brian Pollins. 2009. "TRADING DATA: Evaluating our Assumptions and Coding Rules." *Conflict Management and Peace Science* 26 (5): 471–491.