# Eenie, Meenie, Miney, Moe? Institutional Portfolios and Delegation to Multilateral Aid Institutions\*

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#### Abstract

This paper develops a theory of governments' strategic choice in delegating aid between multilateral aid institutions (MAIs). We posit that although delegation of aid to multilateral institutions increases the overall value of development aid, governments do not benefit from this efficiency if the de facto MAI development strategies do not fall in line with the government's own allocation interests. We argue that governments can mitigate this problem by building an institutional portfolio of aid. In other words, governments take into account the existence of various, oftentimes overlapping, aid institutions and delegate to these institutions such as to maximize efficiency and similarity of allocation policies between government and MAI. The closer the MAI's aid allocation reflects the development goals of the donor and the greater the MAI's efficiency, the more likely it will delegate aid to that MAI over others. We use data from 26 MAIs as well as 23 OECD donor states from 1977 to 2008 to analyze a donor government's strategic choice. The empirical analyses robustly support the main theoretical claim. Governments make strategic choices and build institutional portfolios that aim at mitigating the problem of power diffusion in MAIs.

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### I. INTRODUCTION

Governments increasingly rely on international institutions to govern state relations and to pursue collective action in policy fields ranging from international trade and finance to environmental and cultural issues. The extent of delegation to these institutions has varied significantly across countries and over time and much effort has gone into analyzing the conditions under which states delegate decision-making power to international institutions. A government's decision to delegate vital tasks to international institutions is generally attributed either to the need to pool resources for the provision of international public goods that countries could not provide on their own or to the advantages of transferring decision-making and implementation to an international agent with superior expertise and information. Yet, the advantages of delegation are unlikely to apply to the provision of foreign aid, where governments contribute aid in order to pursue their economic, military, or geo-political foreign policy goals.<sup>2</sup> In this case, delegation to multilateral aid institutions (MAIs) implies the diffusion of strategic considerations.<sup>3</sup> the benefits of pooling resources should not be relevant to a government if a MAI's allocation policies do not fall in line with the government's preferred allocation policies. In fact, delegation appears rather costly for governments who do not have the bargaining power to assert themselves in the multilateral decision-making process. At the same time, bilateral aid-giving allows governments to delegate aid allocation to domestic agencies (such as USAID in the U.S.) which have economic expertise and are easier to monitor (because of a shorter chain of delegation).

If the costs of delegation can easily exceed its benefits, why have governments consistently delegated large portions of their aid budgets to multilateral aid institutions? This paper attempts to answer this puzzle by providing a new way of thinking about delegation. We speculate that analyzing the delegation of foreign aid as a dichotomous choice between bilateral and multilateral aid-giving underestimates the potential benefits of delegation to MAIs. A dichotomous framework ignores the ability of governments to both select from different multilateral aid institutions to achieve their goals (forum-shopping) AND to vary their contributions among a multitude of MAIs to achieve their goals (we will call this *institutional portfolio building*). Whereas forum-shopping has been analyzed extensively, almost no research has been conducted regarding institutional portfolio building in foreign aid.<sup>4</sup>

<sup>1</sup> Pollack (1997); Abbott and Snidal (1998); Nielson and Tierney (2003); Hawkins et al. (2006); Milner and Tingley (2010c).

<sup>2</sup> Maizels and Nissanke (1984); Ruttan (1996); Meernik et al. (1998); Schraeder et al. (1998); Thacker (1999); Alesina and Dollar (2000); Burnside and Dollar (2000); Alesina and Weder (2002); Stone (2002); Neumayer (2003a, b); Vreeland (2005); Berthelemy (2006); Dreher et al. (2006, 2008, 2009); Dreher and Sturm (2006); Dreher and Jensen (2007); Hyde (2007).

<sup>3</sup> An alternative explanation is that governments give multilateral aid for different reasons. We discuss and test this alternative argument below but find no evidence for it.

<sup>4</sup> We thank Mark Busch for providing his insights on the difference between forum shopping and institutional portfolio building.

We argue that governments select the size of their contributions to each MAI based on a combination of the similarity between their own and the MAIs allocation policies as well as the relative efficiency of the MAIs. First, governments care about how well the MAI aid allocation reflects their own domestic allocation preferences. We will call this preference similarity. While a government's bargaining power in the MAI will have a strong influence on preference similarity, we also acknowledge the importance of bureaucratic politics within the MAIs and its potential impacts. To the extent that the multilateral agent can bias the allocation policies of the MAI, any member government can experience an increase or decrease of preference similarity, independent of its bargaining power. Second, because one of the main benefits of delegation is burden-sharing (i.e. governments want to provide as much of the public good as possible with as little resources as possible), governments observe how efficient the MAI is compared to other MAIs. We define MAI efficiency in terms of the ability of MAIs to produce more output (greater amounts of aid) than other MAIs with similar levels of inputs (for example, donors financial contributions). MAIs typically increase the amount of resources that is available for development projects (i.e. they use capital markets, attract private donations, and pool administrative costs), but they vary in the degree to which they are able to do so. Governments then delegate more resources to MAIs that are more efficient.

To test the empirical implications of our argument we use data on OECD donor financial contributions to 18 MAIs over the period 1970-2007 and develop new measures to test our hypotheses regarding preference similarity and MAI efficiency. First, we measure preference similarity as the degree to which the MAI's allocation policies reflect a government's allocation policies. This measure allows us to better approximate power diffusion not only as a consequence of intergovernmental bargaining, but also as consequence of organizational characteristics and bureaucratic politics. Second, we use data envelopment analysis (DEA), a well established technique from the field of management science, to assess the *efficiency* of MAIs in relation to their competitors. Our analysis provides strong support for our theory of strategic institutional portfolio building. Several robustness checks support these conclusions.

Our findings provide new insights into several strands of the literature. First, to our knowledge, this paper presents the first general empirical analysis of a governments' choice among various MAIs.<sup>5</sup> We, therefore, contribute to the small literature on delegation by moving the focus from the question of *why* states delegate to the question of *how and to which institutions* states delegate.<sup>6</sup> Second, we introduce the notion of institutional portfolio building as an important strategy for governments to solve their allocation problems. Third, whereas scholarly work has shed light on the causes and consequences of the multitude of international institutions using qualitative evidence, we provide a large-n empirical analysis of this topic, and propose measures for MAI efficiency and preference similarity that are applicable to a wide-range of institutions.

<sup>5</sup> See also Hicks et al. (2008) who analyze choices between multilateral aid institutions for the delegation of environmental aid.

<sup>6</sup> As Raustiala and Victor (2004) argue "most empirical studies focus on the development of a single regime, usually centered on a core international agreement and administered by a discrete organization."

In turn, out analysis has implications for the broader question of why states cooperate and the rational design of international institutions: we show that states make strategic choices when they design and use international institutions.

#### II. THE DELEGATION PUZZLE AND DONOR CHOICE

The allocation of foreign aid through multilateral aid agencies has become increasingly popular since the late 1960s and 1970s. Figure 1 illustrates this trend by graphing total bilateral contributions in constant (2007) billions of U.S. dollars of the 23 OECD donor countries to a sample of 26 multilateral aid agencies and development banks from 1970-2008 (Data from OECD). Between 1970 and 2008, the amount of foreign aid spent through multilateral aid institutions more than tripled to over 1 trillion U.S. dollars.

### [Figure 1 about here]

Across the board, governments spend about 35% of their foreign aid through MAIs. Disaggregating the numbers by countries and type of foreign aid (e.g. environmental aid, disaster aid, or social development aid) reveals that some countries spend up to 90% of their foreign aid through these multilateral agencies. Figure 2 illustrates the variation in delegation decisions across countries. While Italy spends over 50% of its foreign aid through international financial institutions, peaking at over 90% in the late 1970s, the U.S. has consistently delegated lower levels of aid to MAIs. Since the 1970s, it has spent on average 30% of its foreign aid through MAIs, which falls just short of Germany's total financial delegation of about 40%.

# [Figure 2 about here]

The delegation of foreign aid to MAIs has always been puzzling because bilateral and multilateral aid goals often diverge. The empirical scholarly literature on the allocation of foreign aid

The data includes all information available from the OECD aid statistics. Unfortunately the data base does not provide information on all existing multilateral aid agencies but it is the only currently existing data base that provides data on delegation across MAIs (AidData generally provides better data but has no information on delegation to MAIs). The 23 OECD donors are Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Japan, Luxembourg, the Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland, United Kingdom, and the United States. The multilateral aid institutions are the International Bank for Reconstruction and Development, the Multilateral Investment Guarantee Agency, International Finance Corporation, International Development Agency, Caribbean Development Bank, Inter-American Development Bank, Central American Bank of Economic Integration, African Development Bank, African Development Fund, Asian Development Bank, Asian Development Bank, European Development Fund, European Union Aid Program, European Investment Bank, International Monetary Fund, United Nations Development Program, United Nations Children's Fund, World Food Program, Office of the United Nations High Commissioner for Refugees, African Solidarity Fund, Multilateral Debt Relief Initiative, United Nations Population Fund, International Fund for Agricultural Development, European Bank for Reconstruction and Development, and the United Nations Relief and Works Agency.

<sup>8</sup> Milner (2006); Hicks et al (2008).

has long concluded that most governments prefer to allocate their aid to countries in which they have a strategic-military, geo-political, or economic interest. These basic strategic goals are jeopardized when delegating aid to MAIs. Delegation implies that foreign aid allocation will be decided and managed by the collective decision-making of all member states and the multilateral agent. Decision-making is delegated to an intergovernmental body where member states with varying decision-making power decide by some form of majority voting who gets what and when. The implementation of these decisions is then delegated to the multilateral agent—such as the Executive Board of the World Bank or the EU Commission in the European Union—whose goal it is to implement the official goals of the MAI. Diffusion of preferences can occur on both levels. First, if a government is not powerful enough to assert itself in the decision-making process, its interests might be underrepresented in allocation decisions. Second, in the implementation stage, the multilateral aid agent may exploit its information advantages to bias the allocation process according to its own interests (which in MAIs typically implies an increase the overall aid budget and the provision of aid in accordance with the official goals of the organization).

If governments prefer to give aid according to their interests and MAIs diffuse these interests, why do governments delegate to MAIs? Surprisingly little research has been conducted to explain this conundrum. The main arguments refer to the gains from pooling resources and increased efficiency of multilateral aid-giving, which increases the overall value of development aid. Whereas the MAI's ability to attract private funding and lower administrative costs increases the overall value of aid giving, individual donors can also gain from sharing the burden of development. In many cases, governments are not able or willing to individually solve more complex problems like HIV/AIDS. When pooling resources, governments can lower their individual costs of providing such public goods without having to compromise on their overall goals. Milner and Tingley (2010c), for example, show that burden-sharing plays an important role for domestic support of multilateralism in the United States.

However, research on decision-making in MAIs also reveals that governments try to use their bargaining power to bias multilateral aid allocation in favor of their domestic interests. Accordingly, the importance of any efficiency gains that arise from delegation depend on whether multilateral allocation is in line with the government's allocation preferences. In turn, a government's allocation preferences will depend on its bargaining power within the MAI and the nature of agency slippage. For example, powerful members or coalitions of members may bias the allocation of MAI aid away from the other members' interests thus increasing their own expected gains from delegation. Dominant members could force other members to provide more aid to a strategically important country, say, Jordan even though the opposing members prefer to provide

<sup>9</sup> See FN 2.

<sup>10</sup> Lyne et al (2010); Nielson and Tierney (2010); Schneider and Tobin (2010).

<sup>11</sup> Barnett and Finnemore (1999); Hawkins et al. (2006); Hicks et al. (2008); Copelovitch (2010).

Martens (2005); Hicks et al. (2008); Milner and Tingley (2010c). In addition, Milner (2006) provides some evidence that increased domestic interest in economic development leads governments to delegate to MAIs.

aid to the Congo. <sup>13</sup> Whereas weak states can also gain if they form coalitions with like-minded governments, it is much harder for them to exert influence because of the difficulties inherent in coalition formation. <sup>14</sup> The greater the heterogeneity of interests between member states, the more difficult it is to form effective coalitions between like-minded states which—in turn—are able to bias the allocation decisions of the MAI. This will increase a donor's costs of delegation *relative* to the donor's gains from delegation, making delegation to this institution less attractive.

This result appears puzzling because weak states have been some of the most consistent contributors to MAIs. However, if we relax the implicit assumption that governments decide simply whether or not to delegate multilaterally, and instead analyze the choice of delegation *among* multiple, oftentimes overlapping MAIs, this decision is no longer puzzling. We will show that taking into account delegation choices among overlapping MAIs solves the problem of underestimating delegation.

Taking into account donor choice when analyzing delegation is important because the international aid regime has shifted from a regime with the World Bank Group as the predominant institution to one where a multitude of multilateral and regional aid institutions exist with overlapping goals and memberships. In a recent effort to collect a comprehensive data base on bilateral and multilateral aid allocations, the AidDATA group has counted over 30 multilateral development institutions across the world. Many of these MAIs have overlapping, but still varying, memberships and similar goals so that in practice governments have a choice among various MAIs when they decide to delegate. Figure 3 illustrates these choices and the existing variation by graphing U.S. delegation decisions to four major MAIs between 1970 and 2008: the International Development Agency (IDA), the United Nations Development Program (UNDP), the Inter-American Development Bank (IADB) and the World Food Program (WFP).

### [Figure 3 about here]

Figure 3 shows great variation in the degree of delegation not only across MAIs, but across time. The U.S. has consistently preferred to delegate aid to the World Bank's development arm (IDA). And whereas delegation to the Inter-American Development Bank (IADB) and the United Nations Development Program (UNDP) has declined over time, the World Food Program (WFP) has become a more important recipient of U.S. aid over time. For example, in 2001 aid to the WFP increased to 20% of overall delegation, whereas UNDP delegation substantially dropped to 30% of delegated aid.

## [Figure 4 about here]

Figure 4 shows that decisions also differ across donors. In Germany, for example, delegation to the IDA has been crowded out since the 1990s in favor of delegation to European aid agencies such as the European Commission (EC) and the European Development Fund (EDF). This varia-

<sup>13</sup> For example, Stone (2010) provides some case studies on how the U.S. Government has individually influenced IMF lending decisions even against the interests of other member states.

<sup>14</sup> Lyne et al. (2009); Schneider and Tobin (2010).

tion suggests that delegation decisions do not only depend on considerations of efficiency alone (we would expect similar decisions across countries), but that other country-specific factors may be at play as well.

In sum, the descriptive graphs show that (i) governments delegate resources to various MAIs each year and (ii) governments differ in their delegation choices. But what is the impact of donor choice on delegation? In principle, choice could just be a random, or functional, process made by the domestic bureaucratic apparatus. In his work on forum shopping in international economic institutions Busch (2007) demonstrated that the existence of a multitude of overlapping international institutions (such as is the case for multilateral aid giving) enables governments to choose a forum in which to further their goals. We extend this work by adding the notion of strategic institutional portfolio building. When delegating aid to MAIs, governments usually do not pick one or the other forum, instead they select from among the multitude of institutions to build an institutional portfolio. Institutional portfolios, in turn, have important implications for the decision to delegate aid in the first place. In the next section we argue that if we allow governments to delegate foreign aid to different international institutions, they will take into account this choice when making their decision about how much aid to delegate (we may call this backward induction). We show that the availability of delegation choice mitigates the trade-off raised in the literature. Under many conditions, even the most strategically-minded donors can be better off by delegating their aid rather than providing it bilaterally, by maximizing the gains from their institutional portfolio.

### III. A THEORY OF INSTITUTIONAL PORTFOLIO BUILDING

This section develops a theory of delegation to a multitude of overlapping multilateral aid institutions. In a nutshell, we argue that governments maximize the possible benefits of delegation by strategically channeling more aid through efficient MAIs whose policies mirror the donor's own national aid allocation policies.

Our theory is based on the assumption that governments are rational actors who aim to maximize their time in power. Governments act opportunistically when deciding on their domestic and foreign policies. In so doing, they must balance three different sources of interests. First, governments may use aid allocation to satisfy their own intrinsic preferences. Most likely this will imply allocating aid in order to achieve economic, military, or geo-political goals, but it may also imply allocating aid to further sustainable economic development in recipient countries. Second, governments are influenced by organized interest groups that might lobby for aid allocation strategies that increase the economic (or other) benefits from aid-giving. Finally, governments may strive to satisfy its constituencies that want their tax dollars focused either on the de-

<sup>15</sup> As Milner and Tingley (2010a, b) argue, development aid has positive effects on domestic companies that gain from contracting with domestic and multilateral aid agencies to export goods and services to the recipient countries during and after the development project phase. Consequently, these groups will strongly lobby governments in favor of allocating aid to recipients in which they are likely to reap the greatest economic benefits.

velopment of the poorest countries in the world.<sup>16</sup> The priority of one over the other varies across countries based on variations in the distributional effects of aid, the relative strength of interest groups, and the importance of aid as a foreign policy instrument.<sup>17</sup> However, regardless of whether aid is distributed bilaterally or multilaterally, we assume that governments maximize their utility by providing aid according to this vector of interests.

Based on these national interests, governments maximize their expected value from aid allocation by allocating aid both bilaterally and multilaterally. This decision has traditionally been looked at as either a simple dichotomous decision between bilateral or multilateral aid, or a simple choice between MAIs. We argue that this is not the case. Donors can delegate varying resources to multiple, often overlapping multilateral aid institutions – in other words, they can build an institutional portfolio.

By and large, MAIs share the basic goal of providing aid to countries which are the least developed and that are the most effective in utilizing aid to promote sustainable development. However, MAIs are not substitutes for each other. They differ in membership as well as the focus of their development policies. For example, although major multilateral aid and financial institutions, such as the World Bank, the IMF, and the UNDP have almost universal membership, over the last few decades, we have experienced a trend towards regional development banks which often differ in their membership. The European Bank for Reconstruction and Development (EBRD), for example, consists of purely European donors, whereas most regional development banks in the Middle East restrict donor membership to countries of that region. In addition, these institutions vary in regards of autonomy granted to the multilateral agency to manage and implement development projects.

This variation in membership (regional and substantive) and focus of development policies increases the opportunities for donors to make strategic decisions about aid delegation, and thereby to maximize the net gains of delegation.

In other words, donors are able to base their decision on whether and how much to delegate to any MAI on two factors: the degree of similarity between their allocation preferences and the MAI'said allocation policies (we call this preference similarity) and the efficiency of the MAI (we call this MAI efficiency).

*Preference Similarity*. First, donors care about how well the MAI's aid allocation policies reflect the donor's allocation preferences (may these be needs-based or strategic). Specifically, we argue that domestic policy preferences are a good indicator of a government's preferences about how multilateral aid should be spent.<sup>18</sup> Preference similarity is then defined as the similarity between the national allocation policies of the donor country and the MAI's actual aid allocation

<sup>16</sup> Lumsdaine (1993, 43); McDonnell et al. (2003: 20); Smillie et al. (1998); Milner and Tingley (2010a, b).

<sup>17</sup> Note, it is out of the scope of this paper and, as discussed below, unnecessary for the empirical test to discuss interest group politics on the domestic level in-depth. See Milner and Tingley (2010a, b) for a discussion of this question.

<sup>18</sup> See also FN 3 and the discussion below.

policies (how much they spent on which recipient). <sup>19</sup> The degree of preference similarity depends on several factors such as the development goals of the MAI, the influence of the donor in the decision-making process, and the preferences and power of the multilateral agent. Perhaps most obvious, variation in membership and institutional rules implies disparity in the donor's influence on collective allocation decisions. For example, a country like France will have much more leverage in an MAI that does not include the U.S. as a member. Donors will naturally prefer to allocate to MAIs in which the membership constellation maximizes their leverage over decision-making. Influence over allocation decisions allows governments to cater to domestic public, economic, and geo-political interests thereby minimizing the costs of diffusion in the intergovernmental bargaining process. Germany, for example, redirected its delegation policies in favor of European aid institutions at the expense of the global MAIs.

However, bargaining power is not the only factor that explains multilateral aid allocation. We address at least two additional factors that are important. First, the variation in the MAI's development policies implies that countries can delegate to MAIs which focus on development policies or regions that are in line with their interests. For example, if a government wants to provide most of its aid to Sub Saharan Africa, donating resources to the African Development Bank will ensure such a focus. Second, the principal-agent literature demonstrates a trade-off between the efficiency of the multilateral agent and opportunities for agency slippage. <sup>20</sup> Multilateral agents are self-interested actors who want to maximize the likelihood of the organization's (and therefore their own) survival. Accordingly, they have strong incentives to protect the legitimacy of the institution by implementing the official aid goals of the organization and they aim to increase the depth and scope of the MAI by, for example, providing more aid to more regions.<sup>21</sup> If governments have allocation preferences that are different from the agents' preferences and if agency slippage occurs, then delegation to such an institution diffuses the government's interest through agency slippage. On the other hand, if the preferences of the agent and the government are similar (because, for example, the government really aims to support economic development as does the multilateral agency), then individual government's can gain from agency slippage.

In other words, governments have to take into account all of these factors when deciding where to delegate. They can do so easily by observing whether the MAI de facto provides aid according to their national interest because the MAI's aid allocations are the consequence of intergovernmental bargaining, organizational characteristics, and agency slippage. This leads to our first empirically testable implication:

<sup>19</sup> The degree to which policy similarity occurs can depend on the intrinsic goals of the MAI as well as the ability of states or international agents to influence allocation decisions. Since donors care about whether the aid is spent according to their foreign policy interests, they will be most interested in analyzing actual aid allocation of MAIs. Consequently, we can abstract from the decision-making process or bureaucratic politics within the MAI.

<sup>20</sup> Barnett and Finnemore (1999); Hawkins et al. (2006); Hicks et al. (2008).

<sup>21</sup> Vaubel 1996, 2006; Frey 1997; Willett 2000; Vaubel and Willett 1991; Copelovitch 2010; Schneider and Tobin (2010).

Hypothesis 1: When choosing among MAIs, donor governments provide more funds to institutions where multilateral aid allocation reflects the domestic (strategic or non-strategic) preferences of the donor country, ceteris paribus.

It is important to note that this hypothesis does not depend on assumptions about government preferences. Whereas the literature largely assumes strategic interests of donor countries, some donor countries, notably the Nordic countries, have made it a policy to eliminate strategic considerations from foreign aid allocation decisions. Such countries also have an incentive to delegate to MAIs because they will be able to exert an influence over the aid policies of other, more strategic-minded donors. Both, strategic and non-strategic minded donors should then be more likely to delegate aid to MAIs that allocate aid according to their interests.

MAI efficiency. One of the main advantages to providing aid through multilateral aid institutions is the ability to pool resources. When deciding where to delegate their resources from among myriad MAIs, efficiency gains will be a fundamental factor to insure that their resources are used to their fullest. MAIs control budgets which are often much larger than the donations of their members. A great deal of funding comes from capital markets and the reputation of MAIs for giving aid based on need leads to donations from the public and private sector, thus multiplying the operational budgets that members are able to control. For example, Collier et al. (2001) show that every development dollar channeled through the IDA creates almost two additional private investment dollars for a recipient country. At the same time, by pooling the administrative apparatus, MAIs significantly decrease administrative and organizational costs which contributes to smaller costs of providing aid through multilateral channels. Overall, the provision of economic development as an international collective good increases the amount of resources that can actually be spent on development directly. As with many international public goods, the "whole is greater than the sum of its parts." By delegating, governments can increase the value of development aid that would have been given bilaterally: they can do more with less.

Conditional on their ability to attract further funding or to minimize administrative costs, some MAIs may provide much greater efficiency gains than others. In other words, the existing multitude of MAIs implies variation in efficiency with which aid is provided multilaterally—that is, the more MAIs, the greater the expected variance in the returns from aid. We define MAI efficiency therefore in relative terms. MAIs are relatively efficient if they can provide more development aid (output) than other MAIs with similar inputs (in terms of resources or staff expertise). Whereas some institutions will be very efficient in multiplying existing funds or collecting private funds, others are riddled by, for example, functional inefficiency, bureaucratic politics, or coordination problems which limit the efficiency of an MAI. This leads to our second testable hypothesis:

Hypothesis 2: When choosing among different MAIs, donor governments provide more funds to the most efficient institutions, ceteris paribus.

However, even though efficiency is an important benefit from delegation and therefore should be an important factor to explain delegation in itself, as we argue above, governments do not gain from efficiency if the aid allocation policies of the MAI are not in line with the government's allocation interests. In other words, for a given MAI we would expect that governments with greater preference similarity would be more likely to delegate to the MAI than governments with lower preference similarity. MAI efficiency should become a more important factor in the government calculus, the greater preference similarity. This leads to our third hypothesis:

Hypothesis 3: When choosing among different international financial institutions, as the preference similarity of a donor and an MDB grows, so should the importance of the efficiency of the MDB, ceteris paribus.

One important implication of our theoretical findings is that in contrast to the traditional view in which only one MAI exists, the incentives to delegate are much greater (thus providing a more accurate theoretical account of the empirical observations) because governments now decide where to delegate how much instead of whether or how much to delegate. Delegation choices increase the likelihood that governments exert greater influence on allocation decisions and it increases the likelihood that these institutions have greater overall leverage than if the government gave aid bilaterally. In other words, the government would get more of what it actually wants.

### IV. EMPIRICAL ANALYSIS

In this section, we describe our econometric models for analyzing governments' strategic choices when delegating to overlapping MAIs. To test the empirical implications of our model we collected a data set with observations on 22 OECD donor's aid disbursements to 26 MAIs from 1970 to 2008.<sup>22</sup> Our unit of analysis is the donor-MAI-year.

## DEPENDENT VARIABLE

To assess how governments decide where to allocate their funds among MAIs we first need a measure of financial contributions from governments to MAIs. We measure financial contributions in two ways. Our first measure, *Financial Contributions* (%) focuses on the feature of most interest to us theoretically. That is, how governments allocate a given amount of funding across a number of MAIs. Thus, we take total multilateral ODA disbursements from a government to an MAI in a given year as a percentage of a donor's total ODA disbursements to all MAIs in that year. It is also possible that rather than a set amount of funding to give multilaterally each year, donors disburse an indefinite amount of funding among the MAIs. To deal with this possibility, we include a second dependent variable, *Financial Contributions* (*log*), which is the log of a do-

See FN 5 for a list of donor countries and MAIs. Although AidData is the most comprehensive dataset for international aid, unfortunately it does not have information on delegation to MAIs. The OECD data set is therefore the most comprehensive data set on donor disbursements to MAIs that currently exists.

nor's total ODA disbursements to a given MAI (in constant 2007 dollars). Data comes from the OECD's International Development Statistics. We use disbursements rather than commitments in both cases merely because of data limitations. Although commitment data on donor commitments and disbursements to individual countries is widely available for all OECD donors, commitment data is much more limited than disbursement data for financial contributions to MAIs.

### INDEPENDENT VARIABLES

To understand the decision to delegate foreign aid to MAIs we need measures that directly correspond to our theoretical hypotheses regarding *preference similarity* and *MAI efficiency*.

*Preference Similarity*. Hypothesis 1 states that donor governments, when choosing how much to delegate to different MAIs, provide more contributions to institutions where the aid allocation reflects the government's domestic (strategic or non-strategic) allocation policies, ceteris paribus. To measure the similarity of allocation policies between a donor and an MAI we rely on the well-documented research that shows that bilateral foreign aid flows reflect a donor state's interest in the developing country.<sup>23</sup> We then compare the allocation policies of the donor (which recipient gets how much aid) to the allocation policies of the MAI (again, which recipient gets how much aid).

Specifically, we derive the basic aid allocation interests of any government i in any given recipient country k by taking each government's bilateral ODA to the recipient, as a percentage of that government's overall bilateral aid for each year t:

Donor Allocation Preferences 
$$_{i,k,t} = \frac{Bilateral\ Aid_{i,k,t}}{Bilateral\ Aid_{i,t}}$$
 (1)

Increasing values for *Government Allocation Preferences* imply that a member has increasingly salient interests in providing aid to that country. In a second step, we measure the allocation preferences of the MAI in the same way: the basic aid allocation preferences of any MAI *j* in any given recipient k is given by taking each MAI's ODA to the recipient as a percentage of that MAI's aid for each year t:

MAI Allocation Preferences<sub>j,k,t</sub> = 
$$\frac{Bilateral\ Aid_{j,k,t}}{Bilateral\ Aid_{j,t}}$$
(2)

<sup>23</sup> See for example Maizels and Nissanke (1984), Schraeder et al. (1998), Alesina and Dollar (2000), Stone (2002, 2004, 2008) among others.

To measure the difference in preferences we take the absolute value of the difference between these two values:

Preference Similarity = Donor Allocation Preferences<sub>i,k,t</sub> - MAI Allocation Preferences<sub>j,k,t</sub> (3)

Finally, we multiply this by negative 1 so that higher numbers imply greater preference similarity. Again, we expect that the greater the similarity of preferences, the more financial contributions will be directed from a government to an MAI.

The main advantage of this approach is that actual bilateral and multilateral aid allocations account for all dimensions of government preferences and, therefore, we do not have to account for the specific preferences of individual governments. For example, regardless of whether a donor is more interested in economic development or geo-political factors, the constellation of countries it is interested in will be evident in the pattern of their bilateral giving. In addition, whether multilateral aid giving is a function of formal or informal bargaining power or agency slippage in the MAI, the vector of these preferences is captured by the pattern of multilateral aid giving. In contrast to measuring preference similarity just by analyzing decision-making *input*, such as the formal voting power of a member state – the traditional approach – we reduce possible bias introduced by organizational characteristics and bureaucratic politics by looking directly at the decision-making *output*.

One could potentially criticize the underlying assumption that governments pursue similar goals when providing bilateral and multilateral aid. An alternative explanation could be that donors actually delegate aid to MAIs in order to pursue goals that are different from the goals they pursue through bilateral aid. Our analysis directly tests for this. We would expect an insignificant or even negative relationship between the variable *Preference Similarity* and delegation if governments pursued alternative goals by delegating aid through MAIs. A positive and significant relationship, on the other hand, would support our theory that they want to delegate aid to pursue their domestic allocation preferences but with greater efficiency.

Efficiency. Hypothesis 2 states that when choosing between different MAIs, governments provide more money to institutions where aid allocation is more efficient, ceteris paribus. But what do we mean precisely when we talk about efficiency? In the literature, efficiency is usually defined as whether the same level of output could be achieved with less input—or, equivalently, whether more output could be generated with the same level of input. For example, in economics scholars are interested in the level of efficiency of the firm, that is its ability to maximize production from a given set of inputs. They compare the inputs and outputs of firms to establish the efficiency of production of the firm of interest. For MAIs, organizational efficiency can be defined in very similar terms: we are interested in the MAI's ability to maximize its output (the amount of aid provision). Here this is defined in term of its aid giving, relative to their available inputs in comparison to similar MAIs. Importantly, this is different from a MAI's effectiveness in achieving economic development goals in recipient countries.

For our measurement we can rely on the well established techniques developed by the management science literature to assess the efficiency of firms and government agencies. Specifically, we use data envelopment analysis (DEA), a linear programming technique that evaluates

the *relative efficiency* of similar decision-making units (DMUs can be firms, governments departments, or in our case, MAIs).<sup>24</sup> DEA takes a set of inputs and outputs from among a set of DMUs and defines a benchmark production frontier composed of those DMUs that are best practice performers in terms of their inputs and outputs in that time period. The relative efficiency frontier is the point where no producer could get more output for any lower level of input. DEA then calculates the level of efficiency of each remaining DMU relative to that benchmark frontier. Important for our analysis, DEA does not compare MAIs that may be smaller, or not able to raise funds on the capital markets to MAIs with these different inputs—that would bias efficiency towards larger MAIs. Instead, by weighting the inputs of each MAI, DEA enables us to compare outputs that would be possible from organizations with similar resources or inputs. The calculation weights each DMU's inputs to maximize its weighted input to output ratio. Thus, each DMU's efficiency is judged according to its own standards—but the maximum possible efficiency is set by the DMU and its peers.

Our objective function is as follows:

$$\begin{aligned} & Max \ \xi_0 = \sum_{i=1}^n \omega_r y_{ij0} \\ & Subject \ to = \sum_{i=1}^n v_i x_{ij0} = 1 \ and \ \sum_{i=1}^s \omega_i y_{ij} - \sum_{i=1}^m v_i x_{ij} \ge 0 \end{aligned}$$

where  $\xi$  is equal to the efficiency score for MAI  $j_0$ ,  $\omega$  and v are weights, and x and y are inputs and outputs respectively.

One of the difficulties in measuring the efficiency of a MAI is the nature of inputs and outputs. For the most part, MAIs receive funds from governments and combine this with funds raised on capital markets (although many MAIs, including the UN organizations, are not able to raise additional funding through capital markets), the knowledge and expertise of their staff, and their time in the field to produce loan capital and funding for development programs. In other words, they both input and output capital. Thus, our measurement of output is simply aid disbursements by an individual MAI in a given year (we use disbursements instead of commitments because of lack of data on commitments). We rely on a series of inputs to the MAI: disbursements from donors to the MAI, whether or not they are allowed to raise funds on capital markets, the size of the staff, and the age of the MAI. We use the Stata program *DEA* developed by Lee and Ji (2009) to calculate the efficiency scores of each MAI on a yearly basis.

Although we think these measures capture the main features of preference similarity and MAI efficiency, we consider a number of other possibilities and report results of these analyses in the robustness checks.

<sup>24</sup> DEA analysis was developed by Charnes et at (1994) as an operationalization of Farrell's 1957 work on measuring efficiency. Thousands of papers exist in the operations management and public policy that use the DEA technique to measure the efficiency of firms, government institutions, financial agencies, etc.

#### CONTROL VARIABLES

In addition to our main variables of interest, *Preference Similarity* and *MAI Efficiency*, we include a set of government- and MAI level- variables to control for the determinants of government contributions to MAIs. Although the aid literature has established the important determinants of bilateral aid to developing countries, little is available theoretically that determines the relationship of government contributions to MAIs. Thus, we update the extant literature to deal with the nature of the relationship between governments and MAIs rather than the usual donor-recipient specification.<sup>25</sup>

First, we need to account for the economic climate in the donor country. Countries with better performing economies are more likely to increase their financial resources for giving both bilaterally and multilaterally. We use the variable *Unemployment Rate* (as a percentage of overall employment) as well as the variable *Economic Growth (GDP per capita growth)* as indicators of a donor's willingness to provide multilateral contributions. We expect higher growth to increase financial contributions, while higher unemployment will decrease them. Similarly, a country's wealth should determine their willingness to provide contributions, with wealthier countries contributing more than poorer countries. We measure the wealth of a donor with their gross domestic product per capita in constant (2000) US dollars (*Per Capita GDP*). Milner (2006) finds that government capacity to tax and spend leads to lower levels of distribution to MAIs. In line with this finding we include the variable *Government Expenditure*, which controls for overall government spending as a proportion of GNP.

A government's willingness to contribute to MAIs depends also on some characteristics of the organization. Perhaps most important is a government's relative influence within the MAI. Measures of formal influence, such as voting power, are hard to come by for all MAIs, so we rely on a donor country's wealth relative to all other donor's as a measure of the formal influence within the MAI. To account for variations of political influence across MAIs we control for the number of major powers within the membership of the MAI and whether or not the US is a member.<sup>28</sup> It is also possible that the experience of the MAI or the length of time that a donor has contributed to an MAI helps, in part, to determine its contributions. Therefore, we include the age of the MAI to account for the experience of the organization.

Finally, government's financial contributions should depend on the climate in the world more generally. First, aid strategies changed drastically during and after the Cold War, necessitating a control for this time period. We focus on the year 1989, the watershed year in this context, because most former satellites started holding free elections and the geographic Iron Curtain that

<sup>25</sup> Note that we do not include a measure of domestic pressure on the donor government even though theoretical this could account for increases in delegation to MAIs. Domestic pressure could increase the overall size of domestic funding for MAIs, but would not impact the pattern of funding.

<sup>26</sup> Data from OECD iLibrary.

<sup>27</sup> Data from World Development Indicators.

<sup>28</sup> Data from Correlates of War Project (2008).

had divided the East and the West for over 40 years fell. The Post Cold War variable is equal to 0 prior to 1989 and 1 in 1989 and after.<sup>29</sup> Governments are willing to give more to multilateral agencies following major natural disasters. Although data on numbers of major natural disasters are not available across time, the overall numbers of deaths due to natural disasters serves as a proxy for the depth of disasters in a given year. Data from the Emergency Disasters Data Base (www.em-dat.net).

In some models we include a linear time trend to account for common shocks and trends in aid disbursements to MAIs. Because aid flows can respond to the global environment we also employ a model that includes time fixed effects and a time trend together—but because of collinearity we cannot include the dummy variable for the cold war or for natural disasters in this model. Finally, because many disbursements to multilateral donors are fixed over multi-year terms, we estimate each of the specifications that we describe below for year-to-year data as well as data averaged over 5-year periods.

Our econometric model employs the following generalized least squares specification: governments i's financial contributions to MAI j in year t depends on the similarity of preferences between the government and the MAI (*Preference Similarity*), the efficiency of the MAI (*MAI Efficiency*), control variables (*Control*), a time trend  $\tau$  and an error term  $\mu$ :

Financial Contributions 
$$_{j,k,t} = \gamma_t + \beta_1 Similarity_{j,k,t-2} + \beta_2 Efficiency_{k,t-2} + \beta_3 Control_{j,k,t} + \tau + \mu_{j,k,t}$$
 (4)

Equation (4) is useful for examining the independent effects of preference similarity and efficiency on financial contributions, but our theory leads us to believe that these effects may be conditional (Hypothesis 3). To examine this possibility, we estimate equation (4) including an interaction:

$$Aid_{j,k,t} = \gamma_t + \beta_1 Similarity_{j,k,t-2} + \beta_2 Efficiency_{k,t-2} + \beta_3 Similarity * Efficiency_{j,k,t-2}$$

$$+ \beta_4 Control_{j,k,t} + \tau + \mu_{j,k,t}$$
(5)

We present feasible generalized least squares (FGLS) regression estimates with a Prais-Winsten transformation of all of our models accounting for an autoregressive (AR1) error process and report panel corrected standard errors to account for panel-level heteroskedasticity. Because we have an unbalanced panel, we assume that the error variances are constant within each directed-dyad, but heteroskedastic across dyads.

<sup>29</sup> One could also use 1991 as watershed year with the coup overthrowing Mikhail Gorbachev and the collapse of the Soviet Union without changing the substantive results. See also Bermeo (2008).

<sup>30</sup> Beck and Katz (1996).

There are a few potential concerns with our model. Our most pressing concern is the possibility of reverse causality for both of our independent variables of interest. An MAI's preferences could approximate those of a specific government *because* that donor has committed a substantial amount of financial contributions. Similarly, an MAI could be relatively more efficient *because* of government financial contributions. Either of these relationships would tend to bias our estimates in a positive direction, leading us to overestimate the effect of preference similarity and efficiency on aid disbursements. To deal with both of these possibilities, we lag our measures of similarity and efficiency by two years for our year-to-year specification and by 1-period for our data average over 5-year periods. Further, it is quite likely that in not including the lag of financial contributions to MAIs we are excluding a number of potential time-varying unobservables that we might be concerned about. However, including a lagged dependent variable in an FGLS model results in upward biases when using FGLS and downward biases when using fixed effects techniques.<sup>31</sup>

### **EMPIRICAL RESULTS**

The results of our estimations lend considerable support to our main hypotheses. Specifically, we find that the closer a government's preferences are to the allocation policies of an MAI and the greater the MAI's efficiency, the more financial resources are provided to that MAI.

## [Tables 1-4 about here]

Tables 1 through 4 report the results of our hypotheses regarding the strategic delegation of government aid. Table 1 examines equations 3-4 with the dependent variable as the financial contributions to a specific MAI as percent of its overall financial contributions to all MAIs. Table 2 examines equations (1)-(3) with the dependent variable as the log of financial contributions. Tables 3 and 4 repeat these analyses with the data averaged over 5-year time periods. In all tables we standardize our independent variables of interest (efficiency and preference similarity) for ease of interpretation. Columns (1) and (2) in each table report the independent impact of preference similarity and efficiency without including the other variable, while column (3) of each table includes the independent effects of both independent variables in the regression. Column (4) reports equation (4), the conditional impact of preference similarity on the effect of MAI efficiency on delegation. Columns (1)-(4) in each table include a time trend and a dummy variable for the Cold War, while column (5) in each table reports equation (4) including a time trend and year dummy variables.<sup>32</sup>

<sup>31</sup> Kiviet (1995) and Nickell (1981). The decision to allocate funds to MAIs could be a two step process. Specifically, a donor selects from among its pool of aid funds how much to give bilaterally and how much to give multilaterally. It then selects among MAIs from that multilateral aid pool. Our theory is skeptical of that claim. We argue above that donor's strategic allocation decision is dependent on the individual characteristics of donors and MAIs as well as their joint characteristics. Thus, we do not believe that a two-step process is at work

<sup>32</sup> We do not include the independent equations as they do not differ substantially from the results excluding the year dummy-variables. Results are available from the authors.

The estimates in each of our tables are consistent with a substantively and statistically significant positive effect of both preference similarity and MAI efficiency on aid flows from donors to multilateral aid institutions. Across all specifications the coefficient estimates for the variables preference similarity and efficiency are positive and statistically significant.

In Table 1, the specifications for the year-to-year panels the coefficient estimates for preference similarity range from 0.1 percentage points to .34 percentage points with relatively small standard errors. This indicates that, all else equal, a donor that saw a one-standard deviation increase in preference similarity would increase funding to that donor as a percentage of all MAI funding by between .1 and .34 percentage points. Similarly in Table 2 where we look at the log of total aid flows to MAIs, the coefficient estimates for preference similarity range between 0.03 and 0.06, indicating that a one-standard deviation increase in preference similarity would lead to an increase of between 3 and 6 percent in financial contributions to that MAI. The estimates for the 5-year panels are also positive and statistically significant at the 99% confidence level, but the coefficient estimates are larger. These results also imply that government's indeed follow similar goals (compared to bilateral aid-giving) when delegating aid to MAIs rather than pursuing different goals.

Turning to the coefficient estimates for the relationship between efficiency and aid flows, the specifications for the year-to-year panels in Table 1 demonstrates that a one standard deviation increase in efficiency indicates an increase of between 0.18 and 0.41 percentage points in per cent financial contributions, all else equal. Similarly in Table 2, a similar increase in efficiency by an MAI would lead to an increase of between 5 and 10 percent in financial contributions. All of the results are significant at least at the 99 percent confidence level. The 5-year panel estimates are similarly positive and statistically significant with qualitatively similar coefficient estimates.

These results provide support for Hypotheses 1 and 2 that all else equal, governments, when choosing among different MAIs, provide more funds to institutions where multilateral aid allocation reflects the governments' domestic (strategic or non-strategic) interests and where MAIs provide aid efficiently. The results provide some support for the idea that regardless of whether a government is more interested in contributing aid to needy versus geo-strategically important countries, they are able to determine how similar (or different) their allocation policies are to that of individual MAIs—and this preference similarity is a driving force in their decision over which MAIs to contribute to and how much.

Columns (4) and (5) of Tables 1-4 explore the conditional nature the effect of efficiency on financial contributions to MAIs. We find that the strong, positive relationship between efficiency and preference similarity remains strong, and the impact of efficiency grows stronger the greater the preference similarity.

To better understand the magnitude of these effects, consider Figures 5 and 6. They show the effect of an increase in the efficiency of an MAI for varying levels of preference similarity, holding all other variables constant (both variables have been standardized so that an increase of one-point translates to an increase of one standard deviation). Figures 5 and 6 were generated from

the coefficient estimates and the variance-covariance matrices from the regressions in Column (4) of Tables 1 and 2. The upward sloping lines depict the contingent relationship between preference similarity and the level of efficiency of that MAI. Specifically, the effect of an increase in efficiency grows stronger as the similarity of policies between a donor and an MAI increases. Looking at Figure 6 we see that an MAI with a level of preference similarity one standard deviations below the mean would receive an increase of 6.5 percent in funding for every 1 standard deviation increase in efficiency as opposed to an MAI with a level of preference similarity 1 standard deviation above the mean who would receive 8 percent greater flows for a 1 standard deviation increase in efficiency. Most importantly, this changing impact is significant. Although not a huge difference, these results offer evidence that preference similarity and efficiency have a positive and conditional impact on donor disbursements to MAIs.

#### **ROBUSTNESS**

The evidence in Tables (2) through (4) strongly suggests that both preference similarity between a donor and an MAI and the efficiency of MAIs increases the funding that MAIs receive from donors. We evaluated the robustness of these results in several ways (all results are available from the authors).

First, we included further control variables that accounted for variation in membership of MAIs. The variation in membership and development policies across MAIs increases opportunities for governments to make strategic decisions about aid delegation, and thereby to reduce the costs of delegation. Variation in membership implies disparity in the donor's influence on collective allocation decisions. For example, a country like France will have much more formal and informal leverage in MAIs that do not include the U.S. as a member. Donors naturally prefer to allocate to MAIs in which the membership constellation maximizes their leverage on decision-making. We therefore include a variable that measures the membership size of the MAI. In addition, we create a dummy variable equal to 1 for regional MAIs and equal to 0 for non-regional MAIs. Adding a dummy variable for regional development banks to our specifications results in a negative, significant impact on aid disbursements to MAIs. This indicates that donors are less likely to give to regional than non-regional development banks, holding all else constant. Interestingly, the size of the membership of the MAI has a negative, though minimal impact. This is likely due to the high correlation between the size of the MAI and the region. Most importantly, our main results to do change due to the inclusion of these control variables.

Second, one potential benefit of delegating to one over another MAI that we have not analyzed so far is the effectiveness of the MAI to actually promote development in the recipient countries. To account for a potential influence of this variables on the importance of preference similarity and MAI efficiency, we include a measure of effectiveness of MAIs. Recently, a number of authors have established rankings of bilateral and multilateral donors in the hopes of

"shaming" them into increasing the effectiveness of their programs.<sup>33</sup> We include the MAI's average percent rank from Easterly and Pfutze's (2008) measure of "Best Practices in Aid," in our specifications without time dummies (it is important to note that the rankings are only available for the current time period). The inclusion of this variable had little impact on our results.

Third, to account for the potential trade dependency of a country we included the sum of a government's exports and imports of goods and services measured as a share of gross domestic product. Further, we controlled for the natural log of a government's population in a given year. Neither of these variables entered significantly into any of our models.

Finally, to account for estimation problems that may derive from the large number of government-years with no financial contributions we re-estimated our specifications using a Cragg-Hurdle model. Hurdle models estimate the specification in a two-step process. In the first step, a binomial probability model determines the outcome of whether the dependent variable has a value of zero or any positive value. If the "hurdle" is overcome (i.e., the dependent variable is greater than 0), the value enters the second stage of the estimation where it is estimated as a model truncated at zero. Again, our results are not significantly different from estimating our models using GLS.

### **CONCLUSION**

This paper has presented a theory of strategic institutional portfolio-building. We argued that governments are more likely to delegate to an MAI that minimizes the costs of delegating resources spent in the donor's interest (through preference similarity) while at the same time maximizing efficiency gains. The empirical analysis provides some first support of the strategic choice of governments when delegating aid to MAIs. OECD countries' choice between 26 MAIs has been mainly influenced by their desire to retain leverage over allocation decisions. At the same time, they exerted a bias for more efficient MAIs.

Our paper provides the first general analysis of institutional portfolio-building in MAIs. The findings have important implications for the underlying puzzle of in the literature of why states delegate to MAIs instead of allocating aid bilaterally. We argue that the decision to delegate is in fact quite rational. Donors can increase the impact of their aid both in terms of their national interests and in terms of its efficiency by delegating strategically across a multitude of MAIs. The reason is that within the system of multilateral aid institutions an array of choices exist where differing levels of efficiency and allocation policies exist. Donors can choose strategically how much to allocate to each of these MAIs and therefore maximize both the efficiency of the aid and their own preferences. As a result, the decision to delegate is not as puzzling from a theoretical standpoint. The more MAIs from which to choose, the more potential venues for delegation, the more likely delegation will lead to favorable outcomes for the donor. If a donor can make their

<sup>33</sup> Roodman 2006, 2009; Center for Global Development 2007; Easterly and Pfutze 2008.

aid more efficient while maintaining control over allocation decisions, then at times multilateral aid is a better choice than bilateral aid.

Importantly, if we can better understand delegation to MAIs, this may help us to better understand the level of aid effectiveness among MAIs. Given our findings, it could be that agents within MAIs alter their giving strategies to attract more funds. If MAIs are allocating significant portions of their funds to meet the geo-strategic interests of their principals, this could be having a negative impact on aid effectiveness. On the other hand, if agents have the means to increase the efficiency of their organization to attract funds, this would have a beneficial impact on the effectiveness of MAI aid. Thus, there may be two trade-offs at hand: one facing governments and another facing the MAIs.

Figure 5: Conditional Effect of an Increase in Efficiency on Multilateral Financial Contributions at Various levels of donor-MAI Preference Similarity

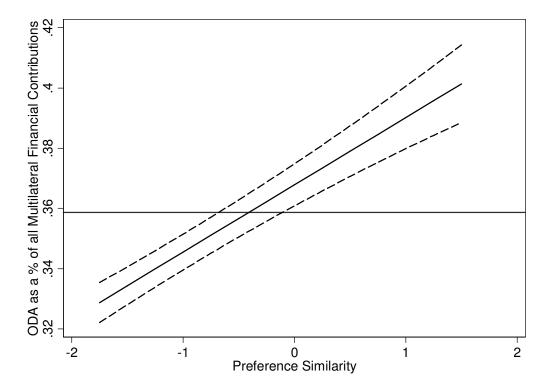


Figure 6: Conditional Effect of an Increase in Efficiency on the Log of Multilateral Financial Contributions at Various levels of donor-MAI Preference Similarity

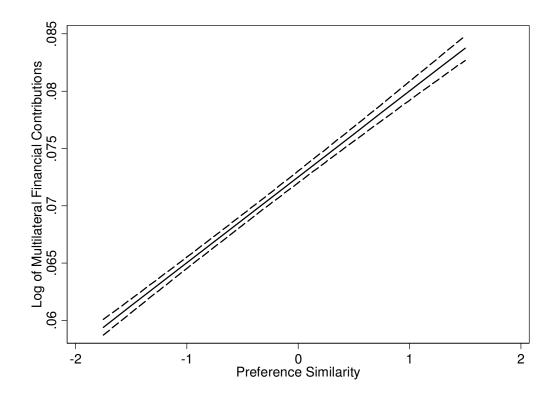


Table 1: Strategic Delegation of Government Aid: Year to Year Observations

Model	(1)	(2)	(3)	(4)	(5)
Preference Similarity	0.100***		0.334***	0.332***	0.344***
Treference Similarity	(0.023)		(0.050)	(0.051)	(0.052)
Efficiency	(0.023)	0.184***	0.358***	0.368***	0.409***
Efficiency		(0.061)	(0.080)	(0.084)	(0.114)
Interaction		(0.001)	(0.000)	0.022	0.028
interaction				(0.022)	(0.037)
Unamplayment	-0.028	0.028	0.013	0.034)	0.037)
Unemployment					
CDD C	(0.059)	(0.065)	(0.063)	(0.063)	(0.071)
GDP Growth	-0.079**	-0.085**	-0.132***	-0.132***	-0.073
CDDD C '	(0.040)	(0.040)	(0.047)	(0.047)	(0.057)
GDP Per Capita	0.301	2.412*	2.444*	2.465*	3.639**
	(1.305)	(1.378)	(1.374)	(1.371)	(1.421)
Govt. Expenditure	-0.004	-0.019	-0.013	-0.013	0.020
	(0.033)	(0.034)	(0.036)	(0.036)	(0.038)
Relative Income	-0.063***	-0.522***	-0.679***	-0.683***	-0.812***
	(0.007)	(0.072)	(0.077)	(0.077)	(0.089)
# Major Powers	0.380***	-0.165	-0.385**	-0.388**	-0.840***
	(0.122)	(0.173)	(0.181)	(0.181)	(0.209)
Donor-Major Power	-0.037	-0.019	-0.060	-0.058	-0.269
	(0.630)	(0.630)	(0.591)	(0.589)	(0.598)
US Member	-1.959***	-6.186***	-6.550***	-6.586***	-6.010***
	(0.671)	(0.778)	(0.708)	(0.705)	(0.701)
Multilateral Age	-0.007	0.021	0.033**	0.033**	0.022
	(0.015)	(0.017)	(0.015)	(0.015)	(0.016)
Cold War	-0.149	-0.355	-0.623	-0.624	
	(0.398)	(0.421)	(0.473)	(0.473)	
Disaster Deaths	-0.000	0.000	0.000	0.000	
	(0.000)	(0.000)	(0.000)	(0.000)	
Year	-0.109***	-0.116***	-0.152***	-0.152***	-0.011
	(0.040)	(0.040)	(0.039)	(0.039)	(0.009)
Constant	220.56***	221.97***	295.05***	295.096***	0.000
	(71.319)	(69.954)	(69.539)	(69.394)	(0.000)
Observations	7953	7562	6745	6745	6745
Donor-MDB N	328	288	268	268	268

Dependent Variable: Financial Contributions as a % of total Contributions FGLS models with robust standard errors in parentheses \* significant at 10%; \*\* significant at 5%; \*\*\* significant at 1%

Table 2: Strategic Delegation of Government Aid: Year to Year Observations

Model	(1)	(2)	(3)	(4)	(5)
Preference Similarity	0.027***		0.056***	0.055***	0.053***
Treference Similarity	(0.010)		(0.017)	(0.018)	(0.018)
Efficiency	(0.010)	0.045***	0.070***	0.073***	0.098***
Efficiency		(0.016)	(0.022)	(0.023)	(0.027)
Interaction		(0.010)	(0.022)	0.007	0.009
interaction				(0.012)	(0.013)
Unemployment	0.025**	0.045***	0.035***	0.012)	0.029**
Onemployment	(0.011)	(0.011)	(0.012)	(0.012)	(0.013)
GDP Growth	-0.020***	-0.011)	-0.028***	-0.028***	-0.021**
ODF Glowin	(0.007)	(0.006)	(0.008)	(0.008)	(0.009)
CDP Par Capita	0.964***	1.679***	1.414***	1.417***	1.114***
GDP Per Capita			(0.261)		
Court Eumanditum	(0.231) 0.006	(0.225)	0.002	(0.261)	(0.265) -0.003
Govt. Expenditure		0.006		0.002	
D 1 d' T	(0.006)	(0.005)	(0.007)	(0.007)	(0.007)
Relative Income	-0.014***	-0.080***	-0.120***	-0.121***	-0.081***
"" " " " " " " " " " " " " " " " " " "	(0.002)	(0.018)	(0.020)	(0.020)	(0.022)
# Major Powers	0.163***	0.062*	0.037	0.037	0.183***
	(0.027)	(0.035)	(0.039)	(0.039)	(0.048)
Donor-Major Power	0.782***	1.013***	0.963***	0.964***	1.029***
	(0.134)	(0.157)	(0.139)	(0.139)	(0.135)
US Member	0.220	-0.269	-0.411***	-0.419***	-0.667***
	(0.142)	(0.166)	(0.158)	(0.158)	(0.157)
Multilateral Age	-0.009*	0.003	0.009*	0.009*	0.011**
	(0.005)	(0.006)	(0.005)	(0.005)	(0.005)
Cold War	0.125	-0.021	0.074	0.075	
	(0.085)	(0.072)	(0.091)	(0.091)	
Disaster Deaths	-0.000***	-0.000***	-0.000***	-0.000***	
	(0.000)	(0.000)	(0.000)	(0.000)	
Year	-0.028***	-0.031***	-0.045***	-0.045***	-0.005***
	(0.009)	(0.008)	(0.009)	(0.009)	(0.002)
Constant	45.489***	46.357***	77.213***	77.313***	0.000
	(15.764)	(15.534)	(15.720)	(15.678)	(0.000)
Observations	7965	8276	6755	6755	6755
Donor-MDB N	328	294	268	268	268

Dependent Variable: Log of Financial Contributions

FGLS models with robust standard errors in parentheses

<sup>\*</sup> significant at 10%; \*\* significant at 5%; \*\*\* significant at 1%

Table 3: Strategic Delegation of Government Aid: Five-Year Periods

(1) (2) (3) (4) **Preference Similarity** 0.317\*\*\* 1.052\*\*\* 1.034\*\*\* (0.076)(0.176)(0.174)0.701\*\*\* 1.305\*\*\* 1.352\*\*\* Efficiency (0.194)(0.219)(0.225)Interaction 0.169 (0.116)Unemployment 0.018 -0.010 -0.003 -0.004 (0.058)(0.061)(0.052)(0.061)**GDP** Growth -0.019 0.019 0.021 0.020 (0.097)(0.078)(0.086)(0.097)4.595\*\*\* GDP Per Capita 1.648 5.825\*\*\* 5.842\*\*\* (1.389)(1.570)(1.623)(1.623)Govt. Expenditure 0.042 0.024 0.038 0.038 (0.039)(0.043)(0.047)(0.047)Relative Income -0.058\*\*\* -0.983\*\*\* -1.150\*\*\* -1.154\*\*\* (0.009)(0.120)(0.129)(0.129)0.492\*\*\* -0.686\*\*\* -1.057\*\*\* -1.060\*\*\* # Major Powers (0.252)(0.118)(0.263)(0.263)Donor-Major Power -0.502 -0.428 -0.421-0.434 (0.637)(0.717)(0.707)(0.706)-10.678\*\*\* **US** Member -3.367\*\*\* -8.972\*\*\* -10.607\*\*\* (1.007)(1.352)(1.343)(1.338)-0.028\* -0.037\* Multilateral Age -0.012 -0.010 (0.016)(0.020)(0.018)(0.018)Cold War -1.897\*\*\* -2.481\*\*\* -2.529\*\*\* 0.674 (0.458)(0.612)(0.682)(0.684)Disaster Deaths 0.000 0.000 0.000 0.000 (0.000)(0.000)(0.000)(0.000)-0.580\*\*\* -0.762\*\*\* -0.773\*\*\* Period -0.197 (0.180)(0.203)(0.207)(0.207)Constant -13.838 -23.872 -33.418\* -33.428\* (15.730)(17.392)(18.296)(18.301)Observations 1913 1727 1617 1617 Donor-MDB N 328 288 268 268

Dependent Variable: Financial Contributions as a % of total Contributions FGLS models with robust standard errors in parentheses \* significant at 10%; \*\* significant at 5%; \*\*\* significant at 1%

Table 4: Strategic Delegation of Government Aid: Five-Year Periods

Model	(1)	(2)	(3)	(4)	(5)
Preference Similarity	0.378**		0.971***	0.979***	0.952***
	(0.187)		(0.319)	(0.317)	(0.316)
Efficiency	(11 11)	0.024	0.100**	0.102**	0.099**
		(0.039)	(0.045)	(0.045)	(0.047)
Interaction		,	,	0.154	0.187
				(0.214)	(0.215)
Unemployment	0.044***	0.053***	0.045***	0.045***	0.026*
	(0.011)	(0.010)	(0.012)	(0.012)	(0.014)
GDP Growth	-0.045***	-0.018*	-0.048***	-0.048***	-0.016
	(0.014)	(0.011)	(0.015)	(0.015)	(0.017)
GDP Per Capita	1.132***	2.196***	1.875***	1.876***	1.628***
	(0.271)	(0.266)	(0.313)	(0.312)	(0.321)
Govt. Expenditure	0.006	0.012*	0.005	0.005	0.002
	(0.007)	(0.007)	(0.008)	(0.008)	(0.008)
Relative Income	-0.009***	-0.124***	-0.156***	-0.156***	-0.153***
	(0.002)	(0.021)	(0.023)	(0.023)	(0.023)
# Major Powers	0.256***	0.098**	0.055	0.055	0.085*
	(0.032)	(0.048)	(0.050)	(0.050)	(0.050)
Donor-Major Power	0.570***	0.635***	0.746***	0.747***	0.809***
3	(0.158)	(0.190)	(0.171)	(0.171)	(0.169)
US Member	-0.229	-0.963***	-1.146***	-1.153***	-1.233***
	(0.194)	(0.248)	(0.237)	(0.237)	(0.237)
Multilateral Age	-0.015***	-0.013**	0.001	0.001	0.002
	(0.005)	(0.006)	(0.006)	(0.006)	(0.006)
Cold War	0.750***	0.268**	0.386***	0.381***	
	(0.104)	(0.111)	(0.127)	(0.127)	
Disaster Deaths	0.000	-0.000	0.000	0.000	
	(0.000)	(0.000)	(0.000)	(0.000)	
Period	0.035	-0.081*	-0.123***	-0.124***	-1.775***
	(0.043)	(0.045)	(0.046)	(0.046)	(0.475)
Constant	-11.486***	-20.27***	-15.98***	-15.97***	0.000
	(3.114)	(2.914)	(3.475)	(3.474)	(0.000)
Observations	1913	1882	1617	1617	1617
Donor-MDB N	328	294	268	268	268

Dependent Variable: Log of Financial Contributions

FGLS models with robust standard errors in parentheses

<sup>\*</sup> significant at 10%; \*\* significant at 5%; \*\*\* significant at 1%

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