Terms and Conditions of Use of Digitised Theses from Trinity College Library Dublin

Copyright statement

All material supplied by Trinity College Library is protected by copyright (under the Copyright and Related Rights Act, 2000 as amended) and other relevant Intellectual Property Rights. By accessing and using a Digitised Thesis from Trinity College Library you acknowledge that all Intellectual Property Rights in any Works supplied are the sole and exclusive property of the copyright and/or other IPR holder. Specific copyright holders may not be explicitly identified. Use of materials from other sources within a thesis should not be construed as a claim over them.

A non-exclusive, non-transferable licence is hereby granted to those using or reproducing, in whole or in part, the material for valid purposes, providing the copyright owners are acknowledged using the normal conventions. Where specific permission to use material is required, this is identified and such permission must be sought from the copyright holder or agency cited.

Liability statement

By using a Digitised Thesis, I accept that Trinity College Dublin bears no legal responsibility for the accuracy, legality or comprehensiveness of materials contained within the thesis, and that Trinity College Dublin accepts no liability for indirect, consequential, or incidental, damages or losses arising from use of the thesis for whatever reason. Information located in a thesis may be subject to specific use constraints, details of which may not be explicitly described. It is the responsibility of potential and actual users to be aware of such constraints and to abide by them. By making use of material from a digitised thesis, you accept these copyright and disclaimer provisions. Where it is brought to the attention of Trinity College Library that there may be a breach of copyright or other restraint, it is the policy to withdraw or take down access to a thesis while the issue is being resolved.

Access Agreement

By using a Digitised Thesis from Trinity College Library you are bound by the following Terms & Conditions. Please read them carefully.

I have read and I understand the following statement: All material supplied via a Digitised Thesis from Trinity College Library is protected by copyright and other intellectual property rights, and duplication or sale of all or part of any of a thesis is not permitted, except that material may be duplicated by you for your research use or for educational purposes in electronic or print form providing the copyright owners are acknowledged using the normal conventions. You must obtain permission for any other use. Electronic or print copies may not be offered, whether for sale or otherwise to anyone. This copy has been supplied on the understanding that it is copyright material and that no quotation from the thesis may be published without proper acknowledgement.

TRINITY COLLEGE DUBLIN
DEPARTMENT OF POLITICAL SCIENCE

Ph.D. in Political Science

Donors, Dollars, and Diseases

State-Institution Interactions in Global Public Health

Candidate
Patrick Theiner

Supervisor
William Phelan

July 2012

In nothing does man more nearly approach the gods than in giving health to man.
– Marcus Tullius Cicero

I declare that this thesis is entirely my own work, and that it has not been submitted as an exercise for a degree at this or any other university. I agree to the library lending or copying this thesis upon request. This permission covers only single copies made for study purposes, subject to normal conditions of acknowledgment as per the rules and regulations of Trinity College Dublin.

Patrick Theiner
Dublin, July 2012

Summary

This study explores the dynamics of state interactions with institutions for global public health. It investigates three separate, but intrinsically linked questions: why donor states contribute resources to certain international institutions, which developing states aim to acquire these resources, and how institutions ultimately translate between donors and recipients in their decisions about resource distribution.

The study contributes to the theoretical literature by adapting and extending existing theoretical frameworks to a new issue area. The first of three chapters uses a principal-agent approach for a clear conceptualization of donor state preferences with regard to the choice of an institutional agent. The second chapter shows that a domestic politics perspective can explain how developing states decide whether or not to apply for health grants from the Global Fund. The third chapter again employs a principal-agent approach to shed light on the distribution of power between the institutional actors that decide about Global Fund grants.

The empirical contribution lies in the first cross-national and cross-institutional study of multilateral health aid allocation in the second chapter, while the third and fourth chapters present the results of the first large-n analysis of grant-giving by the Global Fund to Fight AIDS, Tuberculosis and Malaria. The three chapters are based on distinct, original datasets, and the aggregation and analysis of this data constituted a major component of the thesis. Quantitative methods are employed throughout the project; results are based on a series of multilevel regression models which incorporate random intercepts at the appropriate levels.

Chapter 2 asks how donor states decide how to allocate their multilateral health aid in the face of increasing institutional choice. I argue that one main heuristic used by donor states is the degree of policy congruence between them and a number of potential institutions, which is motivated by a desire to minimize delegation problems in a principal-agent setting. An empirical analysis of 22 donors' health contributions to 12 major international organizations from 2000 to 2009 finds support for this argument.

Chapter 3 explores why developing states turn to the Global Fund to Fight AIDS,

Tuberculosis and Malaria for aid, and why they so rarely capitalize fully on their chances to apply. Based on an original database of more than 3,000 decision points for 125 countries over nine years, I show that requesting aid is by no means a foregone conclusion, but one that comes with potential political costs that can offset enough of the financial benefits to keep states from applying. Rather than being primarily based on actual public health pressures or economics, the decision to apply is in fact heavily political.

Chapter 4 takes a close look at variation in grant decision-making by the Global Fund to Fight AIDS, Tuberculosis and Malaria. Using a principal-agent framework, I explore in how far grants are dependent on the preferences of different actors involved in the institutional process. An empirical analysis of Global Fund grant applications shows that technocratic variables linked to expert preferences explain whether grants are recommended for funding, and their approved grant amounts. However, donor states' political preferences still influence whether or not an applicant will receive what they asked for.

Acknowledgments

No one ever truly writes a dissertation on their own, and over the years I have been lucky enough to receive help, criticism, and encouragement from a number of parties.

This project was only possible because of generous financial support by the Irish Research Council for the Humanities and Social Sciences (IRCHSS), and the Ph.D. scholarship provided by Trinity College Dublin.

I am especially grateful to my supervisor William Phelan, who guided this project from its very beginning to completion; challenged and clarified my thinking; gave me opportunities to prove myself in research and teaching; and generously supplied extensive feedback that helped me stay on the right course both conceptually and methodically. You know your supervisor is dedicated to your work when you get hand-written comments delivered to you from the other side of the world.

I am indebted to Raj Chari, Koji Kagotani, Tom Pegram, Jeff Weber, and the faculty of Trinity College's Department of Political Science for their input, and to my friends and colleagues in the Ph.D. program, who tolerated every bad joke and heeded every call for help: Adriana Bunea, James Cross, Sander Ensink, Henrik Hermansson, Carolin Hübner, Raimondas Ibenskas, Justin Leinaweaver, and Caroline McEvoy.

I also wish to thank my friends Jochen Ehmann, Nils Gehlenborg, Björn Luithardt, Sven Luithardt, Kai Müller-Berner, Johannes Schult, Kai Vogel, and Christoffer Wittmann, who have walked this winding road with me for more than 15 years, and who have kept me sane, made me laugh, and forced me to think.

This project could not have been completed without the unwavering backing of my parents Christl and Matthias, who always believed that whatever I told them I was working on would make sense in the end. I can only hope I will one day be as loyal and supportive a parent as they have been.

Lastly, and most importantly, my deepest gratitude goes to Natalie Novick, who in the course of writing this thesis became my best friend, girlfriend, fiancée, and wife. This project only exists because of your love, encouragement, belief, and kindness. Meine Liebe, das hier ist für dich.

Contents

List of Figures

List of Tables

Chapter 1

Introduction

Public health has become one of the core development challenges facing the world in the 21st century. Guaranteeing some measure of public health has long been considered an essential state task, and is thus a deeply *political* issue. Yet health problems and diseases transcend national borders, making them and their consequences impact not only on developing states: "despite their power, it is extremely unlikely that developed countries will be able to remain an island of health in a global sea of disease" (Price-Smith 2002, p.122). As a result, states have turned to international cooperation to achieve better *global* public health provision. Health represents a particularly important issue area for exploring how states and institutions interact given that many problems and solutions lie outside the control of individual actors, comparable to areas such as environmental protection or international security.

Analyses of global health institutions from a political science perspective are surprisingly rare. One explanation is that global public health sits at the intersection of a number of other strands of research, such as studies on the more general dynamics of international institutions, on the multilateral distribution of development aid, and on the micro-level implications and in-country approaches to providing health. Even where research has explicitly turned to global health, it is often descriptive or normative, but has seldom been conducted in a theoretically informed, empirical manner.

This project aims to close the gaps in the literature and answer three closely linked questions about global health institutions that have gone unanswered: how do donor states decide to which international institutions they contribute financial resources; how do recipient states attempt to access these resources; and how do institutions ultimately translate between donors and recipients in their aid distribution. However, rather than concentrate exclusively on one particular organization or aspect of decision-making, the following substantive chapters are cross-national, cross-institutional, and cross-temporal.

Furthermore, the dissertation is structured not only to give a more comprehensive account of the institutional dynamics in the field of global health, but also to mirror the different parts of the decision-making process: institutional politics (inputs), processes (throughputs), and policies (outputs). Chapter 2 considers the question of donor contributions to a number of global health institutions, which covers aspects of institutional inputs and throughputs. Chapter 3 focuses on inputs with state applications for grants from the Global Fund to Fight AIDS, Tuberculosis and Malaria, arguably the most important global health institution of the last decade. Chapter 4 analyzes institutional throughputs and outputs by explaining how the Global Fund decides its grant distribution.

The study's theoretical contribution consists in the adaptation of well-established theoretical frameworks to a largely uncharted issue area. Approaches such as principal-agent theory have been important tools in analyzing other international institutions (Nielson and Tierney 2003; Bendor and Meirowitz 2004; Hawkins et al. 2006; Copelovitch 2010), since they allow for a clear conceptualization and distinction of the marginal effects of different actors, and they inform and guide the empirical testing throughout the project. This extension of established theories makes a comparison between global health and other, more commonly analyzed institutions and issue areas possible, and brings global health more in line with larger debates in international relations.

Empirically, the literature on global public health and the relevant institutions has generally relied on case studies (Mosley, Harrigan and Toye 1991; Killick 1998; Burnell and Morissey 2004; Lu et al. 2006; Huckel Schneider 2008*a*; Brown 2009; Whitfield 2009), with some exceptions (McLean 2012). This project remedies this lack of systematic large-n work by building and examining three separate datasets, each of which forms the basis of the first quantitative analysis of its kind. Neither Global Fund applications nor grants, nor donor state contributions to health institutions, have been the subject of a data-driven examination from a political science perspective. Collecting and refining the data necessary to adequately answer the research questions was one of the major tasks of this project. As an example, the first substantive paper on donor state contributions only involves two main independent variables and six controls, but constructing these variables entailed the creation of a dataset with several hundred thousand cells. This is due to the multiplicative effect of data spanning across multiple levels, such as several donors contributing to a number of institutions over multiple years.[1] Similar efforts of

[1] Continuing the example above, one main independent variable in the first chapter is the average geopolitical alignment of donor states with all other member states of an institution. This means that for donor A, alignment values for 22 to 191 other states (depending on the institution) have to be generated and averaged. This is repeated for each of the ten years in the study's time frame, and for

dataset creation and maintenance were made for the two chapters on the Global Fund.

All datasets involve some degree of grouping at different levels. For example, grant application success can be modeled as depending on characteristics of individual applications, but a separate model can also be fitted within each applying country, where parameters depend on country characteristics. Because applications are clustered within countries, a reliable overall model considers both the application-level regression and the country-level regression within a *multilevel* regression framework. Similarly, donor contributions or grant application decisions are clustered within states and years, and such nested data is most appropriately modeled with hierarchical multilevel regression models.[2] Multilevel modeling also offers advantages over the two alternative statistical approaches in simple ordinary least squares (OLS) estimation, and OLS regression with clustered standard errors. The former produces distorted results where observations within a cluster are correlated, and clustered standard errors are only reliable where across-cluster observations are independent—both factors cannot be considered a given (Primo, Jacobsmeier and Milyo 2007).

I begin the investigative process with the first paper, Chapter 2, that seeks to explain variation in how donors distribute their multilateral health aid budgets between a number of international institutions. Donor states face increasingly complex budgetary decisions because of an expanding number of multilateral institutions involved in global public health. How donors choose between different recipients in a *bilateral* context has been researched extensively, but the same cannot be said for the allocation of *multilateral* budgets on a range of institutions. Since states find themselves in the position of a principal choosing an institutional agent, I argue that they aim to channel their resources into institutions that minimize principal-agent problems, which are those with whom donors are policy congruent—meaning well-aligned with other state principals, and with known institutional outputs.

After the initial cross-institutional analysis, the remainder of the project concentrates on one of the most important global health institutions of the last decade, the Global Fund to Fight AIDS, Tuberculosis and Malaria (Global Fund). The focus on the Global Fund is motivated chiefly by its importance in the field of global health, and the paucity of empirical studies on its institutional processes. Furthermore, the Global Fund constitutes the most high-profile example of a new breed of international institutions existing outside

each of the 12 institutions in the sample. The process is then run again for donors B through V. As a result, one coefficient reported in the regression tables is based on around 180,000 cells of data.

[2] Such regressions are also sometimes called random-effects or mixed-effects models. Because these terms are not always defined consistently, this project exclusively uses the term "multilevel model" for the sake of clarity.

the United Nations system, which exhibit innovative governance structures such as the heavy reliance on technocratic expertise in the decision-making process, and have a lean operational structure that is built around a managerial approach to problem solving (Huckel Schneider 2008*b*). Regardless of whether the Fund is an outlier or heralding a trend in institutional design, it allows us to study the behavior of different actors in a novel institutional setting. In addition to these substantive arguments, the Global Fund provides a wealth of empirical data due to its high degree of transparency—for example, full information is available on grant applications even where they were rejected, which is not the case for practically all other international institutions.

The first of two chapters on the Global Fund, Chapter 3, asks why states decide to apply for grants from the Fund, or why they would refrain from doing so. Given that the costs of designing and filing an application seem much smaller than the potential payoffs, it is puzzling why a country on average only applies less than a third of the time it is eligible for grants. I propose that a significant part of the variation in application decisions can be explained by the domestic political situation an applying executive finds itself in. The empirical analysis shows that political costs for governments indeed reduce the likelihood of requesting aid from the Fund, and that contrary to expectations, public health concerns are of lesser importance for such decisions.

The third paper, Chapter 4, looks at variation in three key measures of the Global Fund's institutional output: which grant applications are approved for funding; the amount of money awarded to approved grants; and the discrepancy between requested and approved grant amounts. Echoing Chapter 2, a principal-agent framework is used to conceptualize the Fund's decision-making process, which provides a role for both public health experts and for political representatives of stakeholders. Based on data on grant applications from 2002 to 2010, I demonstrate that the Global Fund has been largely successful in 'depoliticizing' grant approval and grant amounts, which are chiefly determined by the preferences of health experts, and insulated from political variables. However, the discrepancy between proposed and approved grant amounts is still at least partly dependent on political preferences of the Fund's six largest donor states—developing states that are attractive to donors more often than not get what they asked for, while others can experience dramatic cuts to proposed budgets.

This project thus aims to remedy deficiencies in the literature on international institutions, global public health, and development aid, and provide a more comprehensive, empirically based account of how states and global health institutions interact on multiple levels.

Chapter 2

Donor Choice in Multilateral Health Aid

Donors of development aid for health face an increasingly complex decision when distributing their contributions. While a significant portion of aid continues to be given bilaterally, donors also have the choice of an expanding number of multilateral institutions involved in global public health. How donors choose bilateral aid recipients has received considerable attention in the literature. But how do the same donors allocate their multilateral budgets between a range of institutions? I argue that when donor states decide how to channel their multilateral health aid, they are guided by the level of congruence between an institution's policies and their own. To adequately evaluate and predict policy congruence, donors have to take all actors into account that could influence the policy-making process, meaning both member state principals and institutional agents. Donors will allocate greater parts of their health aid budgets to institutions where they are more closely aligned with both actors. The chapter presents a set of empirical tests of this argument based on financial contributions by 22 OECD donor states to 12 international institutions with health programs between 2000 and 2009. Results show that an institution receives a significantly higher percentage of states' multilateral aid budgets when donors are more aligned with other member state principals. On the other hand, it matters little if the policies of donors and institutions are aligned as expressed in spending priorities and patterns—whether institutional spending is complementary or congruent with how donors distribute their bilateral aid is unimportant when choosing to delegate health aid.

2.1 Introduction

In the decade since the turn of the millennium, developed countries have on average channeled more than 30% of their development aid through multilateral institutions, and allocated over US $40 billion to global public health programs. Donor states rely on multilateral institutions to distribute aid, but the number of such institutions involved in public health has been rising. Where the World Health Organization (WHO) once dominated the field, it has been joined by other UN organizations with substantial health programs of their own, such as the Joint UN Programme on HIV/AIDS (UNAIDS), the UN Children's Fund (UNICEF), and the UN Population Fund (UNFPA). The past 20 years have further seen a host of institutions outside the UN system becoming involved in global health such as the World Bank, the European Union (EU), the Global Alliance for Vaccination and Immunization (GAVI), and the Global Fund to Fight AIDS, Tuberculosis and Malaria (Global Fund). Faced with greater institutional choice and domestic budgetary pressures, donor states must make a complex decision about how to allocate their resources between multilateral organizations. How do donors make this choice?

While a donor state has complete authority over its bilateral aid allocation, delegation to a multilateral institution reduces control and presents two main problems: how to find common ground with other principals, and how to ensure the institution remains committed to a donor's preferences about aid distribution. Despite such concerns, multilateral institutions are attractive to donors since they allow them to pool resources, facilitate coordination, provide specialized expertise, and signal credible policy commitment—they constitute an effective way to provide global public goods (Balogh 1967). Yet little has been said about how donors choose *between* multilateral institutions and why this would change over time, even though there is a substantial body of literature that examines how donor states choose between bilateral and multilateral aid.

This chapter investigates institutional choice by examining how donors distribute their multilateral aid budget among a number of global health institutions of different

size, composition, and focus. For example, in 2000 the United States channeled 22% of its total multilateral health aid through UNICEF and 48% through the World Bank's International Development Association. Ten years later, these organizations seem to have lost much of their attraction—so much so that in 2009, both institutions *together* received not even 9% of all American multilateral contributions for health, while almost 75% were delegated to the Global Fund.

The study will look at the behavior of 22 of the 24 members of the OECD's Development Assistance Committee: Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Japan, Luxembourg, Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland, United Kingdom, and the United States.[1] Between 2000 and 2009, these donor states delegated almost US $300 billion in development aid to multilateral institutions, more than $40 billion of which were devoted to health programs run by 12 organizations: African Development Fund (AfDF), Asian Development Fund (AsDF), the EU's development aid programs, GAVI, Global Fund, the World Bank's International Development Association (IDA), the Inter-American Development Bank's Special Fund (IDB), UNAIDS, UN Development Programme (UNDP), UNFPA, UNICEF, and the WHO.

I argue that donors decide the level of delegation to a particular institution based on how geopolitically aligned they are with its member states, and how similar institutional aid allocation patterns are to their own. An institution exhibiting high *policy congruence* with a donor is more attractive because it ensures that delegation will not compromise a donor's core preferences about aid distribution. Accordingly, the more a donor prefers an institution as an allocation channel, the greater a share of multilateral health aid the agency will receive from this state.

This chapter proceeds as follows: the next section outlines donor state delegation to multilateral aid institutions (section 2.2) and shows the substantial variation in donor

[1] Excluded are South Korea, which only joined the Committee in 2010, and the European Union, whose member states are also individual members of the Committee, creating endogeneity problems.

budget allocations to a number of international aid agencies (section 2.3). I briefly examine the state of the literature (section 2.4), and offer a principal-agent framework for analysis (section 2.5). Following this, the impact of policy congruence between donors and institutions is tested on a dataset spanning the period of 2000-2009 for 22 donor states (section 2.6). The chapter concludes by summarizing key findings and their implications for our understanding of multilateral aid, and international institutions more generally (section 2.7).

2.2 Delegation to Multilateral Aid Institutions

International relations scholarship has increasingly employed principal-agent models over the last decade (Nielson and Tierney 2003; Bendor and Meirowitz 2004; Hawkins et al. 2006; Copelovitch 2010). The principal-agent approach explains why and how a principal—a state, or a group of states as a collective principal—grants conditional authority to an agent that empowers the latter to act on behalf of the former, in what is commonly known as delegation (Hawkins et al. 2006). Considering that development aid can be used as a powerful method to influence recipient states and pursue political and economic state interests, states should be reluctant to hand over control of this tool to an international organization. Donors cannot keep complete control since they are unable to sufficiently monitor the agent (perfect monitoring would be prohibitively expensive), which inevitably leads to some degree of 'agency slack', and to outcomes that might not be in the principal's direct interest. It is for this reason that delegation to multilateral agencies can be a controversial move for governments, and might be unattractive for those under domestic pressure to retain sovereignty (Lake 2007).

In all multilateral aid agencies, member states and other political stakeholders hold some form of ultimate authority over institutional policymaking, but certain parts of the decision-making have been delegated to agents. Their tasks can range from the more

trivial to the vitally important, from compiling documents, and preparing meetings, to shaping institutional agendas and strategies, or determining resource distribution. A central tenet of principal-agent theory holds that all agents possess and pursue their own interests and aim to maximize their autonomy within the constraints that principals set out. In the case at hand, this should be easier to achieve because it constitutes a situation of common agency, or multiple principals. Control over international institutions is not exercised by a unified principal acting on coherent preferences, but rather multiple principals with imperfectly overlapping preferences about the agent's behavior—as a result, overseeing the agent is more difficult, and its independence is increased(Nielson and Tierney 2003; Copelovitch 2010).

Despite these drawbacks, there are several reasons why donors could find delegation useful: institutional agents gather information, monitor compliance, or provide specialized expertise; they make policy coordination and dispute resolution easier; or even serve as a convenient scapegoat for unpopular decisions and policies (Haas and Adler 1992; Koremenos 2008). Milner (2006) points out that donors can also convince domestic audiences of the altruism of their actions when they delegate to multilateral institutions, while still using bilateral aid budgets to further their political goals. All this can make multilateral assistance a very attractive option for donors.

This leaves open the question how donors minimize the risk of a 'runaway agent' acting against their interests. There are two possibilities for principals: use incentives and punishments to keep the agents in line even in the absence of perfect monitoring (Weingast 1984; Miller 2005), or allocate aid to organizations whose policies are already congruent with the donors' preferences. The latter is an especially effective strategy because it allows donors to enjoy the benefits of institutional delegation without the need for constant negotiation, supervision, or a potentially costly circle of punishing and rewarding their agent. It also explains why principals in a number of international organizations (such as the Global Fund, see Chapter 4) rarely, if ever, exercise their power

to modify or reject program proposals and staff recommendations: if the donor is sufficiently certain that an agent's preferences are already aligned with its own, adjustments can be kept to a minimum.

Taken together, the risks and benefits of delegating aid allocation to multilateral institutions suggest that donors' dominant strategy will be to regularly go 'forum shopping', re-evaluate institutional policies, and choose to contribute more to institutions whose known policy preferences are aligned with their own. Since an organization's policies are determined by collective decision-making among the principals, but influenced and modified by agents, donors will delegate greater portions of their budgets to institutions where they are more closely aligned with both parties.

Multilateral cooperation on health is especially useful to test such hypotheses about institutional choice, because donors can select among a relatively limited number of international agencies with substantial health programs, but the institutions themselves vary greatly in size, structure, and scope. The menu of donor choice includes organizations both regional or global (AfDF or UNDP), old or new (IDA or GAVI), state-centric or including other actors (WHO or Global Fund), generalist or focused on specific diseases (UNICEF or UNAIDS), and a number of other criteria.[2] The following section will outline the observable outcome of donor preferences about delegation to these different agencies, namely the varying allocation of resources.

2.3 Variation in Multilateral Aid Allocations

The 22 donor states in the sample show great variation in how they allocate their health budgets to the 12 multilateral institutions that are classified by the OECD as having substantial global health programs (OECD 2011).

The dependent variable capturing this variation is the *percentage of a donor's total multilateral heath aid channeled through institution X in year Y*. While the interpretation

[2] See table 2.1 (pg. 11) for an overview of the institutions in the sample.

Table 2.1: Multilateral institutions included in the sample

Name	Abbreviation	Founded	Principals	Spending on health	UN-affiliated
African Development Fund	AfDF	1972	71	0.8%	no
Asian Development Fund	AsDF	1973	62	2.2%	no
European Union development aid programs	—	1957	27	7%	no
Global Alliance for Vaccination and Immunisation	GAVI	2000	21	100%	no
Global Fund to Fight AIDS, Tuberculosis and Malaria	Global Fund	2002	31	100%	no
World Bank International Development Association	IDA	1960	170	8.1%	no
Inter-American Development Bank Special Fund	IDB	1989	47	2.0%	no
Joint United Nations Programme on HIV/AIDS	UNAIDS	1996	36	100%	yes
United Nations Development Programme	UNDP	1965	36	3.7%	yes
United Nations Population Fund	UNFPA	1971	36	100%	yes
United Nations Children's Fund	UNICEF	1946	32	15%	yes
World Health Organization	WHO	1948	192	88%	yes

of the variable is intuitive, it is not always as straightforward to calculate as in the case of bilateral aid. First, it is established what amount of a donor's imputed multilateral aid to health is channeled through a particular institution. As an example, Finland allocated $24 million in total to the United Nations Children's Fund (UNICEF) in 2009, and in turn the agency spent roughly 15% of its budget on health programs in the same year—as a result, Finland's imputed multilateral aid to health through UNICEF in 2009 was 15% of $24 million, or $3.6 million.

Second, this result is expressed as a share of all imputed multilateral aid to the twelve institutions in the same year. Finland channeled $62 million in imputed health aid through all agencies, meaning its contribution to UNICEF represents 5.8% of its multilateral health aid in 2009. In other words, out of all its aid to the health sector through multilateral channels, Finland let UNICEF distribute only 5.8%, compared to 20% for UNAIDS, and almost 50% for the UN Population Fund.

Other donors prefer delegating to different agents. For example, Canada channeled more than 70% of all multilateral health aid through the Global Fund in 2009, and Greece allocated 80% of its budget to programs run by the European Union. However, aid allocation choices do not only vary between donors, they also change significantly and frequently over time for each donor. As outlined before, the aid allocation patterns of the United States changed radically in the space of nine years: in 2000, it channeled 70% of its health aid through UNICEF and IDA, but the percentage dropped to barely 9% in 2009. This loss was primarily the Global Fund's gain, which increased its share of American multilateral contributions for health from zero to almost 75% during the same time frame. The United Kingdom's aid allocation underwent a similar transformation from 53% of health aid going through the World Health Organization in 2000, to only 9% in 2009.

The imputation of contributions is necessary because donors normally contribute to an agency's overall budget, rather than allocate funds to individual issue areas such as

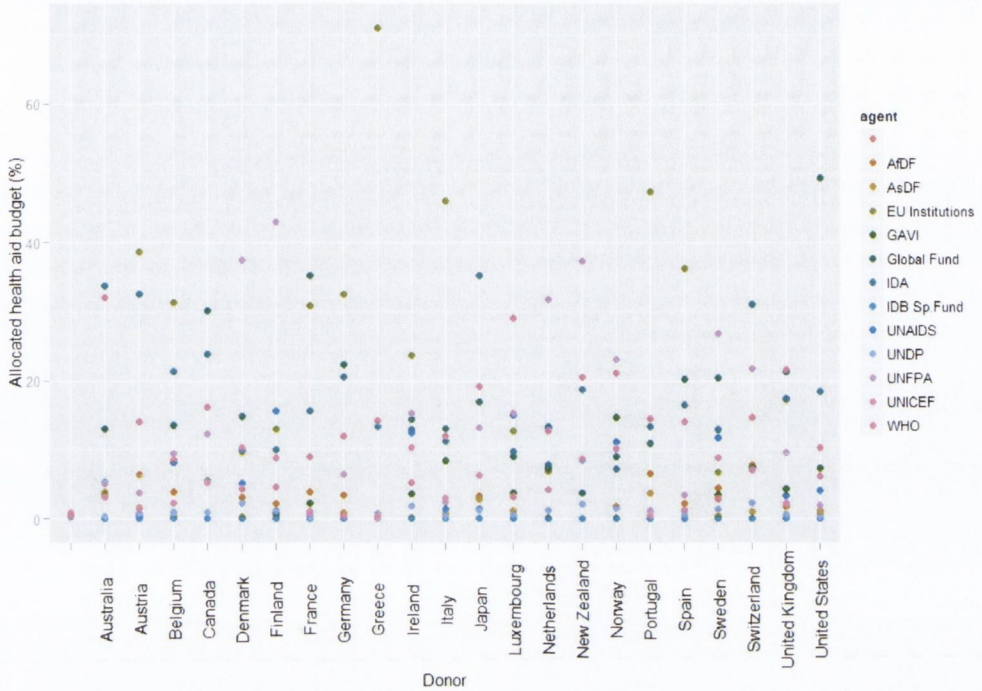


Figure 2.1: Percent of donors' multilateral health budgets allocated to institution. Points represent the ten-year average for a donor-institution dyad.

health. Imputation is not needed if an institution spends 100% of its funds on health programs (like the Global Fund or UNAIDS), and if donors delegated only to such organizations, this computational step would be altogether unnecessary. However, many states give substantial amounts to organizations such as the World Bank's IDA, which is an important actor in global health, but only devotes 7-10% of its budget to the issue. What is more, donors might systematically prefer (or dislike) delegating to such mixed-function agencies, and this variation would be lost if they were excluded from the analysis. Calculating imputed multilateral aid is a method developed by the OECD Development Co-operation Directorate (2011), to which both donors and multilateral institutions directly report their yearly spending allocations. Despite its usefulness and data availability, imputed multilateral aid only been used in a handful of previous studies (Rajan and Subramanian 2005; Powell and Bobba 2006; Woods 2008).

Figure 2.1 presents the substantial variation in health aid allocations to various in-

ternational institution among the donors in the sample, and shows that some states have clear preferences for particular institutions. For example, Mediterranean states such as Greece and Italy strongly prefer delegating to EU programs, even where other European countries do not, while the US and—to a lesser degree—Canada allocate most of their multilateral health aid to the Global Fund. UN-affiliated agencies such as UNAIDS, UNICEF, and the WHO have trouble attracting larger parts of donors' health budgets, with the exception of the UN Population Fund (UNFPA), which is heavily used by small-volume donors like Denmark, Finland, and New Zealand. The differences in how well institutions are able to attract large parts of donors' budgets can further be seen in Figure 2.2.

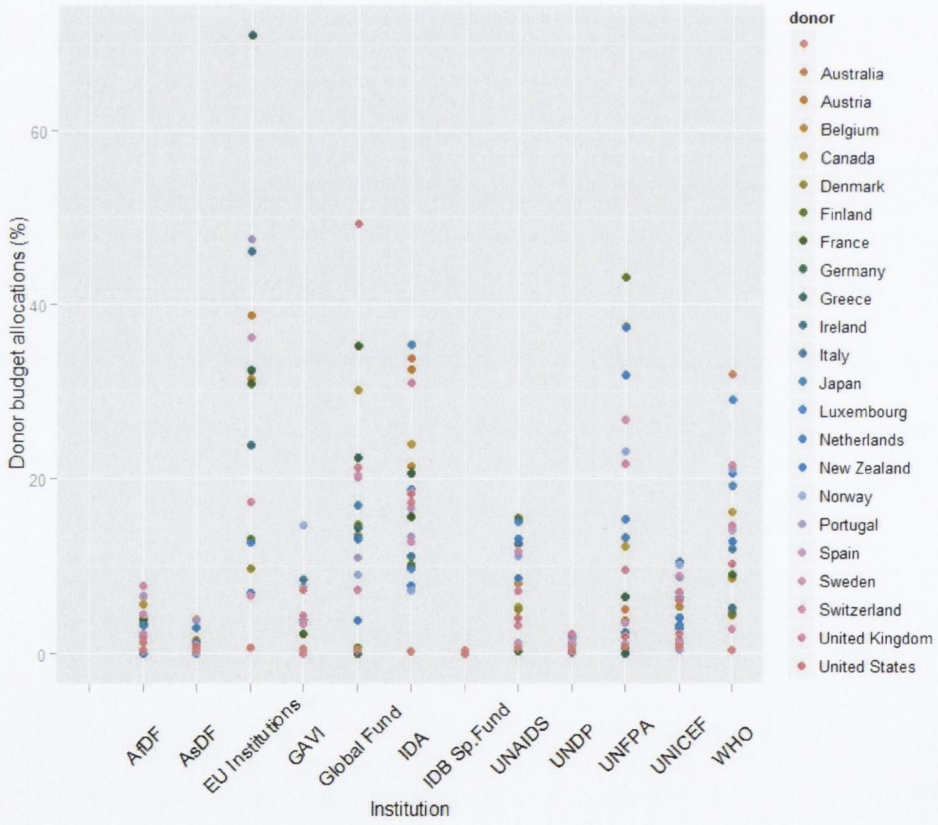


Figure 2.2: Percent of multilateral health aid allocated to institution. Points represent the ten-year average for a donor-institution dyad.

To summarize, donor preferences about delegating multilateral aid can be measured by what percentage of all health aid was channeled through an institution in a particular year. The more preferred an institution is as an allocation channel by a donor, the greater the share of this state's multilateral health aid it will receive.

2.4 State of the Literature

Despite the number of studies on development aid in general, global public health remains understudied in international relations scholarship. To date, no systematic study of donor contributions to multilateral health institutions has been published. However, there are a number of useful strands in the literature on aid, and on delegation, that can help provide context for the question.

The more general assertion that states aim to make use of multilateral institutions to pursue foreign policy objectives is exceptionally well-supported by the literature. Authors providing evidence of this behavior include Alesina and Dollar (2000); Burnside and Dollar (2004); Oatley and Yackee (2004); Broz and Hawes (2006); Dreher, Sturm and Vreeland (2009*b*); Bearce and Tirone (2010); Copelovitch (2010); Vreeland (2011), and others.

In the case of development aid, donor states typically specify which share of the aid budget will be allocated to multilateral institutions, and which share is to be given to recipient states bilaterally. The literature remains dominated by studies on bilateral aid relationships (Mckinley and Little 1979; Maizels and Nissanke 1984; Schraeder, Hook and Taylor 1998; Alesina and Weder 2002; Dollar and Levin 2006), and normally focuses on the reasons why donors allocate aid to a specific recipient country. Donors commonly reward developing nations that are of political, economical, or strategical importance to them, although this behavior is not entirely consistent across donors: France, Italy, and Japan are especially 'egoistic', in that donor interest clearly outweighs recipient need as

a determining factor of foreign aid, while Austria, Switzerland, or the Nordic countries are much more 'altruistic' (Berthelemy 2006). Notwithstanding some diverging results, there is a general agreement that bilateral aid allocation is a strategic choice by donors, and there is nothing to imply this would be different for multilateral aid allocation.

In contrast to bilateral aid, the concrete factors explaining donor delegation to multilateral agencies have rarely been investigated, and even then authors typically concentrate on one case (Nielson and Tierney 2003; Martin 2006; Copelovitch 2010). These studies are still useful points of departure, as they show that states are indeed more amenable to delegation when their own preferences and those of their agents are aligned (Martin 2006). Milner (2006) explains a donor's choice between bilateral and multilateral delegation, and provides a number of variables influencing the delegation decision. The only cross-institutional quantitative analysis of donor choice in multilateral aid to date has been conducted by McLean (2012), which is also based on a OECD dataset. The article focuses on EU-15 donors and three international institutions, but does not cover a particular issue area such as health. McLean provides statistical evidence that donor states systematically prefer delegation to agencies with whose members they are more closely aligned—where preferences converge, donors are more comfortable with allocating larger parts of their budgets.

On the theoretical level, there have been several decades of attempts in different disciplines to model the behavior and interplay of principals and agents. Miller (2005) provides a comprehensive overview of the use of principal-agent theory in political science, including its roots in the economic analysis of insurance such as Spence and Zeckhauser (1971). The case of donor choice presents an additional complication of the 'canonical' principal-agent model, in that it has to account for situations of multiple principals, which relaxes the original assumption of a unified principal acting on coherent preferences in much of the economic literature. Studies show that this creates problems for both sides, in that principals lose some degree of control over the articulation of inter-

ests, and that agents find themselves faced with a range of preferences, some of which might be conflicting (Moe 1987). The shortcoming of the majority of research is that it concentrates on multiple principals overseeing *one* agent, rather than looking at a plurality of actors on both sides.

To summarize, donor choice in multilateral aid in general, and in health aid in particular, has not been studied in the theoretically informed, methodically rigorous way seen in studies of other issue areas and institutions. This chapter aims to close this gap and explain how donors choose which agency to delegate to.

2.5 Modeling Donor Choices

Expressed in general theoretical terms, a donor state's goal in the distribution of multilateral resources is that it complements or enhances the donor's foreign policy objectives towards the recipients of said resources. Domestically set objectives for development aid range from a more self-interested propensity to strengthen trading partners, to encouraging democratic processes and peace, or the collective good of environmental preservation. While donors differ greatly in how they order and prioritize these objectives, they have in common that they do not only want bilateral aid to reflect these priorities, but also multilateral aid. The agents in the distribution of multilateral aid are the international institutions acting as middlemen, and on the most basic level, their primary goal is to maximize their budget, autonomy, and influence. In the scenario at hand, however, the principals do not *have* to interact with one particular agent, but can rather pick and choose. This heavily favors donors that are willing to take their resources elsewhere if they are dissatisfied with an agent, and puts institutions at a disadvantage that is not part of a regular principal-agent setting. For this reason the remainder of the chapter puts the emphasis squarely on donor choice.

Delegation to a multilateral organization comes with substantial benefits, but is not

without cost. The greatest risk for a state is to delegate authority and resources to an institution which then pursues policies vastly different from donor preferences, and thereby greatly reduces the usefulness of development aid as a strategic tool of foreign policy. To prevent this, a donor can either monitor, punish, and incentivize one particular agent to enforce a congruence of preferences, or choose between different agents and allocate most resources where principal and agent preferences are already congruent. The latter incurs less institutional friction, limits the need for negotiation, and as a result is more cost-effective. I argue that the main heuristic used by states to choose *between* organizations is based on policy congruence—the alignment with other principals, and with the institutional agent.

Policy congruence is attractive to donors because it allows them to avoid most costs of delegation, but still use the organization to coordinate and implement the policies they prefer unilaterally. When donors make decisions based on predictions about whether an institution's policies will be congruent with their own, they have to take into account all actors that may influence the policy-making process. In most organizations, policies are created through the interplay of state principals and institutional agents. It is still contested within the literature whether it is principals or agents who have the last word on institutional policy, and arguments and empirical evidence have been provided for either side (Schraeder, Hook and Taylor 1998; Flinders and Buller 2006; Barnes and Brown 2009; Börzel 2009; Kilby 2010) or even for both (Copelovitch 2010). The reason for these disagreements is that the power balance between principals and agents is context-sensitive and differs between different organizations, so a cross-institutional analysis cannot assume it to be constant. The chapter at hand circumvents this problem by allowing a state to consider the preferences of principals and the possible influence of agents when evaluating policy congruence.

2.5.1 Alignment with Member States

Rather than choosing a venue for cooperation first and then trying to influence and possibly change its members' preferences, it is considerably cheaper for a donor to determine what states they are already aligned with, and then delegate to institutions that maximize the number of aligned member states.

Less aligned preferences can make delegation an unattractive choice, because negotiations become more difficult—and thus more costly—when countries disagree about which institutional policy to adopt. More importantly, divergent preferences mean that any policy resulting from institutional negotiations will only be satisfactory to some members, but not to others; the more heterogeneous state preferences are, the greater the chance for an individual donor to end up on the 'losing' side with an institutional policy not in line with its own preferences. Furthermore, oversight in all institutions in the sample is exercised collectively, meaning that member state assemblies or executive committees supervise the execution of institutional responsibilities. This presents a double challenge for donors: not only is supervision itself imperfect, but it might also be exercised by a part of the institution that does not include themselves. This provides a very strong incentive for donors to favor institutions which are overseen by states with which they are closely aligned (De Wet 2008).

Preference alignment will be measured using the Affinity of Nations dataset (Gartzke 2006), which provides scores for the similarity of votes in the UN General Assembly. A number of studies have shown that voting similarity provides a useful shorthand for overall geopolitical alignment (Voeten 2000, 2008; Vreeland 2003, 2011), and greater alignment has already been found to positively influence aid allocation, albeit in a bilateral context (Dreher, Nunnenkamp and Thiele 2008). Note that UN voting similarity is intended purely as a proxy for how aligned state preferences generally are, but this does not presuppose that donors themselves actually use these records as a base for policy decisions in other issue areas. However, states that generally agree on topics as

diverse as those discussed in the General Assembly will rarely have diametrically opposed preferences in other institutions.

To measure preference alignment, the average similarity of UN voting between a donor and all other members of the organization is calculated for each donor-institution pairing in a given year. As an example, to generate Germany's alignment with the WHO's principals in 2008, I identify the UN voting alignment score between Germany and each of the 192 other WHO member states in 2008, and calculate the average of all these values. The result of 0.62 (on a scale of ± 1) indicates that Germany is fairly closely aligned with WHO members, but considerably less aligned than with Global Fund principals, where Germany scores 0.75 in the same year. McLean (2012) employs a simpler operationalization of preference alignment, identifying only the member state of an institution which is least aligned with a donor state (the minimum value for alignment between a donor and all other members). A major weakness of this method is that it overemphasizes negative outliers: especially in large institutions, finding at least one state with unaligned preferences is highly likely even if a donor were perfectly aligned with all other states.

A high value means that the donor is closely aligned with many other member states, and it should allocate larger parts of its health aid budget to the agency as a consequence. Hypothesis 1 can thus be stated as follows: *donor states will channel larger parts of their health aid budgets through institutions with whose member states they have more aligned preferences.*

2.5.2 Alignment with Agents

In the principal-agent setting of international organizations, institutional policies are not just determined by member states, but also influenced by agents—an institution's leaders, its staff, or independent experts consulted during the decision-making process. Depending on the institution, such agents can have a significant and sometimes decisive

impact on how policies are made and implemented, which makes ignoring them a risky strategy. In addition to member state alignment, donors thus also have to evaluate and predict the degree of policy congruence between themselves and the institutional agent.

In contrast to state alignment, agents' preferences are much harder to discern, even though the policy-relevant positions of leaders such as the WHO's Director-General are normally known. However, many other agents active in the decision-making process deliberately refrain from publicly stating preferences to appear impartial, and donors cannot extrapolate from actor behavior in other issue areas and voting records as in the case of member states. From a donor's perspective, agents are thus part of an institutional 'black box', their preferences and influence largely hidden from view. A reliable way for donors to still determine their policy congruence with agents is to disregard the institution's internal workings, and instead evaluate its outputs—in this case, its aid allocation patterns. These spending patterns are not random, but the result of principals' policy preferences that have been interpreted and transformed by agents. In other words, institutional outcomes at least partially reflect what agents want, and donors can compare the resulting patterns to their own preferred allocation of aid in order to judge how aligned they are with the agency.

The alignment between preferred and actual outcomes can be determined by comparing a donor's bilateral aid allocations and an institution's multilateral spending patterns. Bilateral aid serves as a baseline since it remains entirely under control of the donor and should thus give an unfiltered account of its preferences in global health. A donor might, for example, designate the prevention and treatment of sexually transmitted diseases (STDs) to be its primary health policy goal. These priorities are easily identifiable in the donor's bilateral aid budget, where a large proportion is spent on combating STDs. The patterns can then be compared to those of various multilateral organizations, and the donor should be most inclined to delegate to the institution that most closely mirrors its own spending.

The congruence between donor and institutional policy will be measured using OECD data on 'Aid to Health' (OECD 2011). The data breaks down the amounts given as health aid into 17 distinct spending categories such as 'health education' or 'malaria control', and it does this both for donors' bilateral aid and for multilateral funding by the institutions in the sample. For each sector, I convert the spent amount into a percentage of all health aid, and then calculate the sum of absolute distances between all these percentages for each donor and institution. The result is a measure of how similar donors and institutions spend their their money—high distance values indicate that a donor prefers to spend its bilateral aid on very different sectors and programs than the multilateral institution.

As an example, in 2005 Sweden allocated around 42% of its bilateral health aid budget to STD programs (including HIV/AIDS) and 10% to basic health care infrastructure, while the Global Fund spent around 55% of its budget on STDs and nothing at all on infrastructure. The sum of absolute distances is 13% + 10% = 23% for the two issue areas; or 115% summed up across all 17 spending categories identified by the OECD. In the same year, the difference between Sweden's bilateral spending and the aid allocated by the Asian Development Fund was 169%, implying that Sweden's aid priorities are much closer to those of the Global Fund than the AsDF. As a consequence, Sweden favors the Fund in delegating its multilateral health aid.

Hypothesis 2 can thus be stated as follows: *donor states will allocate larger parts of their health aid budgets to institutions whose multilateral spending patterns are more similar to donors' bilateral ones.*

To summarize, I argue that donors prefer delegation to agencies with which they have congruent policies. Donors will judge the degree of congruence based on both the geopolitical alignment with other member states, and on the policy overlap as expressed by spending patterns. All else being equal, states will delegate preferably to institutions with whose members they agree geopolitically, and share similar aid policies.

2.5.3 Control Variables

The literature has identified a number of variables that influence budget allocations by donors and could be used as controls. Their usefulness is limited however, because they usually explain why donors delegate bilaterally or multilaterally, rather than why they would prefer one multilateral channel over the other. Milner (2006) contends that wealthier countries—measured by GDP per capita—will be more likely to allocate their aid on a bilateral basis, since their financial power makes the multilateral pooling of resources less necessary. Whatever the veracity of this claim, the variable cannot explain what multilateral institutions more or less affluent donors will prefer. The same is true for other variables such as population size or the level of government spending as a percentage of GDP.

The study will nevertheless include several control variables in order to account for possible systematic variation between donors. The basic controls of donors' GDP per capita, population, and government spending as a percentage of GDP will show whether wealthier donors prefer to distribute their donations among fewer institutions, for example. There are two potentially confounding factors directly related to an institution: the size of its membership, because countries might prefer delegating to institutions with fewer members in order to reduce negotiation times and overall preference heterogeneity (Kahler 1995); and how much of its budget is spent on actual health programs. Donors might prefer organizations which specialize in one area—in this case, health—rather than divide their budget between many avenues for development assistance. The control variable will be the percentage of an institution's total budget spent on heath programs.

2.6 Empirical Analysis

This section describes the construction of the dataset used for testing the explanation outlined earlier, the statistical methods, and the results of the analysis. Table 2.2

provides summary statistics of the dependent, independent, and control variables.

Table 2.2: Summary Statistics: Multilateral Health Aid

Variable	n	**Mean**	**SD**	**Min**	**Max**
Dependent variable					
Share of multilateral health aid (%)	2570	8.56	13.49	0	90.21
Independent variables (policy congruence)					
Alignment with member states	2537	0.66	0.26	-0.71	0.98
Alignment of spending patterns	1808	144	39	20	200
Control variables					
Number of institution's members	2640	64	55	21	193
Institution's budget for health (%)	2640	45	47	0.8	100
Population size (log)	2640	16.6	1.42	13	19.5
GDP per capita (log)	2640	10.1	0.37	9.3	10.9
Government spending (%)	2640	19.4	3.5	10.8	27.3

2.6.1 Dataset

I created a dataset containing information about the aid allocations of 22 OECD donor states. The dataset tracks these donors' financial contributions to 12 international institutions between 2000 and 2009, and is based on direct reporting to the OECD Development Co-operation Directorate. A state has 120 data points, one per institution per year; each point indicates what share of its total contributions to all 12 global health organizations a donor assigned to institution X in year Y. For the sake of simplicity, the chapter assumes that these institutions constitute all viable avenues for multilateral health funding, meaning that each year, one donor's contributions across all 12 organizations will always sum up to 100%. Values of zero are possible if a donor did not allocate resources to a particular organization; data points were only omitted if a state could not possibly have delegated aid distribution to the institution, such as Australia not contributing to European Union programs. See table 2.1 (pg. 11) for an overview of the institutions in the sample and their key characteristics.

The independent variable of member state alignment was generated by averaging a donor state's Affinity of Nations scores (Gartzke 2006) with all other members of an institution in a specific year. Alignment with institutional policies was calculated from OECD data on health aid spending by sector, which is based on direct reporting of states and institutions. The World Bank Data Catalog (World Bank 2012) provided the continuous control variables of GDP per capita, population size, and government spending as a percentage of GDP. The number of an institution's member states was obtained from their respective websites; for institutions where steering committees or councils set institutional policies without the involvement of all members, the size of this body was used instead of general membership.

2.6.2 Statistical Methods

Several multilevel regression models were specified where the dependent variable is the multilateral health aid channeled through institution X in year Y, expressed as the share of the donor's total contributions in this year. The models include country-level and year-level random effects which allow the intercept of the regression line to vary by donor and year (Gelman and Hill 2007); the effects are not incorporated into the slope since the purpose is to create a plausible average model for all countries, rather than for each individual state.

There are two alternative statistical approaches: simple ordinary least squares (OLS) estimation, and OLS regression with clustered standard errors. The problem with the first techniques is that it greatly underestimates standard errors where observations within a cluster (such as a donor state) share certain characteristics, and as a result the OLS estimator is not the best linear-unbiased estimator. OLS regressions can be improved by using cluster-adjusted standard errors, which allows for within-cluster observations to be correlated. However, clustered standard errors require across-cluster observations to be independent, which is not the case for the data at hand: it cannot be

assumed that each donor's contributions are independent of those of other states, and the same is true for observations across years. These limitations make a multilevel modeling approach necessary (comp. Primo, Jacobsmeier and Milyo 2007; Gelman 2006).

The main concern about the dependent variable is autocorrelation, meaning that a state's contributions in year X could simply be a continuation of those in year X-1, with minor corrections at best. A preliminary analysis showed that donor contributions are indeed correlated across years, even though states do not shy away from making major adjustments between budget cycles. Such autocorrelation can still distort the results if left uncontrolled. The regression models thus include the dependent variable lagged by one year as a control variable, which is a standard method of accounting for autocorrelation.

The control variables of population and GDP were logged before their inclusion in the model. All independent variables are lagged by one year, and non-binary independent variables were transformed by centering and dividing by two standard deviations in order to make regression coefficients comparable on a common scale (Gelman 2008). Because of this transformation, non-binary coefficients can be directly interpreted as the expected changes in the dependent variable that correspond to two-standard-deviation changes of each numeric input. In other words, the coefficient is the expected change in the percentage of a donor's budget allocated to an institution when comparing a low and a high value of a given explanatory variable, while keeping all other factors at their mean. A table providing the coefficients for untransformed variables is available at the end of the chapter.

To make the individual contributions of the two facets of policy congruence clearer, they are first entered separately into models 1 and 2, and then combined in model 3. As is discussed in greater detail below, a fourth model was then run which excludes the European Union as an agency, in order to test whether the results are mainly driven by EU member states allocating their budgets to EU programs.

2.6.3 Results

Table 2.3 shows the results of the multilevel linear regressions which model the percentage of a donor's health aid budget allocated to an institution.

Table 2.3: Modeling the share of a donor's budget delegated to an institution

	Model 1	Model 2	Model 3 *All Institutions*	Model 4 *EU excluded*
Policy congruence				
Member state alignment	**2.05**		**3.22**	**2.55**
	(0.64)		(0.80)	(1.17)
Spending pattern alignment		**1.22**	**1.10**	-0.44
		(0.55)	(0.55)	(0.71)
Control variables				
Size of institution	**0.88**	-0.20	0.41	**3.91**
	(0.39)	(0.46)	(0.49)	(0.62)
Institution health spending	**1.78**	**2.36**	**2.43**	**3.75**
	(0.36)	(0.49)	(0.49)	(0.62)
Population size	**1.69**	-0.26	**2.39**	1.59
	(0.65)	(0.49)	(0.83)	(1.17)
GDP per capita	0.12	-0.34	-0.15	-1.95
	(0.37)	(0.48)	(0.48)	(0.67)
Government spending	-0.05	-0.09	-0.13	-0.34
	(0.39)	(0.48)	(0.49)	(0.68)
Autocorrelation control	**0.74**	**0.72**	**0.71**	**0.73**
	(0.01)	(0.02)	(0.02)	(0.03)
(Intercept)	2.25	2.80	2.98	4.00
	(0.22)	(0.30)	(0.30)	(0.40)
N	2291	1687	1675	1543

Bold coefficients significant at $p \leq .05$. Standard errors in parentheses.

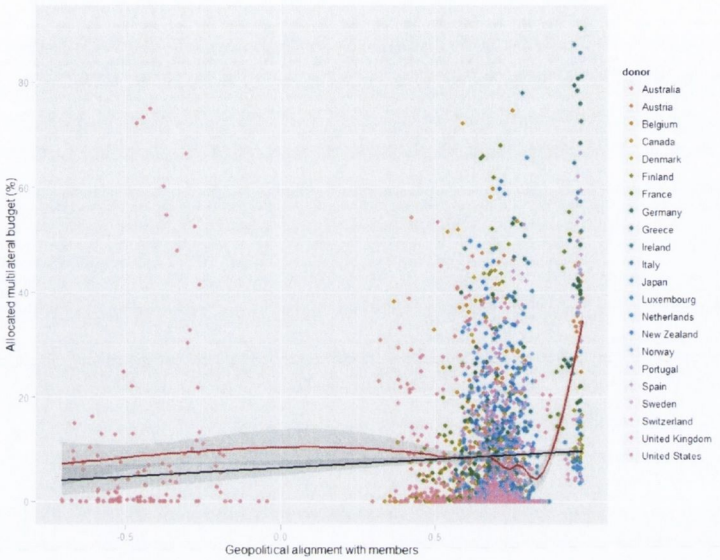
The results support one hypothesis about the effect of policy congruence on the choice of multilateral institution, but not necessarily the other. Alignment with an institution's principals consistently points in the hypothesized direction and is highly statistically significant. However, the proxy measure for alignment with institutional agents—alignment of bilateral and multilateral spending patterns—loses its significance entirely when EU

institutions as a distribution venue are excluded, and exerts less influence than principal alignment. The findings show that donors indeed evaluate policy congruence when they choose to which institution to delegate, but they seem to be focused on finding allies among principals, rather than pay much attention to agents' influence on institutional outcomes. Institutions where a donor is more closely aligned with member states receive a significantly greater share of the donor's total multilateral health aid budget, and this result is robust in different model specifications.

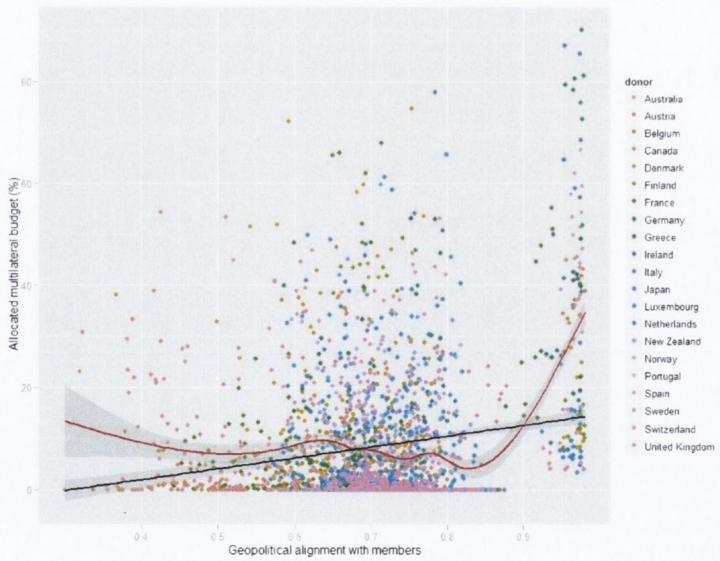
Alignment with Member States

Figure 2.3 presents the overall relationship between member state alignment and budget allocations in simplified graphical form (see Kastellec and Leoni 2007), with each point signifying a donor-institution dyad in a particular year. The United States is an extreme outlier when it comes to UN voting alignment, since it regularly votes against a majority of General Assembly members as evident in sub-figure (a); however, sub-figure (b) shows that the overall trend holds whether the US is included in the sample or not. Although the substantive effect of member state alignment seems modest, the local regression slope rises sharply for institutions where states are very closely aligned.

This effect is confirmed by the full multilevel models shown in table 2.3. In model 3, which includes all 12 agencies in the sample, an institution will receive a 4% larger share of a state's multilateral health budget if the donor scores is close to perfectly aligned with other members (socring 1 on the ± 1 alignment scale), compared to an organization where member preferences are opposed (at an alignment of -1). Especially considering that the model is relatively parsimonious, and controls for the previous year's contribution, the size of the effect is substantial: in 2009, each donor distributed an average of over $240 million among the 12 institutions, which means that an institution fortunate enough to consist of highly aligned members can expect almost $10 million greater multilateral contributions from just one average OECD donor. This can have a large impact on



(a) All donors



(b) US excluded

Figure 2.3: Donors' allocated budgets by member state alignment, with linear and local regression lines.

an institution's overall budget, and is clear empirical evidence for the importance of member state alignment to donors, consistent with findings from previous studies on other institutions (Martin 2006; Copelovitch 2010; McLean 2012).

As indicated by figure 2.3, the biggest question about the effect of alignment is whether it is skewed by the inclusion of European Union development aid programs. The states that can use this agency are normally closely aligned, and at least some EU members (especially along the Mediterranean) seem to also strongly prefer EU programs in their allocation decisions. To test the robustness of the result in the face of this problem, model 4 excludes EU aid programs as a possible agency, and re-calculates the budget allocations for the remaining 11 institutions in the sample. However, the variable maintains its statistical significance, and the effect magnitude actually increases in substantive terms: a donor will allocate around 20% of its total multilateral health aid budget to a non-EU institution with whose members it is highly aligned, compared to only 15% on average for an agency with misaligned principals.

The regressions provide robust statistical evidence for the positive influence of principal alignment on budget allocations, but naturally cannot fit all institutions equally well since they constitute average models. To be able to examine cross-institutional trends in the underlying data and the main independent variables, a look at regression graphs for each institution (see figure 2.4) is helpful. Since graphing a regression with seven predictors is impractical, the graphs show simplified regressions with only one independent variable of interest. These regressions reveal that there are indeed differences in how well the models describe the effect of member state alignment. While most institutions show a positive relationship between the two variables, GAVI and the Global Fund go against this trend, because a significant number of well-aligned donors did not delegate any funds to the agency. This is especially surprising in the case of the Global Fund, which has an excellent track record of attracting large parts of donors' budgets for an agency outside the UN system. However, it is relatively simple to explain this aberration:

Figure 2.4: Budget allocations and member state alignment by institution, with linear and local regression lines displayed. US as an alignment outlier has been excluded to make graphs more readable.

GAVI and the Global Fund were both only created at the beginning of the dataset's time frame (in 2000 and 2002, respectively), and a majority of donors are clearly unwilling to 'gamble' large parts of their budgets on young institutions that might experience significant teething troubles. The fact that both organizations have successfully acquired substantial budget allocations in recent years implies that they will eventually confirm the effects of member state alignment.

Alignment with Agents

The evidence for the second independent variable of interest—alignment between principal and agent as proxied by bilateral and multilateral spending patterns—is inconclusive. In models 2 and 3, greater overlap between donor and institutional spending does indeed lead to larger budget allocations. However, the variable loses its significance when EU institutions are excluded in model 4. The predictor's uneven performance can also be seen when simplified regressions for each institution are graphed in figure 2.5.

The models show that states are somewhat more likely to delegate to agents with which they are aligned. The more similar the spending preferences of a donor and an institution are—the higher the alignment values—the more resources the organization will receive. In other words, a donor will 'punish' institutions that spend their multilateral aid in a very different fashion to how it allocates its bilateral aid. This implies that as hypothesized, donors are looking for congruence, rather than complementarity, when they choose where to delegate their multilateral aid. However, the effect is rather small in substantive terms: moving from one standard deviation below the mean of spending alignment to one above means that a donor will only reduce its allocated budget by about 1%, depending on the model.

The variable's significance and small effect across models is somewhat surprising, since it indicates that donors do seem to consider institutional policies as expressed in spending priorities and patterns, but that these are not really a guiding factor when

Figure 2.5: Budget allocations and spending pattern alignment by institution, with linear and local regression lines displayed.

choosing to delegate health aid. It remains to be seen whether this finding is unique to the issue area of health, or whether states indeed pay little attention to the output side of aid institutions, as long as they are reasonably aligned with members.

Control Variables

Only two control variables are consistently significant across models: institution size and spending concentration. Contrary to expectations, donors do not seem to shy away from institutions with a large membership, even though conventional wisdom indicates that broader participation has a detrimental effect on the depth of cooperation (Koremenos, Lipson and Snidal 2001). One possible explanation is the mixed effect of size: as the number of states in an institution increases, so does the likelihood of preference heterogeneity, which states should aim to avoid. On the other hand, a larger membership slows down potentially unwanted policies due to the increased difficulty to find majorities. The finding might further be specific to the case of health aid—tackling epidemics and other large-scale health problems with a concerted effort from a large number of actors might not only be the optimal solution, but arguably the only one.

The control variable with the strongest empirical record is the degree to which an institution concentrates its spending on actual health programs. Compared to mixed-issue organizations such as the International Development Association, an institution like the Global Fund—which devotes 100% of its budget to health—is much more likely to be used as funding venues by donors. This points to a trend towards issue-specialization of international institutions at least in the area of health, rather than the generalist approaches of 20th century.

Interestingly, none of the other control variables show consistent significance: for example, there seem to be no systematic differences between more and less affluent donors when it comes to choosing multilateral aid channels.

Summary

The statistical analysis provides evidence that donors look to their alignment with other potential member states when deciding where to delegate their aid budgets, but that congruence of spending patterns is not of great significance. States seem to be much more concerned about how their preferences match those of other principals, rather than how much influence agents could exert. Both points can explain some of the variation discussed in section 2.3: newer institutions such as the Global Fund have been successful at least partly because their principals are relatively well-aligned, which is an advantage over traditional organizations like the WHO with a more diverse membership that incurs the risk of misalignment. In addition, the Fund as an institution that is more focused in their approach than donors are bilaterally—in this case, only funding infectious diseases—is not penalized for these differing policies, while traditional organizations like the WHO cannot capitalize on their more general orientation that makes them more congruent with donor spending.

2.7 Conclusion

This chapter has examined how donors decide to allocate their multilateral health aid. I have argued that donor states take *policy congruence* into consideration when making the choice to delegate parts of their budgets to certain institutions. Policy congruence consists of the alignment between the donor's interests and the preferences of the institution's other member states; and of the overlap between the bilateral aid allocation patterns chosen by the donor, and the multilateral policies pursued by the institution. Higher policy congruence makes an institution attractive to donors because it limits principal-agent problems, which means states can enjoy the benefits of delegation without the need to constantly negotiate with other principals or monitor their agents. The empirical analysis of 22 donors' contributions to 12 major international organizations

from 2000 to 2009 supports the first part of this argument: states do indeed allocate greater parts of their multilateral health budgets to institutions with whose members they are closely aligned. On the other hand, it seems to matter little whether institutional policies and spending patterns are congruent with how donors like to spend their bilateral aid. The results are robust when controlling for a number of confounding factors.

This study has presented the first systematic cross-national and cross-institutional analysis of health aid allocation. The test case of multilateral institutions for health is useful because donors face a choice between a number of agencies delivering similar services, but that differ in several key aspects such as size and scope. To ensure that results can be generalized, the study has refrained from using explanatory variables intrinsically tied to the field of health. While the primary goal of the analysis is thus modeling donor choices in development aid delegation, it ties in with previous research on the relationship between principals and agents on the international level, and could be extended to other areas of multilateral cooperation. Given the increasing importance of such cooperation in general, and multilateral development aid in particular, improving our understanding of interactions between principals and agents is vital.

Table 2.4: Modeling donors' budgets (untransformed coefficients)

	Model 1	Model 2	Model 3 *All Institutions*	Model 4 *EU excluded*
Policy congruence				
Member state alignment	**1.97**		**3.36**	**2.38**
	(0.88)		(1.11)	(1.39)
Spending pattern alignment		**-0.02**	**-0.02**	0.01
		(0.01)	(0.01)	(0.01)
Control variables				
Size of institution	**0.01**	-0.002	0.001	**0.03**
	(0.003)	(0.004)	(0.004)	(0.01)
Institution health spending	**0.02**	**0.03**	**0.03**	**0.04**
	(0.004)	(0.005)	(0.01)	(0.62)
Population size	**0.19**	-0.07	0.25	0.08
	(0.15)	(0.17)	(0.20)	(0.25)
GDP per capita	0.42	-0.64	0.08	**-2.78**
	(0.53)	(0.67)	(0.72)	(0.88)
Government spending	-0.03	-0.002	-0.05	-0.04
	(0.05)	(0.07)	(0.07)	(0.08)
Autocorrelation control	**0.74**	**0.72**	**0.71**	**0.73**
	(0.01)	(0.02)	(0.02)	(0.03)
(Intercept)	-7.13	11.80	-2.40	25.12
	(6.90)	(8.32)	(9.55)	(11.73)
N	2291	1687	1675	1543

Bold coefficients significant at $p \leq .05$. Standard errors in parentheses.

Chapter 3

Requesting Aid: Political Determinants of Variation in State Applications for Global Fund Grants

Why do states decide to apply for funding from the Global Fund to Fight AIDS, Tuberculosis and Malaria? The Fund is an international institution that has approved over US $21 billion in grants since 2002. All countries meeting certain basic eligibility criteria are free to apply for funding once per disease per year. While it seems rational for states to file as many applications as possible, a country only applies in an average of 29% of the cases it is eligible for, and even particularly active states only apply around half the time. What can explain this variation? Using data from nine years of application decisions, I show that requesting aid is primarily based on the domestic political situation an executive finds itself in. Governments that have a more secure hold on power within an effective political system, and do not run on nationalist platforms, can minimize the political costs of applying; they are significantly more likely to turn to the Fund than others. The results remain robust when a number of possible confounding factors are accounted for. Contrary to expectations, a country's actual public health concerns are of lesser importance when states decide whether or not to request multilateral aid from the Global Fund.

3.1 Introduction

Ten years after its inception, the Global Fund to Fight AIDS, Tuberculosis and Malaria[1] has become an integral part of the institutional architecture for multilateral development assistance, and the largest single source of funding against infectious diseases among international organizations. Because the Global Fund is an international institution, developing countries do not negotiate directly with donor states as in the case of bilateral official development assistance, but rather apply to the Fund with concrete grant proposals. States can be eligible yearly for each of the three diseases, which results in a maximum of 27 applications over the course of nine rounds of funding. It seems rational to use this opportunity to its full extent. Yet while the average developing nation was eligible for around 24 Global Fund grants over nine years, states on average only filed six applications. Even the most involved states like Cambodia and China have submitted only around 15 proposals in the same time frame. Overall, some countries are highly active, filing requests (and receiving grants) in nearly every round, while other eligible states go for years without a single application. These discrepancies are puzzling, given that preparing an application is estimated to cost less than $1 million per year, but the average yearly payoff from a grant is around $18 million, and has ranged up to $280 million. Why do states not try to acquire this 'free money' more often?

The chapter contends that the answer lies primarily in the domestic political situation in the applicant state at the time, and more specifically in the costs and benefits for political executives (Milner 1997). International relations scholarship has rarely investigated such determinants in the context of development aid. This is in contrast to research on international institutions such as the International Monetary Fund (Thacker 1999; Sturm, Berger and de Haan 2005) or the World Trade Organization (Bown 2005), where factors explaining state engagement with the organization have received attention.

[1] The terms "Global Fund to Fight AIDS, Tuberculosis and Malaria", "Global Fund", and "Fund" are used interchangeably.

The study proceeds as follows: first the Global Fund's application process is described (section 3.2), and the substantial variation in funding applications demonstrated (section 3.3). The chapter then gives a brief overview of current research on the Global Fund (section 3.4), and introduces explanatory variables related to a country's political situation and a number of control variables (section 3.5). Following this, hypotheses are tested on an original dataset containing 3,019 application decisions (section 3.6). The chapter concludes by summarizing key findings and their broader implications (section 3.7).

3.2 Applying to the Global Fund

The Global Fund was conceived in 2000 as the result of a G8 effort to achieve progress on several UN Millennium Development Goals, among them the fight against HIV/AIDS, improvements in maternal and child health, and the establishment of a "Global Partnership for Development" (United Nations 2010). Donor states were especially insistent on the creation of a new organization because they perceived existing institutions tasked with providing global public health—such as the World Health Organization (WHO) and the Joint UN Programme on HIV/AIDS (UNAIDS)—as lacking in efficiency and accountability (Edele 2006; Huckel Schneider 2008*a*). The Global Fund was to rectify this through an innovative governance structure and a focus on funding, deliberately refraining from participation within the affected countries. The Global Fund was formally incorporated as a foundation under Swiss law in January 2002, and concluded its first round of funding only months later (Edele 2006). Between 2002 and 2010, the Fund received over US $28 billion in pledges and approved more than $22 billion in grants.

The Global Fund issues yearly calls for grant applications, and publishes a list of eligible states. A country's eligibility to file a grant proposal is based first on its income per capita, and second on its disease burden. All countries classified by the World Bank as having a 'low' or 'lower middle' income per capita are automatically eligible to apply,

regardless of their burden of disease. However, lower middle income countries must meet additional requirements, such as counterpart financing and a focus on poor or vulnerable populations. As of 2010, these two groups together consisted of 81 countries under the lower middle income threshold of US $3,975. For upper middle income countries like Botswana or Gabon, data from the WHO and UNAIDS is used to establish their burden of disease—they only become eligible if this is judged to be "high" or "severe" for the disease in question (cf. Global Fund 2007). The size of this group of potential applicants varies by disease burden, but 54 states with a per capita income below US $12,275 are in principle eligible to apply for Global Fund grants.[2]

Once a country has decided to file an application, it must establish an in-country partnership of political and civil society actors known as a *country coordinating mechanism* (CCM), which is responsible for the application, and the administration and implementation of any subsequent grants. Applications are highly formalized, and must include a total budget and a detailed spending plan. In contrast to most other forms of development aid, this means that grant amounts are first proposed by the recipient, not set by the donor. Countries may file only one application document per year, which can include one sub-section for each of the Fund's three diseases. Because the Fund decides individually on funding each disease component, these sub-sections are treated as separate applications.

The Global Fund's secretariat performs an initial screening of all funding proposals for eligibility and completeness, after which applications are evaluated by an independent panel of public health experts, the Technical Review Panel, and ultimately approved or rejected by the state and non-state members of the Fund's decision-making body, the Foundation Board.

[2] The scope of this study is limited to the years 2002 to 2010. In 2011, the Global Fund instituted a new set of eligibility criteria which now also include a country's recent funding history (Global Fund 2011).

3.2.1 Costs and Benefits

Any decision to prepare and submit an application to the Global Fund must take into consideration the potential costs and payoffs of doing so. The immediate costs of filing a proposal are straightforward—they consist of setting up or maintaining the necessary CCM. These organizations manage all aspects of the application process, and typically incur costs for a permanent secretariat, members traveling to meetings, information dissemination, hiring of external consultants, or translation services. A Global Fund-commissioned case study of three CCMs in 2008 found considerable variation in CCM budgets, from Honduras spending almost US $700,000 per year, to Mali with only US $65,000 (Global Fund 2008). However, the Fund offers to support CCMs in applying countries with up to US $50,000 per year, and data from 2010 shows that only 12 out of 91 CCMs in operation requested more than this amount. A reasonable estimate for the yearly cost of running a CCM and preparing an application must therefore certainly lie below $1 million, and in many cases even below $100,000. Applying to the Global Fund can also result in less obvious costs such as the need to acquire counter-financing, or the establishment of oversight mechanisms. However, states can aim to minimize these costs by drafting proposals that require fewer adjustments, or which can be integrated into existing national frameworks to create synergies. In other words, adjustment costs as a result of grant implementation are largely self-inflicted.

Most importantly, there can be considerable 'hidden' political costs involved in requesting development assistance, which is why leaders generally turn to aid where other options—such as raising taxes—look worse (Sogge 2002, p.46). A government might first have to settle internal differences to get all relevant domestic actors to the table, which is a prerequisite set by the Global Fund. CCMs must include civil society actors and representatives of people living with the relevant disease, which could be a struggle for autocratic states that are more used to exclusive decision-making by the public side, such as Belarus or China. Solving these collective action problems in a manner

satisfactory to the Fund is not a trivial task, as shown by the explicit acknowledgment of such efforts in official reviews of grant applications (Garmaise 2006). A state must also be seen as compliant on terms set by outsiders, who can make funding dependent on improved system effectiveness or greater control of corruption. Much like in the case of loans by the International Monetary Fund, states aim to minimize these conditions in order to preserve their domestic political autonomy (Dreher and Vaubel 2004; Stone 2008).

The literature on post-colonialism further suggests that seeking development aid is sometimes seen as a sign of weakness, akin to admitting a state cannot solve problems on its own (Ashcroft, Griffiths and Tiffin 2007). While aid is an accepted fact in many developing countries (Goldsmith 2001), reservations can be expected from executives who are elected on nationalist platforms which emphasize autonomy and independence, or who find themselves in a situation of slim majorities where an opposition could cast aid-seeking behavior in a negative light. Lastly, governments might disagree with the policy choices mandated by multilateral aid, such as South Africa refusing to acquire funding for antiretroviral drugs due to a policy of AIDS denialism (Chigwedere et al. 2008). Taken together, political factors can attach significant costs to the decision to file an application to the Global Fund.

Compared to the upfront costs of applying to the Fund, the potential financial payoffs are large. From 2002 to 2010, the average application recommended for funding received over $18 million per year of its running time, and the largest grant was allocated fifteen times as much; even the smallest grant ever approved by the Fund still provided $320,000 of yearly spending. When aggregated across all nine years of funding, countries took in an average of $89 million from the Fund, with Ethiopia as the most successful applicant securing almost one billion US dollars. Clearly, the monetary benefits of an approved application are much larger than any similar costs incurred by its preparation—even if CCM running costs were significantly higher, or if a state was not successful in acquiring

funding over a number of years. This constitutes a puzzle: Why do states not apply more often to the Global Fund, and why is there so much overall variation in applications, given that the benefits of winning a grant so far outstrip the financial costs of filing a request?

3.3 Variation in Grant Applications

The following section will introduce and operationalize the substantial variation in state applications for Global Fund grants. Some countries have only ever prepared one application in the Fund's history, while others submit proposals nearly every year, sometimes for multiple diseases. Additionally, no eligible country has submitted the maximum number of applications possible, and the overwhelming majority of states apply far more rarely.

The overall degree of variation in state applications can be measured in multiple ways. The average developing nation was eligible for 23.7 Global Fund grants across the nine rounds of funding and three disease categories, yet decided to only file 6.4 applications. This means that on average, states submitted funding requests less than 30% of the time, despite fulfilling all eligiblity criteria. Furthermore, the full range of variation runs from states that only ever applied once, such as Argentina or Malaysia, to states that submitted well over a dozen applications, such as Cambodia, Nigeria, or Pakistan. Even China, the most active state with 17 submissions, only applied in about two-thirds of all cases it was eligible for. Lastly, the application rate is not constant across time. Some countries seem to apply in waves: Zimbabwe, for example, submitted two or more funding requests in 2002, 2006, 2008, and 2009, but completely refrained from applying in the years between. In contrast, India kept up a more or less constant stream of at least one application per year with the sole exception of 2006. As outlined above, this variation is highly surprising—the fact that an application's financial payoffs

outweigh its costs has been constant over the years, so one would at least expect similar application rates across states, even if not uniformly high ones.

The dependent variable is operationalized in two ways—as a binary variable, and as the ratio of possible to actual applications. Table 3.1 provides summary statistics of the dependent variables, and the independent variables introduced in section 3.5.

Table 3.1: Summary Statistics: Global Fund Applications

	n	*Mean*	*SD*	*Min*	*Max*
Dependent Variables					
Application Decision (Binary)	3019	0.29	0.45	0	1
Ratio of Applications to Eligibility (%)	3264	22.4	17.1	0	100
Independent Variables					
Control of Corruption	3363	-0.54	0.63	-1.92	1.55
Government Effectiveness	3354	-0.52	0.68	-2.45	1.88
Executive Election Year	2881	0.12	0.33	0	1
Executive has Nationalist Base	2734	0.12	0.33	0	1
Executive's Parliamentary Seat Share	2659	0.65	0.22	0.17	1
Control variables					
GDP per Capita at PPP	3231	4664	4320	249	31738
Foreign Aid as Percentage of GDP	3156	0.08	0.13	-0.01	1.47
Population (log)	3375	16	1.66	11.9	21
Prevalence of Relevant Disease (%)	3282	2.36	6.8	0	79.7
Health as % of Government Spending	3321	10.4	4.8	0.6	42.4
Approved Applications in Last Round	3375	0.52	0.77	0	3

Firstly, variation in application decisions can simply be expressed as *whether or not an eligible country filed an application* for a Global Fund grant for a specific disease in a given year. This assumes that a state was indeed eligible to apply for this disease, and was not excluded by virtue of a high income level or low disease burden. Zero values for the dependent variable indicate that states chose not to submit an application for a disease in a particular year, even though they were eligible.

Secondly, variation in the dependent variable can be measured as the *ratio between the possible applications a state could have filed, and actually submitted applications.* As an example, if a state was eligible for three grants in a given year, but chose to apply only two times, it submitted 66% of possible applications. To prevent autocorrelation in the dependent variables, this ratio is recalculated for each round of funding, rather than

summed up across multiple rounds: if the same state submits one application although being eligible for two grants in the next round, the ratio is 50%. Operationalizing the variable in this way adds analytical depth beyond a binary conception of individual decisions, and enables a closer look at how consistently states capitalize on their chances to apply.

To summarize, the substantial variation in state applications for Global Fund grants will be measured with two dependent variables: whether or not a state applied for a grant; and how frequently it used the application process in each round. Figure 3.1 (pg. 47) provides an overview of this variation.

3.4 Literature

No study has so far examined variation in state applications to the Global Fund. However, there are two potentially fruitful strands of inquiry relevant to this question: research on recipient states in other areas of foreign aid; and research on determinants of state decisions to engage with other international institutions.

First, among research on foreign aid, recipients remain curiously understudied, especially considering the scrutiny given to the actions of donor states. Studies normally concentrate on the question of why aid is given, rather than why aid is requested.[3] This research is either strongly donor-centric, in that explanations of aid distribution automatically converge to donor interests, or focused on the implementation process in recipient states, as in the multitude of studies on aid effectiveness (Mavrotas and McGillivray 2009, pp.6-7). Recipient states mostly play a passive role here: in the first case, recipients merely differ in their attractiveness to donors, over which they might have limited control; and in looking at more or less effective uses of aid, the second strand neglects the step of recipients acquiring said aid. But the perceived 'rules of the

[3] Note the lack of relevant studies in the seminal collection on development aid by Burnell and Morissey (2004), for example.

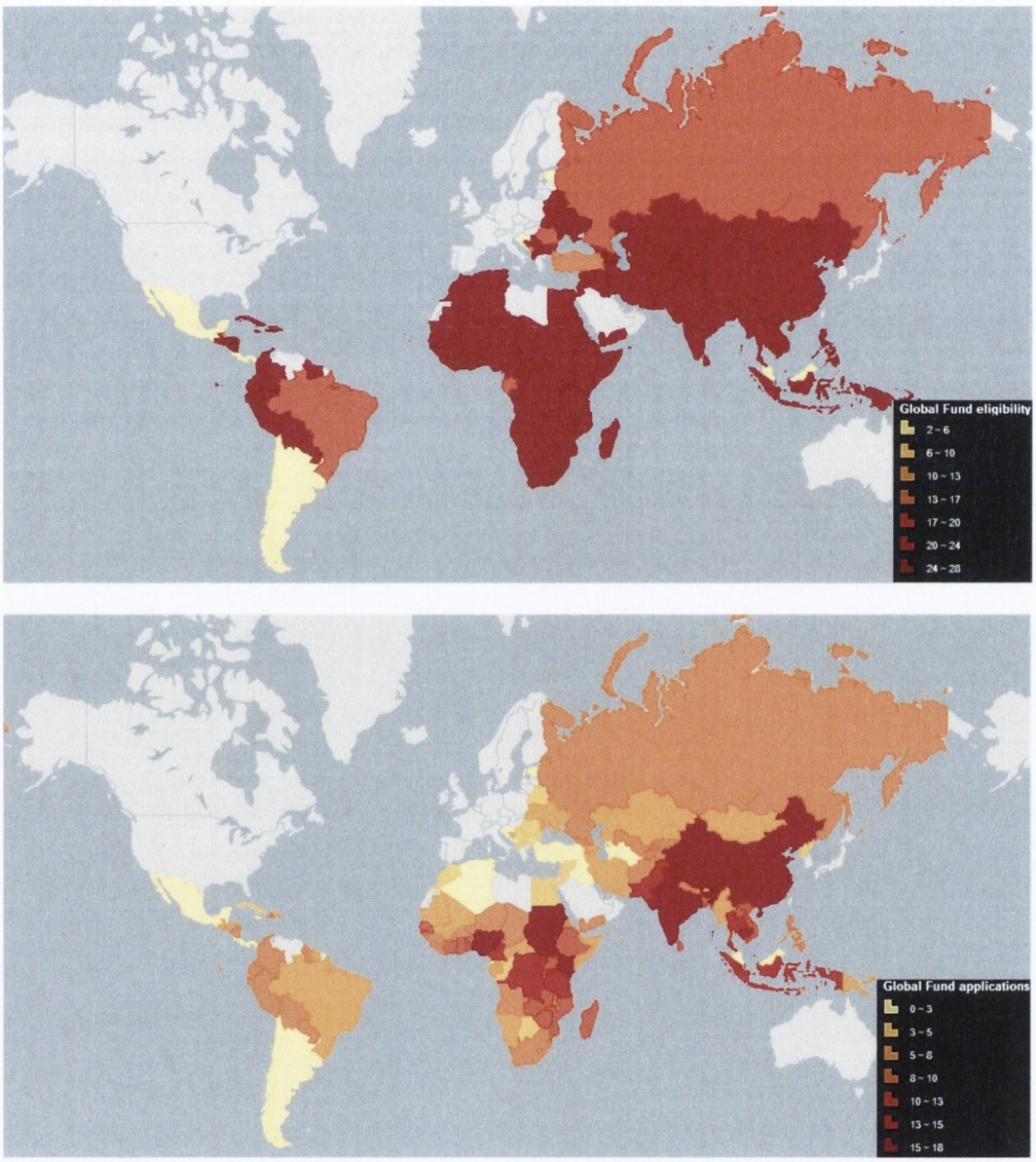


Figure 3.1: Comparison of total number of applications that countries were eligible for (top), and total number of applications actually filed (bottom), 2002-2010.

game' are that "aid is provided at the discretion of of the donor. [...] The donor's choice and definition of a problem, issue or population has precedence" (Sogge 2002, p.60).

There are some studies that do focus on recipient state demand in aid distribution: Mosley, Harrigan and Toye (1991) use case studies of World Bank lending agreements to develop a model of donor-recipient bargaining. The model includes hypotheses about the strategic preferences of recipients, which are presumed to center on the political costs of an agreement and the desire to preserve sovereignty. Also using World Bank projects, Killick (1998) and later Dijkstra (2002) employ principal-agent models, and find evidence for recipients behaving as agents trying to maximize their room for maneuver, and being driven by domestic factors mostly related to a government's power base (executives were more likely to accept foreign aid when they were securely in power). Whitfield (2009) develops a more encompassing political economy framework that covers recipients' negotiating capital and strategies, and looks specifically at cases where African governments were attempting to negotiate the terms of their aid relationships. Lastly, authors such as Bueno de Mesquita and Smith (2009) have made efforts to develop general models of the political economy of aid, which incorporate domestic political constraints and incentives for recipient state executives. An earlier work presents some empirical evidence that development aid has a beneficial effect on the political survival of leaders that are dependent on smaller domestic winning coalitions (Bueno de Mesquita et al. 2003, p. 740-748).

Second, outside the area of development aid, there is considerable scholarship on the reasons why states decide to turn to multilateral institutions for assistance, mostly in the area of trade and finance. Two articles shall serve as examples. Bown (2005) looks at decisions to engage with the World Trade Organization's dispute settlement, and finds a systematic institutional bias which discourages developing states with a smaller retaliatory and legal capacity from using this mechanism. The study also shows that whether or not a state turns to an economic institution does not depend entirely on

economic variables, but also on political and bureaucratic ones. Another useful template is provided by Sturm, Berger and de Haan (2005), who explain applications for loans from the International Monetary Fund with a large number of variables previously found to be influential. Distinguishing between economic and political determinants, they find mixed support for both.

To summarize, there are no existing studies explaining why states decide to apply for Global Fund grants, or why they would refrain from doing so. Studies on foreign aid in general offer useful starting points, but need to be adapted to this issue in two main areas: they do not specifically cover health aid, and thus do not offer explanations that might be unique to the field; and they rely on case studies rather than systematic statistical analysis. More rigorously quantitative research on participation in other international institutions can offer useful templates for studying application decisions, once the usually economic variables have been supplemented by political and public health factors.

3.5 Explaining Grant Applications

To investigate whether political considerations are indeed the driving factors behind the variation in grant applications, a set of independent variables capturing a state executive's political environment will be considered. To control for possible confounding influences, the analysis includes a number of variables related to a country's economic and public health situation, as well as its past interactions with the Fund. The selection of independent and control variables is based on the literature reviewed above, especially Whitfield (2009, ch. 4-11), Gauri and Lieberman (2004), and Sturm, Berger and de Haan (2005).

As outlined previously, I contend that turning to the Fund is a decision by a state executive that is significantly influenced by *political* cost-benefit considerations. This view is commonly shared by foreign aid practitioners, and was especially prevalent during

the Cold War, when recipient states regularly used aid requests as a method to align themselves with East or West (Whitfield 2009, pp.51-52). The explanation presented here differs from such accounts in that it is based on the *domestic* political situation an executive finds itself in. This is not to say the international level does not matter: it has been shown in the contexts of other institutions that executives take factors like the relationship with donor states into consideration in decision-making (Dreher and Sturm 2006). Yet even in their interactions with international institutions, executives are heavily influenced by domestic-level variables, as argued by Milner (1997) and Moravcsik (1997). At the very least, a government cannot make the decision to initiate the Fund's application process completely without regard to the domestic ramifications.

A political explanation of application decisions acknowledges that securing aid can be both an asset and a political liability for a government. The long-term advantages of aid are clear: funds provided by outside actors are often crucial to tackling large-scale problems which states struggle to combat independently, and could free up public resources to be dedicated to other areas. Both outcomes enhance an executive's core function of providing public goods, and can aid in maximizing its term in office. However, numerous examples can be found of governments' reluctance to accept the 'gift' of aid even in sometimes dire circumstances (Sogge 2002, ch. 3). There are several reasons for this behavior.

First and foremost, aid comes with certain strings attached. Global Fund grants involve mostly procedural rules that states have to respect if they hope to see an application approved, rather than substantive rules relating to the nature or scope of the proposed uses of the funds. Even though states formally have complete control over the substance of applications, they do have to take into account the preferences of the independent health experts who evaluate proposals for the Fund. Both adhering to procedural rules and catering to experts is not equally palatable to all states: governments might have reservations about the requirement to involve civil society, or be wary of

their responsibilities when it comes to transparency and accountability.

A further problem is that states sometimes prefer public health strategies at odds with the institutional consensus. As an example, Swaziland has one of the world's highest HIV rates with a quarter of the adult population infected, yet governmental bodies have strongly resisted (and at times expressly prohibited) the involvement of civil society in policymaking (Fenio 2011), which is a key prerequisite for the acquisition of Fund grants. In a similar vein, key figures in the South African government—including then-president Thabo Mbeki and health minister Manto Tshabalala-Msimang—for years propagated various forms of AIDS denialism, restricted the use of antiretroviral drugs, and actively obstructed the acquisition of Global Fund grants (Chigwedere et al. 2008). On a more general level, governments diverge in whether they interpret and portray certain public health risks as universal or particular (Nathanson 1996). Where diseases are associated with foreigners, marginalized groups, or even political adversaries, governments will be slower to respond and use the Fund (Gauri and Lieberman 2004).

States could also reluctant to apply because of more basic problems with accepting development assistance. Requesting aid can be interpreted as a sign of weakness, an expression of a government's inability to deliver vital public goods. An illustration of this was provided by India in 2012, which rejected British development aid due to the "negative publicity of Indian poverty" associated with it, and to better convey the image of a booming economy (Gilligan 2012). Additionally, developing countries are increasingly wary of the effects of continued donor-recipient interactions, which can lead to aid dependence—a heavy reliance on outside resources to fulfill even basic government functions (Knack 2001; de Renzio and Hanlon 2007; Jones and Whitfield 2009).

Lastly, in the most general terms, applying to the Global Fund is a policy response to a public goods problem, and all such decisions are contingent on the formal and informal rules of domestic institutions. As pointed out by Gauri and Lieberman (2004, p.24), policy-making is difficult where political power is diffuse, and where "national policies

consistently hinge upon the uneasy cooperation and coordination of shifting sets of political actors". The problem is exacerbated by the fact that effective public health policy is dependent on a large number of other issue areas including poverty reduction, education, environmental protection, and cultural norms (Skolnik 2007), and that implementation is not confined to the national level. Under these circumstances, designing and submitting an application to the Fund is not necessarily easy, since it requires cooperation among various actors within and without government, and on multiple levels.

To summarize, requesting (and receiving) aid can of benefit to a government, but also has the potential for significant negative consequences. Importantly, health aid mostly generates long-term payoffs, but incurs short-term costs which can have an effect on retaining office and conflict with political preferences. The central hypothesis that follows is that executives will not be universally inclined to file as many applications for Global Fund grants as possible; rather, they will increasingly use the Fund the 'safer' their political situation is.

3.5.1 Independent Variables

An executive's domestic political situation will be operationalized with the independent variables of corruption control, government effectiveness, election years, political platform, and parliamentary majority. The selection is not exhaustive, since the purpose of this study is not to draw a complete picture of an executive's incentive structure. The goal is rather to explore how political factors influence executive decisions in a particular issue area of international politics, and demonstrate that even a parsimonious model can explain variation convincingly. Additionally, these variables have the simple advantage of data availability, which is a special concern when it comes to developing countries.

First, states that are more successful in controlling corruption, and more effective in the overall delivery of public services, will be more likely to apply for grants. Both

variables positively affect an executive's application incentives, because they minimize the costs of complying with the Global Fund's rules on accountability and of adapting domestic infrastructure (which in turn increases the chances of successful grant implementation). Control of corruption and government effectiveness will be derived from the World Bank's 'World Governance Indicators' (Kaufmann, Kraay and Mastruzzi 2010).

Hypothesis 1: *States with stronger corruption controls, and higher government effectiveness, are more likely to apply for Global Fund grants.*

Second, an executive will be more risk-averse in an election year, where decisions can have an immediate negative impact on political survival (cf. Milner 1997; Przeworski and Raymond 2000). Elections also focus a government's attention on retaining office, and draw resources away from regular governance functions such as preparing and filing an application. These short-term effects should lead to a decreased propensity to file an application during an election year.

Hypothesis 2: *States are less likely to apply for Global Fund grants in executive election years.*

Third, governments with an explicitly nationalist platform will be less likely to turn to the Fund. An executive that was elected on a program of national identity, independence, or simple xenophobia, but later publicly asks for outside help, must expect to lose electoral support. Parties from across the political spectrum can run on a platform of national self-determination, so the classification is different from the more commonly used left-right scale. It is more useful though, because nationalist policies have clear negative implications for an executive's aid-seeking behavior, which do not necessarily follow from a left-right placement on (mostly) economic matters. Conservative governments could seek aid in order to reduce government spending, or reject aid as it distorts markets and requires bureaucratic resources, and similar arguments could be made for parties at the other end of the political spectrum. The binary indicator for nationalism is taken from the widely-used Database of Political Institutions (Beck et al. 2001).

Hypothesis 3: *States whose executives run on a nationalist platform are less likely to apply for Global Fund grants.*

Finally, states will submit more Global Fund grant applications when the executive controls a greater share of parliamentary seats. More stable parliamentary majorities give greater room for political maneuver, and lessen the need for domestic compromise (Willett 2001). Executives that are safely in power need to worry less about short-term political costs, and correspondingly are more interested in acquiring the long-term payoffs associated with Fund applications. Coalitions encompassing a larger share of the electorate also have greater incentives to provide public goods that come with a cost, since their provision by necessity benefits more of their members (cf. Phelan 2011). The greater an executive's control of the legislative body in any given year, the greater should its likelihood be to file an application.

Hypothesis 4: *States whose executives control a greater share of parliamentary seats are more likely to apply for Global Fund grants.*

3.5.2 Control Variables

That applications are a result of domestic political factors is not immediately obvious. After all, should the decision to apply for health aid not be driven by a state's public health situation? Full-scale epidemics might be beyond the scope of national health management, and make applying for Fund grants a necessity, while a low disease prevalence might not merit investing into an application. Similarly, the need for outside resources could simply be greater where national public health systems are underfunded (Garrett 2007; Shiffman 2008). To control for such confounding factors, the analysis will include two core measures of health system capacity and need: the prevalence of the disease that eligibility is based on; and government spending on health as a percentage of all government spending. If health concerns are indeed important for decision-making, then states with high disease prevalence and low government spending should be significantly

more inclined to file applications.

The statistical model will further include basic control variables for GDP per capita at purchasing power parity, population size, and foreign aid as a percentage of GDP (to control for the extent of overall aid dependence). Furthermore, a state might be less inclined to apply at time t simply because it already managed to secure Fund grants in *t-1*. Acquiring funding will—at least momentarily—decrease the pressure to apply again, and states might instead concentrate on managing grants that are already running. To control for this, the analysis uses the number of applications filed in the previous year that were in fact approved by the Fund. Additionally, a time variable is used to account for linear trends over the years.

Lastly, I include the Fund's three diseases as a categorical variable. The infection rates, disease dynamics, necessary resources, possible public responses, and social perception of these diseases is not identical. For example, it is relatively cheap to prevent and treat malaria, and the disease does not carry much of a social stigma; HIV/AIDS on the other hand often requires lifelong treatment, and is associated with marginalized groups. One way of dealing with these differences analytically would be to estimate separate statistical models for each of the diseases, but this greatly reduces the sample size and the chance of significant findings. As a compromise, disease is treated as a discrete predictor, which still allows us to judge whether any disease makes a state more or less likely to apply.

To summarize, the empirical section of this chapter will investigate the influence of political variables on a state's decision to apply to the Global Fund in a given year. It will control for a number of confounding factors related to the economy, public health, and past interactions with the Fund. The models also include the three diseases as a categorical variable.

3.6 Empirical Analysis

This section discusses the construction of the dataset used for testing the explanation outlined in the previous section, the statistical methods utilized throughout, and the results of the analysis.

3.6.1 Dataset

I created a dataset containing information about 3,019 'decision points' for 125 states from 2002 to 2010. This includes all 899 filed grant applications targeting the Global Fund's three diseases, and data points for all years in which a state was eligible to apply, but chose not to.[4] Put differently, each state has a maximum of 27 data points, one for each of the nine rounds of funding and three diseases, and a value of 1 indicates that a request was submitted for disease X in year Y. If a state was ineligible for grants, the respective data points for the year are omitted—the purpose of the analysis is not to estimate eligibility, but applications.

The dependent variables were sourced directly from the Fund, which makes a dataset of approved applications available on its website. This was augmented by the inclusion of all requests that were filed but rejected, which can be accessed individually for each country. Independent variables were taken from widely-used sources: World Bank (control of corruption, government effectiveness, GDP per capita, foreign aid, population size), Database of Political Institutions (election year, nationalist base, parliamentary majority), World Health Organization (disease prevalence, health spending), and the Global Fund itself (approved applications, funding rounds).

[4] Twelve small island states in the Caribbean and Pacific have never applied for a Global Fund grant despite always being eligible. Countries like Barbados or Samoa derive their eligibility from the 'Small Island Economy' lending exemption to the International Development Association's requirements, not from their income level or burden of disease like other applicants. For this reason they were omitted.

3.6.2 Statistical Approach

To investigate factors influencing whether a state applies or not, a multilevel logistic regression model was specified where the dependent variable is 1 for an application. Second, the frequency and consistency of a state's applications—expressed as the ratio between all applications a state was eligible for up to a given year, and all applications actually filed—was modeled with a multilevel linear regression model. Both models include country-level random effects which are incorporated into the intercept term, but not into the slopes of the individual coefficients. The intention here is to partially pool the available data to construct an average model of executive decision-making for the countries in the sample, not create a precise model of any one individual state. Each fixed effect in the regression table can thus be interpreted as having been adjusted by the inclusion of the variance added by each state.

For the logit model, the magnitude changes for each predictor (the substantive effects in terms of percent changes in the dependent variable) are based on average predictive comparisons. Evaluating the model at its mean is problematic given the inclusion of binary and categorical variables, and the tendency to overstate effect magnitudes (Gelman and Hill 2007, pp.466-473). Unless otherwise stated, the interpretation of average predictive comparisons refers to comparing a low and a high value ($\pm$ two standard deviations around the mean) of the underlying independent variable. The same is true for interpreting the coefficients in the linear model. Comparisons for binary variables refer to the difference between values of 0 and 1.

3.6.3 Results

The analysis shows robust support for a political explanation of grant application decisions. Table 3.2 provides the results of both regression models.

Table 3.2: Modeling the Decision to Apply

	Application decision (Logit model)	*Application ratio (Linear model)*
Independent Variables		
Control of Corruption	**-0.42**	**-6.95**
	(0.22)	(3.20)
Government Effectiveness	**0.38**	5.61
	(0.21)	(3.23)
Executive Election Year	-0.22	**-4.13**
	(0.17)	(1.89)
Executive has Nationalist Base	**-0.47**	**-8.42**
	(0.21)	(3.72)
Executive's Parliamentary Seat Share	**0.15**	**15.51**
	(0.07)	(4.54)
Control variables		
GDP per Capita at PPP	**-0.11**	**-1.30**
	(0.03)	(0.46)
Foreign Aid as % of GDP	0.16	6.11
	(0.61)	(9.04)
Population Size	**0.02**	**0.33**
	(0.004)	(0.09)
Prevalence of Relevant Disease	**0.03**	0.06
	(0.01)	(0.11)
Health as % of Government Spending	-0.01	-0.17
	(0.02)	(0.25)
Approved Applications in Last Round	**-0.52**	**-10.74**
	(0.07)	(0.80)
Funding Round (Year)	**0.27**	**4.92**
	(0.02)	(0.28)
Malaria Application	**-0.87**	-0.64
	(0.14)	(1.55)
Tuberculosis Application	**-0.53**	-0.44
	(0.12)	(1.42)
Constant	-1.58	7.78
	(0.35)	(5.39)
N	2150	2150

Bold coefficients significant at $p \leq .05$. Standard errors in parentheses.
For better comparability, the control variables of GDP per capita and population size were rescaled by dividing by 1,000 and 10 million, respectively (Gelman and Hill 2007, pp.53-68).

Political Variables

The majority of political variables have a statistically significant relationship with the dependent variables, and point in the hypothesized direction. These findings indicate that executives in recipient states are indeed strongly influenced by their domestic political situation when they make the decision to turn to the Fund.

Both measures of governance quality exhibit high statistical significance, but with substantive effects in opposite directions. Contrary to Hypothesis 1, countries with better corruption control are actually less to apply for Global Fund grants, and the effect remains although the models control for other measures of development and governance. One explanation lies in a tactic described by Moravcsik (2000), whereby governments use international commitments to 'lock in' their policy preferences against future domestic alternatives. In the case of grants, an executive in a highly corrupt environment might use this 'self-binding' through applications because the Fund's rules and safeguards provide more effective corruption control than domestic programs. For a government aiming to fight corruption, using the Global Fund can effectively enforce its policy preferences, even after a loss of power.[5] Substantively, an executive operating in an environment of weak corruption controls is 17% more likely to apply at any point, and has a 24% higher application ratio, compared to a state with robust controls.

Government effectiveness has the expected strongly positive effect on application decisions. As defined by the World Bank, the measure captures various aspects of governance: quality of public service delivery, quality of the civil service, effectiveness of policy formulation and implementation process, and credibility of government commitment to these areas (Kaufmann, Kraay and Mastruzzi 2010, p.4). The process of preparing an application is speedier and cheaper for executives that can rely on a highly effective state apparatus; additionally, the requested grant amounts can be higher where public infras-

[5] An even simpler explanation would point to the attractiveness of outside funding to corrupt governments. However, the Fund has its own inspectors, requires repayment in cases of fraud, and has suspended whole grants over corruption charges. There are certainly easier ways to distribute gains from aid to supporters than go through the Global Fund's application and implementation process.

tructure has a greater absorptive capacity, which makes cost-benefit calculations more attractive. As a consequence, states with high government effectiveness are 18% more likely to turn to the Fund. They also apply more consistently, submitting applications in 18% more of the cases they are eligible for.

In contrast to the previous measures, executive decision-making is not consistently influenced by election years across both models. The variable's direction is consistent with Hypothesis 2, but the evidence is only weakly suggestive that executives are more sensitive to the possible drawbacks of requesting aid in election years, and that their attention is focused elsewhere. One possible reason for this result is the relatively narrow time frame of the study: since the Fund began in 2002, only so many elections could be held, especially considering that developing countries often tend to gravitate towards the autocratic end of the governance spectrum, where executive elections can be a rare occurrence.[6] Nevertheless, the application ratio (model 2) is around 4% lower for executives that are running for election in the same year.

Hypothesis 3 refers to the expectation that executives running on an explicitly nationalist platform—one that is based on national identity and self-determination—are more hesitant to use the Fund. This is not only because requesting aid could have negative electoral implications, but also because a nationalist executive has a lower inclination to cater to the policy preferences of multilateral institutions or follow rules set by outsiders. The statistical analysis clearly supports the hypothesis: nationalist governments are 8% less likely to file an application, and their ratio of submitted to possible applications is 8% lower than that of governments without such a platform.

Lastly, Hypothesis 4 asserted that a greater parliamentary seat share would reduce electoral pressures and minimize the need for domestic compromise on policy decisions; both factors should lead to a higher likelihood of application. This expectation is indeed borne out by the results, which show that executives that control large parliamentary

[6] On average, the states in the sample score 0.48 (SD 0.24) on Freedom House's composite democracy index with a range between 0 and 1.

majorities have an 11% greater likelihood of initiating the Fund's application process, compared to those with only limited backing from their legislature, or even minority governments. Similarly, 'safe' executives also request aid in around 16% more of the cases they are eligible for. One question about these outcomes is whether they are driven by countries where the legislature is uncompetitive and controlled wholly by the executive, since such 'unbound' governments would also be more likely to apply for grants. However, the findings proved to be robust when both models were re-run with World Bank indices of legislative and executive electoral competitiveness as additional control variables.

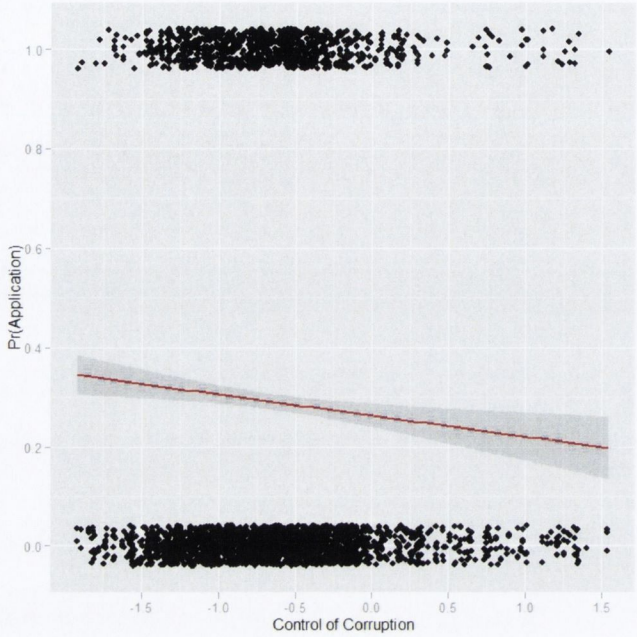
See Figure 3.2 for graphical displays of the logistic regressions for the probability to apply and the two independent variables of corruption control and executive's parliamentary seat share (Kastellec and Leoni 2007).

Control Variables

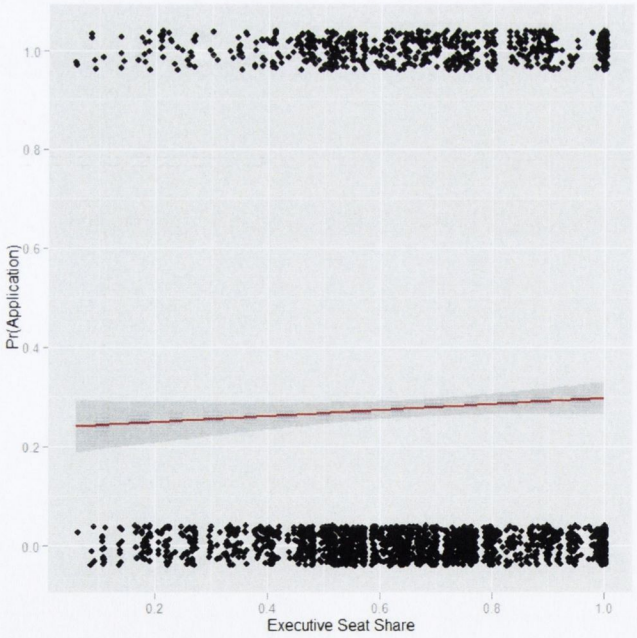
There is some support for alternative explanations captured in the control variables, which partly exhibit large substantive effects.

The relationship between GDP per capita and Fund applications is negative as expected, so wealthier developing countries are less likely to apply. Not only is it more difficult for these states to establish eligibility in the first place, but they are generally better equipped to provide public health on their own, which reduces the need for large grants and shifts the cost-benefit ratio. Such effects are strongly felt in application decisions, where very poor states are 44% more likely to apply for a grant at any point than wealthy states, given that both are eligible. The effect only marginally impacts the application ratio however. The extent of a state's overall dependence on development assistance (measured by the percentage of GDP received in aid) has no discernible effect on application decisions.

Variables related to public health find little support. A country's prevalence of the



(a) Control of corruption



(b) Parliamentary majority

Figure 3.2: Graphical expression of fitted logistic regressions between probability to apply, control of corruption, and parliamentary majority.

relevant disease only affects the first independent variable, and public spending on health as a percentage of all government does not seem to have any relationship to the dependent variable at all. That is not to say the measures do not matter: countries with a high prevalence of the disease in question have 11% higher application ratios, meaning that they capitalize on their chances to acquire outside funding more consistently. Nonetheless, it is surprising that health-related factors do not have a stronger and more significant influence on the decision to turn to a multilateral health institution.

As expected, countries have lower incentives to apply when they saw more requests approved during the preceding funding round. Receiving outside resources decreases the immediate pressure to apply again, and states seem to concentrate on implementation rather than re-application. If we compare two countries, one of which had no approved grants in the previous funding round, and one that was successful with the maximum of three applications, the latter is almost 20% less likely to apply again the following year.

Furthermore, there is a robust linear trend over time towards more applications, so much so that the average state was over 36% more likely to file an application in the last funding round in the sample (round 9 in 2010) than it was in the first (round 1 in 2002). Similarly, the ratio between eligible and filed applications in each round increased by almost 50%, meaning that states more consistently capitalized on their chances to apply over time. The Fund's attractiveness has increased in step with its available resources over the years, and states have learned to more effectively make use of the institution (cf. Haas and Haas 1995). Applying to the Global Fund is to some degree a self-perpetuating process—once a state has shouldered the costs of setting up the necessary domestic institutions and gathered the relevant actors, preparing further applications becomes progressively easier.

Lastly, disease makes a difference. Since disease is a categorical variable, the coefficients for tuberculosis and malaria must be evaluated with respect to the reference category of HIV/AIDS, which is estimated by the intercept. Accordingly, states are

most likely to utilize their eligibility for HIV/AIDS, since both malaria and tuberculosis have negative coefficients; among these two diseases, countries are more likely to request funding for tuberculosis than for malaria. The hierarchy mostly reflects the difficulty and costs involved in fighting the disease—preventing and curing malaria is comparatively easy, tuberculosis might involve some months of treatment, but HIV/AIDS must be strictly managed for the patient's remaining lifetime. It makes sense that countries would be more likely to try and acquire grants for a disease that is more costly and requires greater government infrastructure. The fact that HIV/AIDS carries much more of a social stigma, and is sometimes asserted to be confined to groups on the fringes of society, does not seem to systematically influence application decisions.

3.7 Conclusion

Why do developing states turn to the Global Fund for aid, and why do they so rarely capitalize fully on their chances to apply? I have argued that requesting aid is by no means a foregone conclusion, but one that comes with potential *political* costs that can offset enough of the financial benefits to keep states from applying. Rather than being primarily based on actual public health pressures or economics, the decision to apply is in fact heavily political.

Based on an original database of more than 3,000 decision points for 125 countries over nine years, the empirical analysis lends strong support to this argument. I find that measures of a state's domestic political environment significantly influence whether or not an executive makes use of a multilateral institution like the Fund. Governments faced with rampant corruption file applications more frequently, as do those with a more effective public infrastructures. Designing and submitting funding requests is also shown to be more attractive to executives that do not run on an explicitly nationalist platform, and have a more encompassing power base in the legislature. These measures exhibit

consistent and significant effects over time while controlling for other factors.

No study has explored Global Fund applications, even though the Fund is arguably one of the the most important international institution for health. The chapter also contributes to larger debates about the choices that states make on the international level. In order to understand how states interact with multilateral institutions, a comprehensive and empirically informed look at factors explaining state behavior is needed. The chapter shows that these factors are often both domestic and political in nature, and that expanding the empirical scope yields a number of important insights about state behavior.

Chapter 4

Decision-Making in Multilateral Development Aid: The Case of the Global Fund

Between 2002 and 2010, the Global Fund to Fight AIDS, Tuberculosis and Malaria approved over US $22 billion in grants to developing countries, making it the world's single largest source of funding against these diseases. Yet there is great variation in three key measures of the Fund's institutional output: which applications are approved for funding; the amount of money awarded to approved grants; and the discrepancy between requested and approved grant amounts. The Global Fund's decision-making process provides a role for both public health experts and for political representatives of states, non-state donors, and stakeholders. Based on an original database of grant applications from 2002 to 2010, I demonstrate that the Global Fund has been largely successful in 'depoliticizing' grant approval and grant amounts, which are both dependent on the preferences of independent health experts. However, the political preferences of the Fund's six largest donor states still explain the discrepancy between proposed and approved grant amounts—grants by developing states that are more attractive to donors are also more likely to receive what they asked for, while the opposite can lead to dramatic cuts to proposed budgets.

4.1 Introduction

The Global Fund to Fight AIDS, Tuberculosis and Malaria is one of the most influential international institutions for global public health. From 2002 to 2010, the Global Fund approved grants totaling over US $22 billion for programs combating infectious diseases in more than 120 countries, and in doing so was responsible for a third of all international funding to fight HIV/AIDS, two-thirds for tuberculosis, and half for malaria. So important has the Fund become in fighting diseases that economist Jeffrey Sachs called it "the most successful innovation in foreign assistance of the past decade" (Sachs 2010). But there is a striking amount of variation in applications' chances of being recommended for funding, and in the amount of money that the Global Fund approves for recommended applications. For example, while the Solomon Islands saw three out of four applications rejected, Laos received the Fund's approval for all 11 filed applications. When looking at grant size, Grant 785 allocated over US $435 million for HIV/AIDS to Ethiopia in 2003, while Côte d'Ivoire received less than two million dollars from Grant 622 for fighting the same disease one year later. Lastly, countries rarely get approval for the precise budgets they propose. Georgia applied for $13 million in 2010, but this amount doubled in the approval process, and the Fund eventually disbursed $25 million to the country. In contrast, Kenya was much less fortunate in 2002, when its proposed grant budget of $179 million was cut by over 98%.

Current scholarship disagrees about the reasons for such variation, and the degree to which different actors affect the Global Fund's grant-making decisions. Some authors have argued that the strategic interests of the largest donors, represented on the *Foundation Board*, decisively influence grant distribution (Barnes and Brown 2009, p. 8-10). Others have asserted that a grant's fate is in fact decided by the health experts serving on the Fund's *Technical Review Panel*, who evaluate proposals on the basis of technical feasibility (Huckel Schneider 2008*a*, p. 210). This study uses a quantitative analysis of variation in grants to determine the relative influence of the actors involved in the Fund's

decision-making, namely powerful donor states on one side, and the health experts on the other. Crucially, the results will tell whether this decision-making structure succeeds as an attempt "to create a depoliticised and more accountable mode of global health governance" (Barnes and Brown 2009, p. 2). In fact, the Fund's formal processes are so clearly designed to exclude politics through technical rationality and the delegation of decision-making to experts, that finding political stakeholders *still* hold some influence over grant-giving would raise doubts whether *any* institution could truly 'depoliticize' aid allocation (see Flinders and Buller 2006).

To investigate the substantive variation in grants, the study draws on principal-agent theories of international institutions. The Global Fund's policy-making process constitutes a principal-agent relationship, in which a collective principal (the Foundation Board) delegates tasks to an agent (the Technical Review Panel). In this asymmetrical relationship, formal authority is held by the principals, but the experts have an informational advantage (Miller 2005). As Weber (1958) observed, the power in such arrangements often lies with the experts, but whether this is true in the case of the Global Fund remains to be tested. The empirical analysis will shed light on the relative influence of the technocratic preferences of the expert agents, and of the strategic preferences of donor state principals. The chapter hopes to contribute not only to the study of the processes and policies of the Global Fund, but also to wider debates about the influence of technocrats and states in international institutions, and to ongoing discussions about depoliticizing development aid.

The remainder of the chapter proceeds as follows: the next section outlines the process of Global Fund decision-making and its two main actors (section 4.2), and demonstrates the substantial variation in Fund grant decisions (section 4.3). The chapter then gives a brief overview of current research on the Global Fund (section 4.4), and addresses its theoretical gaps by using a principal-agent framework (section 4.5). Following this, the relative impact of the preferences of principal and agent is tested on an original dataset

containing 899 grant applications (section 4.6). The chapter concludes by summarizing key findings and their implications for our understanding of the Global Fund, and scholarship on international institutions more generally (section 4.7).

4.2 The Process of Global Fund Decision-Making

4.2.1 Global Fund Operations

The foundations for the Global Fund were laid at a G8 summit in Okinawa in 2000. Donor countries asserted that accountability was lacking in existing international institutions such as the World Health Organization, and that this discouraged the provision of financial assistance. Created as a direct result of the summit, the Global Fund was incorporated as a foundation under Swiss law in January 2002, and approved its first grants in April 2002 (Edele 2006). To date, the Fund has received $30 billion in pledges, of which states continue to contribute more than 95%.

The Global Fund issues yearly calls for grant applications. Funding applications must be submitted by in-country partnerships of political and civil society actors known as *country coordinating mechanisms*, which are responsible for administration, implementation, and reporting on any grants received. Applications are highly formalized, and have to include a total budget and a detailed spending plan—in contrast to most other forms of development aid, this means that grant amounts are first suggested by the recipient, not determined by the donor. The Global Fund's secretariat performs an initial eligibility screening of all funding proposals, which are then evaluated by the Technical Review Panel, and ultimately approved by the Foundation Board.

Figure 4.1 provides a schematic overview of the Fund's grant decision-making process.

Figure 4.1: Overview of the Global Fund's decision-making process.

4.2.2 The Principal: Foundation Board

The Fund's state and non-state members are its political principals. They act through their representatives on the Foundation Board (FB), which has the final say over all Global Fund policy decisions, operational guidelines, budgets, and personnel appointments, including Technical Review Panel members. In all, the Board is composed of 20 rotating voting members: eight representatives from donor states; seven representatives from developing countries; and five representatives of non-state actors (Global Fund to Fight AIDS and Malaria 2009*a*).

Among donor states, the 'G6' states (the six largest state donors France, Germany, Italy, Japan, United Kingdom, and United States) contribute over 70% of total funding. The FB operates on the basis of majoritarian decision-making, but in order to pass, any motion requires a majority on both the recipient side of the Board (comprised of recipient states, a representative of communities living with disease, and NGOs) and

the donor side (donor states, the private sector, and foundations). The G6 can thus effectively exercise a veto by preventing a donor side majority. Additionally, the G6 can rely on a strong institutional culture of consensus (Global Fund to Fight AIDS and Malaria 2009*a*, p. 7) to ensure their views are not marginalised (Barnes and Brown 2009, p.3). This combination of a powerful bargaining position, veto powers, and consensus-oriented decision-making strongly suggests that the G6 states can be used as a convenient shorthand for the Global Fund's collective principal (compare Copelovitch 2010, p. 56). The remainder of the chapter will thus focus on the influence of the G6 governments as the primary principals when it comes to grant decision-making.

4.2.3 The Agent: Technical Review Panel

While the Foundation Board holds ultimate authority over Global Fund decision-making, it has delegated substantial competences to the Technical Review Panel. The Panel is comprised of experts on global public health (often academics, researchers, or health practitioners) who serve in their individual capacity. The Foundation Board's formal influence over the Technical Review Panel is restricted to the selection of members and the setting of its general terms of reference. Furthermore, the Foundation Board cannot approve a proposal without receiving a Panel recommendation, which would appear to give the experts a high degree of autonomy, and considerable potential to influence the decision-making process.

In 2010, the Technical Review Panel consisted of 44 public health experts from 31 countries. In the past, experts with G6 citizenship have made up between 25% and 48% of the Panel, and when counted together with experts from other OECD countries, have always constituted 50% or more of the Panel. Half of the Panel's members are designated as 'cross-cutting experts', with the remainder being split between specialists on each of the Fund's three diseases. The Foundation Board appoints candidates to the Technical Review Panel, and those given the Board's approval meet over a two-week period to

review all pending grant applications for the year, after which the Panel dissolves. It is possible for experts to be Panel members for several years, although a majority serves two terms or less.

4.2.4 Decision-Making

Applications vary in their chances of being recommended for funding, and if they are approved, in the amount of this funding. The binary decision whether to recommend a grant or not is made by consensus or (rarely) majority vote in the Technical Review Panel (Global Fund to Fight AIDS and Malaria 2009*b*) after a presentation by the application's primary reviewers. The Panel further has the right to call for budget adjustments of any size for a recommended application: On average, experts slashed the total budgets suggested by applicants by 30%, but individual applications have received approval for as little as 1% of the originally proposed budget, to an *increase* of 90%. After recommendation and budget adjustment, an application is forwarded to the Foundation Board for a final decision, although overturning expert recommendations is an extremely rare occurance (Barnes and Brown 2009; Garmaise 2009).

Grant decision-making thus allows the Global Fund to fully control recommendations and budgets. The question is whether this control is exercised by the agent, or whether it is the donor principals who still hold the experts' reins through expert selection and incentives. The question is especially important since the Fund's institutional structure was specifically designed to 'depoliticize' aid by delegating almost all decision-making power to experts (Heimans 2002; Barnes and Brown 2009, cf.). If the Fund's grant distribution is *still* influenced by the preferences of political stakeholders even when the rules almost completely sideline them, then this raises serious doubts about whether depoliticizing aid allocation—or institutional outputs more generally—is possible. Before these questions are addressed however, the following section will show the substantial outcome of the decision-making process, namely the variation in grants.

4.3 Variation in Grant Decision-Making

The Global Fund is purely a funding mechanism. It does not engage in programs on the ground in affected countries, nor does it provide expertise, technical assistance and training, or develop international rules and regulations. Financial grants are therefore the only institutional outputs of the Global Fund's decision-making process, which shows two main dimensions of variation: the approval or rejection of grant applications, and variation in the amount of money awarded to approved grant applications. Countries can only file one application document per year, but this document can include one sub-section for each of the Fund's three diseases. For the purposes of this study, such sub-sections were treated as separate applications. The following paragraphs introduce and define the three dependent variables that capture the variation in grant decision-making: grant recommendation, grant amount, and grant discrepancy.

The first dependent variable is binary and measures whether a country's application for one specific disease in a given year is *successful in getting recommended for funding.* A country's eligibility to apply to the Global Fund is based primarily on its income level, and not all states eligible for funding indeed choose to apply every year for every disease. Thus, the variation of interest is not whether or not a state applies (see Chapter 3), but rather which of the states that have chosen to apply actually get approved. Between 2002 and 2010, only around 40% of all filed applications have been recommended for funding, and the rates of recommendation vary significantly across countries, from the Solomon Islands with recommendations for only 25% of all filed applications, to 100% for several countries (including Azerbaijan, Gambia, and Laos).

The second dependent variable is *total grant amount.* Among the applications recommended for funding, the awarded amount of money varies considerably. Grant size could be measured in various different ways, such as total amount, amount available per year of a grant's running time, or amount spent per individual sufferer. To preserve as much of the original variation as possible, this study will use total grant amounts as pro-

vided by the Global Fund. However, the 'true' size of grants is not readily comparable across cases due to differences in population size or purchasing power. Consequently, the statistical analysis will control for the prevalence of the disease in the general population, GDP per capita at purchasing power parity, and the number of years the grant is scheduled to run. The largest ever grant was approved for Ethiopia in 2003, which received more than $435 million for an eight-year program to combat HIV/AIDS. Two years later, Ethiopia successfully acquired another $400 million over five years for the same disease, the third-largest grant in the Fund's history (in total, it has received more than $1 billion). In comparison, the average size of a grant is $28 million with a mean running time of four years. And at the other end of the spectrum, there have been a number of grants not even reaching $1 million in Kenya, Panama, Guinea-Bissau, and others.

Grant discrepancy, the third dependent variable, has not previously been used in the aid allocation literature. As outlined in section 4.2, states are required to propose a detailed budget in their applications, and this is adjusted in the decision-making process before approval is given. Most international institutions like the World Bank only publish approved grant amounts, which means that any analysis of the effects of decision-making procedures depends on counterfactual assumptions about what project size would have been without 'institutional interference'. In contrast, the Global Fund has made the original application documents available, so the proposed grant size is known, and deviations from it can be expressed in precise dollar values. In other words, it is known which countries get what they want, and who sees smaller (or larger) amounts approved than what was requested. Grant discrepancy thus measures how *effectively* different states can make use of the Global Fund. Having information about such discrepancies, and being able to link them to explanatory variables related to principal and agent, separates this study from the rest of the aid allocation literature. When China applied for a tuberculosis grant in 2009, it proposed a two-year $119 million program—but while the

proposal was approved, the Fund slashed its budget to $6 million, a -94% discrepancy. On the other hand, when Cuba applied for HIV/AIDS funding in 2007, its proposed five-year budget of $22 million was adjusted upwards to $33 million, overfunding the project by 50%.

Table 4.1 provides summary descriptive statistics of the dependent variables and the independent variables introduced in section 4.5.2.

Table 4.1: Summary Statistics: Global Fund Grants

Variable	n	**Mean**	**SD**	**Min**	**Max**
Dependent Variables					
Recommendation	899	0.77	0.42	0	1
Grant size ($ million)	694	28.2	47.5	0.2	435
Grant size (log)	694	16.4	1.2	12.3	19.9
Grant discrepancy (%)	677	-29.6	29.5	-98.5	92.3
Independent variables					
Agent / expert preferences					
Program area: Prevention	851	0.68	0.47	0	1
Program area: Treatment	851	0.55	0.5	0	1
Previous successful grants	898	3.3	2.8	0	12
Grants currently running	882	2.7	2.3	0	11
PR includes governmental	878	0.7	0.46	0	1
PR includes NGO	878	0.33	0.47	0	1
PR includes IO	878	0.18	0.39	0	1
Number of principal recipients	878	1.27	0.5	1	4
Application length (pages)	887	66.4	27.2	9	233
Proposed amount/infection ($1,000)	798	1.72	6.45	0.22	78.11
Principal / donor preferences					
G6 bilateral aid/capita ($)	867	21	32.2	-20	442
Freedom House score	888	4.2	1.55	1	7
Control of Corruption	891	-0.69	0.49	-1.9	1.51
Bilateral trade with G6 ($ billions)	686	27.8	113	15.8	963
Former G6 colony	899	0.58	0.49	0	1
Mean UN voting affinity	724	0.07	0.3	-0.84	0.72
Control variables					
Coefficient of variance, aid	864	1.47	6.03	-49.9	119.1
Coefficient of variance, trade	686	1.05	0.45	0.22	2.27
GDP/capita at PPP* ($1,000)	873	3.51	3.33	0.24	15.74
Prevalence of targeted disease (%)	879	3.1	7.6	0	62.7
Grant running time (years)	873	4.2	1.7	1	9

4.4 The Existing Literature

Despite its central role in the issue area of global public health, the Global Fund is comparatively neglected in international relations scholarship. So far, only a handful of articles have been written specifically about the Fund. Huckel Schneider (2008*a*) investigates whether the Global Fund's governance is perceived as legitimate by stakeholders, while Brown (2009) uses a discussion of the Global Fund to advocate for increased participation of non-state actors in order to improve global public health provision. A working paper by Barnes and Brown (2009) provides the most critical assessment of Global Fund decision-making to date: the authors use a number of semi-structured interviews with political representatives and experts to examine the role of the Technical Review Panel. They find that most participants agree that donor states decisively influence the decision-making process through formal and informal means, such as pushing for the selection of experts that are known to be sensitive to the concerns and preferences of donor states (Barnes and Brown 2009, p. 9).

On the other hand, the Fund has received considerable attention in medical scholarship (Feachem and Sabot 2006; Lu et al. 2006; Nahlen and Low-Beer 2007; Radelet and Siddiqi 2007), where attempts have been made to analyze Global Fund grants using multivariate models. Cohen, Singh and O'Brien (2008) investigate a range of independent variables in order to predict the precise timing of the series of staggered disbursements in which the Fund transmits each approved grant. Looking at the case of malaria, they find that when information about grant characteristics (such as whether the principal recipient was a public or private actor) was combined with macro-level information about the receiving country (such as the level of corruption), the resulting models had considerable predictive power over the date and rate of monetary disbursements. While the study is the most detailed quantitative effort to date, it does not explain the most important decisions made by the Global Fund, that is, whether to fund grant applications or not, and how much money to award to recommended applications.

In short, research on the Global Fund and its grant decision-making has so far not been conducted in the quantitative, theoretically informed manner that is now routinely applied to other international organizations such as the United Nations (Carter and Stone 2010), the IMF (Copelovitch 2010), or the World Bank (Winters 2010).

4.5 Explaining Global Fund Grant Decision-Making

4.5.1 Framework for Analysis

This section will use a theoretical framework to generate testable hypotheses about Global Fund grant decision-making.

Over the last decade, principal-agent theory has seen increasing use in international relations scholarship (Bendor and Meirowitz 2004; Hawkins et al. 2006; Copelovitch 2010). The principal-agent approach explains why and how a principal—a state, or a group of states as a collective principal in an international institution—delegates authority to an agent. There are several reasons why such delegation would be useful: to gather information or utilize external expertise, to create a neutral dispute settlement mechanism, to monitor compliance with agreements, or even to pass the blame and evade the negative political consequences of decisions (Haas and Adler 1992; Koremenos 2008). The main risk for the principal in this type of arrangement lies in the inability to completely monitor the agent (perfect monitoring would be prohibitively expensive), which inevitably leads to some degree of 'agency slack', and to outcomes that might not be in the principal's direct interest.

As outlined in greater detail below, the principals' general goal lies in using the Fund to further their mostly self-interested foreign policy agenda. There is a body of evidence suggesting that principals are thus committed to those applying states that are of greater economical, political, or geostrategic importance to themselves. Technical agents, on the other hand, are not motivated by the potential hard payoffs to donor state principals,

but instead wish to reward 'deserving' states, which results in a preference for recipients with strong applications or an environment conducive to combating disease. While donor states could alternatively distribute all aid bilaterally and retain complete control over who receives this funding, they would miss out on an opportunity to leverage the pooled resources of international institutions like the Global Fund to support their preferred recipients.

The Global Fund clearly fulfills the 'canonical' criteria of a principal-agent relationship (Miller 2005), which is due to a conscious choice of institutional design meant to make decision-making more technocratic and less politically contentious. The Global Fund's expert agents have an informational advantage over the political principals, both in specialized medical knowledge and managerial expertise, and in their familiarity with each individual application. This expertise is indeed the very reason they are employed as agents. The political principals, on the other hand, can attempt to use incentives to control the experts even in the absence of perfect monitoring. Most previous applications of principal-agent theory, such as Weingast's research into congressional oversight in the US (Weingast and Moran 1983; Weingast 1984), showed that principals tried to ensure compliance by offering incentives such as budget adjustments (Miller 2005). In the case of the Global Fund, the most obvious incentive that the donor state principals provide to health experts is appointment to the Technical Review Panel, from which a member earns prestige and money, and a say in the global fight against infectious diseases. These incentives are strong enough to create a large pool of candidates for Technical Review Panel positions[1], which allows the principals to select experts who are known to be sensitive to donor state concerns and preferences (Barnes and Brown 2009, p. 9). Furthermore, experts who continuously recommend the 'wrong' applications can be punished by not being re-appointed to serve another round, which is a plausible mechanism

[1] The Fund does not publish the number of applicants. Reporting that one of its researchers had been chosen as an expert, a North Carolina-based think tank stated that 576 applications were filed for nine open seats on the Technical Review Panel in 2003 (RTI International 2004).

given that 54% of all Technical Review Panel members have served two or less rounds, and 37% were replaced after only one round.

Global Fund grant-making decisions could therefore reflect the preferences of the health experts on the Technical Review Panel, or the preferences of the G6 donor states on the Foundation Board, depending on the degree to which the donor principals are able to control their expert agents. The link through which such control could be exercised is the selection of experts, and the replacement of those that are less response to donor wishes and concerns.

While the two actors compete with each other, it is important to note that their preferences do not always have to be in opposition, but only that they are sufficiently distinct to influence observable outcomes in different directions. In other words, the preferences of principal and agent are not necessarily diametrically opposed, but they are also far from identical. The following section draws on previous scholarship to specify the preferences of these different actors.

4.5.2 The Agent's Preferences

The preferences of Technical Review Panel experts should primarily be based on technocratic considerations about disease management and project feasibility, and differ from the preferences of the principals in that they are not based on geopolitical cost-benefit calculations (Haas and Adler 1992). If the Technical Review Panel is as autonomous as it seems, and can decisively influence grant distribution, then applications that health experts believe to be effective at tackling disease should have greater chances of being recommended for funding and have larger grants approved.

A number of factors influence the effectiveness of aid programs in general (Collier and Dollar 2004; Headey, Rao and Duhs 2004), but in the case of public health, certain best practices have been identified: condom distribution and prevention of mother-to-child transmission in the case of HIV (Creese et al. 2002), insecticide-treated nets

against malaria (Hill, Lines and Rowland 2006), or directly observed short-course therapy against tuberculosis (World Health Organization 2006). It is vital for 'strong' funding applications that they take technocratic considerations such as the inclusion of effective components into account, as internal Technical Review Panel reports published and analyzed by Garmaise (2006, 2010) show. In almost all reports, the Panel's experts point out a number of similar technocratic strengths, most of which have to do with program management and intervention effectiveness. However, only some strengths can be quantified in a relatively uncomplicated way; in the remaining cases, the difficulty of second-guessing the experts' opinion in order to artificially generate a score would likely undermine the reliability of any result. Thus, five quantifiable variables were selected from identified key strengths of applications in order to capture health expert preferences: program areas covered by the grant; number of previously recommended applications; suggested principal recipients; level of detail of the application; and calculated grant size per infection.

First, each application must specify which program areas it covers, and these are not mutually exclusive. Experts favor applications which include strategies "that will have a meaningful impact on preventing further infections" (Garmaise 2010, p. 9), as current scholarship points to advantages of prevention over other forms of disease management (Creese et al. 2002). Furthermore, in their reviews experts repeatedly expressed approval if applications included a strong treatment component in order to care for those already infected rather than just focus on prevention (Garmaise 2006, p. 44).

Hypothesis A1: *Chances of recommendation and grant size should be higher, and grant discrepancy more positive, where a country explicitly includes prevention and treatment as program areas in its proposal.*

Second, each proposal must name 'principal recipients' (PR): most commonly, payments are made to a country's ministry of health or finance, but PRs can also be NGOs or come from the private sector. Countries can nominate any number and combination

of PRs in their applications. Experts prefer "strong organizations" with substantial "financial and organizational management skills" (Garmaise 2006, p. 15). This means that applications whose PRs include governmental actors or international organizations should enjoy an advantage over those with private recipients.

Hypothesis A2: *Chances of recommendation and grant size should be higher, and grant discrepancy more positive, where a governmental actor or an international organization is named as one of the PRs.*

Third, experts favor applicants that have "experience managing similar programs" (Garmaise 2006, p. 5), and can demonstrate complementarity and additionality with existing funding streams. Both of these factors can be measured by the number of previously approved applications.

Hypothesis A3: *Chances of recommendation and grant size should be higher, and grant discrepancy more positive, where an applicant has a larger number of previously approved grants.*

Fourth, experts write approvingly of applications that provide a "solid description of the epidemiological situation [...and] analysis of the response to the disease" (Garmaise 2010, p. 9). The depth and detail of an application are exceedingly hard to measure, but the length of a proposal in pages shall serve as a proxy. Longer applications can reasonably be expected to provide greater detail both in their analysis of the situation and their proposed countermeasures.

Hypothesis A4: *Chances of recommendation and grant size should be higher, and grant discrepancy more positive, where an application is longer.*

Fifth, well-defined, reasonable budgets are frequently mentioned as a strength (Garmaise 2006, p. 13). Interpretations of what is 'reasonable' necessarily diverge, but this study will use lower proposed amounts of yearly spending per individual infection.

Hypothesis A5: *Chances of recommendation and grant size should be higher, and grant discrepancy more positive, where the proposed grant amount per infection is lower.*

These evaluation criteria omit measures of recipient need, such as low income per capita, or high disease prevalence. This is because the Panel's Terms of Reference unambiguously state that any review shall be conducted "without consideration of the amount of resources available to the Global Fund or the income level or burden of disease of the economy targeted by the proposal" (Global Fund 2009b, p. 6). Measures of recipient need are therefore not part of the agent preferences model itself, but will still be used as control variables.

The agent preferences model is falsified if a grant's chances of recommendation, size, and discrepancy between proposed and approved amounts are not related to measures capturing expert preferences about applications.

4.5.3 The Principals' Preferences

Previous research has shown that the outputs of international institutions often closely mirror the preferences of their most powerful members (Mearsheimer 1994; Börzel 2009), and that the preferences of the largest financial contributors carry the most weight, even where formal rules give equal voting weights to all members (Brown 2009; Copelovitch 2010; Kilby 2010). As outlined above, it is an open question whether this is also the case for the Global Fund's G6 donors on the Foundation Board, even though the formal decision-making rules are weighed in favor of the expert agents.

There is ample evidence that the G6 are more likely to lend financial assistance to an applicant state that is of greater economic or strategic interest to them. In the case of the US, evidence from as far back as 1979 shows that strategic considerations (such as a recipient's support of communism) outweigh considerations of need when foreign aid is distributed (Mckinley and Little 1979). Countries with a colonial history also receive significantly more aid than those without, and some donors give overwhelmingly to their former colonies (Alesina and Dollar 2000; Neumayer 2003). Furthermore, a rhetoric of 'trade, not aid' has long been a staple of donor states, but there is little

empirical evidence that donors use increased trade opportunities to justify aid reductions (Lundsgaarde, Breunig and Prakash 2010). Instead, Berthelemy (2006, p. 11-14) finds that donors in fact approve more aid for better trading partners, and for those that are more democratic (also Kosack 2003; Dollar and Levin 2006). France, Japan, Italy and the US are among the more 'egoistic' donors that clearly value their economic or strategic interest in a developing country higher than its need. Donors have also been found to use bilateral and multilateral aid to get themselves elected to rotating seats in international institutions (Kuziemko and Werker 2006; Vreeland 2011), or to make states vote in line with them in the UN General Assembly (Dreher, Nunnenkamp and Thiele 2008; Carter and Stone 2010). Even 'log-rolling' across institutions is practiced, such as the granting of IMF loans or World Bank projects in exchange for votes in the UN Security Council (Dreher, Sturm and Vreeland 2009*a*,*b*).

In short, the literature argues that G6 donor states will prefer to give aid to states which possess certain macro-level characteristics related to their strategic and economic importance. This does not imply that donor states are entirely unconcerned about technocratic aspects of the applications themselves, but rather that these are additional or secondary considerations for them. This study focuses on six factors previously found to capture donor preferences as outlined above: bilateral development aid; level of democracy; control of corruption; trade volume; status as a former colony; and geopolitical alignment.[2]

First, since donor states can select recipients of bilateral aid at their discretion, the ensuing distribution of aid should give an unfiltered account of the relative importance of recipient countries. Donors will prefer countries to receive Global Fund money to whom they also give development aid bilaterally.

Hypothesis B1: *Chances of recommendation and grant size should be higher, and grant discrepancy more positive, where a country receives more bilateral aid per capita*

[2] Freedom House reports were used for democracy scores; the World Bank's World Governance Indicators for corruption; and UN General Assembly voting similarity (Gartzke 2006) for alignment.

from G6 states.

Second, following the Monterrey Consensus adopted at the 2002 International Conference on Financing for Development, donor countries have aimed to reward recipients with sound, democratic institutions when it comes to aid allocation (see Dollar and Levin 2006), and these should also be the preferred recipients of multilateral aid.

Hypothesis B2: *Chances of recommendation and grant size should be higher, and grant discrepancy more positive, where a country is more democratic, as measured by aggregate Freedom House (2011) scores.*

Third, countries with lower levels of corruption should theoretically be more attractive to donors. Although the literature has repeatedly not found a significant relationship between corruption and aid flows (Alesina and Weder 2002; Chong and Gradstein 2006), it remains to be seen whether this is also the case here. When several instances of corruption in Fund programs were widely publicized in 2011, the Fund came under strong public pressure from donors that demanded effective countermeasures, even though ironically these cases of misuse only came to light due to the Fund's own auditing.

Hypothesis B3: *Chances of recommendation and grant size should be higher, and grant discrepancy more positive, where a country is better at controlling corruption.*

Fourth, donors will be more interested in supporting better trading partners, and previous studies bear out this expectation. Thus increased bilateral trade should be beneficial for the recipient when it comes to grant recommendations, amounts, and discrepancies.

Hypothesis B4: *Chances of recommendation and grant size should be higher, and grant discrepancy more positive, where the volume of trade between a country and the G6 is higher.*

Fifth, donor states have been shown to favor former colonies in aid distribution, due to close cultural ties or as a form of post-colonial compensation. I consider any country belonging to a G6 state in the 20th century for more than five years to be a former

colony, corresponding to roughly half of the countries in the dataset.

Hypothesis B5: *Chances of recommendation and grant size should be higher, and grant discrepancy more positive, where a country is a former G6 colony.*

Sixth, donor states have incentives to channel money to states with whom they are closely aligned on geopolitical issues. Voting affinity within the UN General Assembly is a useful proxy for such an alignment (Voeten 2000; Vreeland 2003; Voeten 2008; Vreeland 2011), and has been shown to influence the distribution of aid (Dreher, Nunnenkamp and Thiele 2008).

Hypothesis B6: *Chances of recommendation and grant size should be higher, and grant discrepancy more positive, where the mean similarity between a country's General Assembly votes and those of the G6 is higher (Gartzke 2006).*

The principal preferences model is falsified if chances of recommendation, grant size, and discrepancy between proposed and approved amounts are not related to measures capturing the strategic and economic relationship between G6 donors and recipient states.

4.5.4 Control Variables

As pointed out by Copelovitch (2010) in the case of the IMF, the relative influence of principal and agent might not be constant, but rather dependent on whether all G6 donors have similar interests in an applicant or not. Heterogeneity of preferences could be a cause of variation in institutional outputs, because collective principals exert a maximum of influence only when they present a unified front to their agent. However, preference heterogeneity might plausibly be tied to lower recommendation chances and smaller grants (as a concession to donors less interested in the recipient), or higher chances and larger grants (through inter-temporal logrolling among donors). The empirical analysis will thus clarify the direction and size of the effect of heterogeneous preferences among G6 donors. The degree of interest divergence is calculated as the

coefficient of variation (CoV) in the values of bilateral aid and trade between each of the G6 donors and a single recipient. Larger values for the coefficient correspond to greater preference heterogeneity among the G6 states.

Three further control variables are included in the statistical analysis: prevalence of the targeted disease; grant running time in years; and GDP per capita at purchasing power parity. These controls account for systematic differences between applicants with large and small populations (populous states will by necessity apply for larger grants), and corrects for the fact that grant size is correlated with its projected running time (longer programs also tend to require greater resources). The inclusion of GDP per capita together with disease prevalence also allows us to address in how far recipient need continues to play a role for grant distribution, even though the Technical Review Panel formally is not allowed to take this into account.

4.6 Results

To test the competing explanations outlined in the previous section, I created a new dataset containing information about all 694 recommended grants and all 205 available rejected grant applications targeting the Global Fund's three diseases in 126 states from 2002 to 2010. Because unsuccessful applications are only available since 2007, the analysis is based on two sub-sets of the data: one of all applications filed from 2007 to 2010, and one of all recommended applications between 2002 and 2010.

First, to investigate which factors influence whether a grant is recommended or not, models are based on a sub-sample of 461 data points corresponding to all applications filed between 2007 and 2010 (both recommended and non-recommended). A multilevel logistic regression model was specified where the dependent variable is 1 for a recommendation, with intercepts allowed to vary by country and by disease (Gelman and Hill 2007, ch. 14). Second, grant amounts were modeled on a sub-sample of all 694

recommended grants from 2002 to 2010. The data was used to specify a multilevel linear regression model with independent variables as fixed effects, and country-level and disease-level random effects (Gelman and Hill 2007, ch. 12 & 13). Since the values for this dependent variable have a lower bound of 0 and are not normally distributed, grant amounts were logged for the regressions. Third, grant discrepancy (percent difference between approved amount and proposed amount) was calculated for all 694 approved grants from 2002 to 2010; again, an multilevel linear regression model was specified. In all models, non-binary independent variables were transformed by centering and dividing by one standard deviation in order to make continuous and binary regression coefficients comparable on a roughly common scale (Gelman 2008).

4.6.1 Grant Recommendation

Table 4.2 presents the results of logit models 1 to 3, showing which variables cause an application's chances of recommendation to rise or fall, given that a country decides to apply to the Fund in a specific year. Agent and principal preferences are analyzed individually in models 1 and 2, and then combined in model 3.

The results reveal a striking pattern, in that grant recommendation is heavily influenced by the preferences of agents, but completely independent from those of the principals. No direct measure of G6 preferences has any statistically significant effect across models: neither colonial status, nor quality of democracy, or even control of corruption seem to impact on an application's chances of recommendation. In stark contrast, many measures of expert preferences are highly significant.

Using average predictive comparisons, we can evaluate the substantive impact of an independent variable while holding all other measures at their respective means. The program areas covered by a grant influence its chances of recommendation in very different ways. Contrary to expectations, applications that include programs on prevention and treatment are not more likely to be recommended for funding. Instead, proposing

Table 4.2: Modeling Grant Recommendation

	Model 1	Model 2	Model 3
Agent (expert) preferences			
PA: Prevention	**-0.76**		**-1.51**
	(0.28)		(0.39)
PA: Treatment	**-1.90**		**-1.88**
	(0.26)		(0.33)
Previous recommendations	0.011		0.12
	(0.07)		(0.13)
Grants currently running	-0.34		-0.46
	(0.24)		(0.39)
Application length	**0.002**		**0.002**
	(0.001)		(0.001)
PR includes governmental	**1.66**		**1.35**
	(0.53)		(0.71)
PR includes NGO	**0.88**		0.54
	(0.53)		(0.67)
PR includes IO	**2.29**		**2.03**
	(0.58)		(0.80)
Number of PRs	**-4.03**		-1.95
	(1.73)		(2.06)
Proposed amount/infection	0.01		**0.02**
	(0.008)		(0.01)
Principal (donor) preferences			
Bilateral aid per capita		0.0003	-0.0003
		(0.0003)	(0.0004)
Freedom House score		-0.10	0.03
		(0.15)	(0.21)
Control of corruption		-1.21	-1.19
		(1.63)	(2.40)
Bilateral trade		1.48	9.71
		(4.16)	(7.32)
Former G6 colony		-0.14	-0.16
		(0.27)	(0.38)
UN voting affinity		**6.69**	1.24
		(2.30)	(3.69)
Control variables			
CoV, bilateral aid		-0.004	-0.005
		(0.004)	(0.004)
CoV, bilateral trade		0.83	1.60
		(1.45)	(1.91)
GDP/capita at PPP			0.02
			(0.25)
Disease prevalence			**0.01**
			(0.005)
Constant	-0.22	0.22	0.81
	(0.73)	(0.26)	(0.96)
N	393	267	257

Bold coefficients significant at $p \leq .05$. Standard errors in parentheses.

a grant with a treatment component translates into 18% lower chances of recommendation, compared to a grant that omits this program area. As hypothesized, specifying public sector principal recipients is a good choice for an applicant: the involvement of an international organization and a governmental actor as a PR increases the likelihood of being recommended for funding by 21% and 29%, but involving NGOs has no such effect. Next, application length as a simple measure of depth and detail shows promise in the analysis. The variable is highly statistically significant and has a positive relationship with recommendation: providing 25 more pages of detail (one standard deviation) corresponds to around 11% greater chances of recommendation over an application of average length, and 22% over a very short application. Statistically, the longest application in the sample (164 pages) thus has 49% higher recommendation chances than the shortest one (29 pages). Expert preferences variables not found to impact significantly on an application's chances are the number of previously recommended grants and the number of principal recipients.

Looking at the control variables, only one of the two measures of preference heterogeneity among the principals is significant in the models. Concretely, we see that when the preferences of the G6 donors diverge with regard to bilateral trade (meaning that the applicant is a more important trading partner for some of the G6, but not for others), a grant has better chances of being funded. Copelovitch (2010) has suggested that in cases of disagreement, less interested states "might support the demands of their most interested counterpart in the hopes of receiving similar treatment in the future for their own preferred [recipient]". The size of the effect is modest however; in cases of high preference heterogeneity, an application is 11% more likely to be recommended for funding. Interestingly, the results also point to the continued importance of disease burden for an application's chances. Holding all else constant, a country with a 9% higher prevalence rate is also 7% more likely to get funding.

Figure 4.2 shows simplified regression graphs for the influence of application length

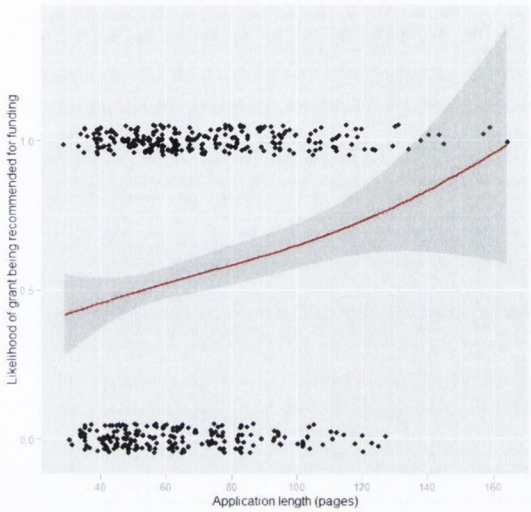
and disease prevalence on the likelihood of a grant application being approved by the Fund.

As intended by the Fund's institutional design, the Technical Review Panel's expert agents indeed determine which grants get recommended, while the G6 donors stay entirely in the background. As a thought experiment illustrating the magnitude of these effects, we can construct two fictional applications from different states, Alpha and Beta. Applicant Alpha is average in all regards, scoring at the mean for every variable in the model, both for principal and agent preferences. Beta, on the other hand, submits an application that meets high technical standards, but is disliked by donors. In other words, Beta wishes to fund prevention and treatment programs, names a governmental actor and an international organization as the principal recipients, has a history of successful applications, provides a maximum of written detail, and requests only a low amount of spending per infection. What Beta lacks are any features that could make it attractive to donors, so it receives low level of development aid, its political system is autocratic, it lacks effective corruption controls, trades little with the G6, was not formerly a colony, and regularly votes against the G6 in the UN General Assembly. Calculating the predicted probabilities, we find that despite being thoroughly unattractive to the G6 donors, Beta's application still has a 48% higher chance of recommendation than average applicant Alpha.

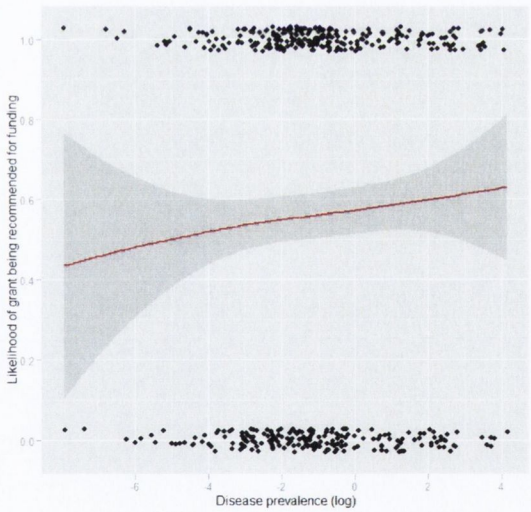
4.6.2 Grant Amount

Table 4.3 shows the results of the multilevel linear regressions which model the total approved grant amounts, given that a grant was recommended for funding. As before, agent and principal preferences are first analyzed individually in models 4 and 5, and then combined in model 6.

Looking at agent preferences first, there are changes compared to recommendation. Most notably, both program areas preferred by experts now exert a positive, significant



(a) Length of application



(b) Prevalence of relevant disease

Figure 4.2: Likelihood of grant application being recommended for funding by application length, and disease prevalence.

Table 4.3: Modeling Grant Amounts

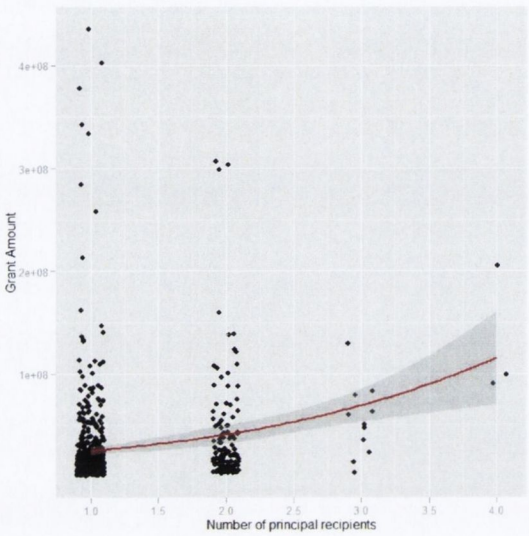
	Model 1	Model 2	Model 3
Agent (expert) preferences			
PA: Prevention	**0.26**		**0.20**
	(0.08)		(0.08)
PA: Treatment	0.10		0.14
	(0.07)		(0.07)
Previous recommendations	**0.79**		**0.80**
	(0.11)		(0.14)
Grants currently running	**-0.31**		**-0.36**
	(0.11)		(0.14)
Application length	0.04		0.06
	(0.04)		(0.04)
PR includes governmental	-0.03		-0.05
	(0.19)		(0.20)
PR includes NGO	0.14		0.01
	(0.19)		(0.21)
PR includes IO	-0.05		-0.24
	(0.20)		(0.22)
Number of PRs	0.12		**0.19**
	(0.08)		(0.08)
Proposed amount/infection	**-0.08**		-0.01
	(0.04)		(0.05)
Principal (donor) preferences			
Bilateral aid per capita		-0.01	-0.09
		(0.06)	(0.05)
Freedom House score		-0.01	0.10
		(0.08)	(0.08)
Control of corruption		-0.11	-0.12
		(0.08)	(0.08)
Bilateral trade		0.07	-0.12
		(0.08)	(0.08)
Former G6 colony		0.24	-0.03
		(0.16)	(0.17)
UN voting affinity		-0.05	0.01
		(0.06)	(0.06)
Control variables			
CoV, bilateral aid		-0.003	-0.03
		(0.04)	(0.04)
CoV, bilateral trade		-0.10	-0.08
		(0.07)	(0.07)
GDP/capita at PPP			0.02
			(0.08)
Disease prevalence			**0.13**
			(0.05)
Grant running time	0.45	0.34	**0.48**
	(0.04)	(0.04)	(0.04)
Constant	16.14	16.14	16.28
	(0.33)	(0.26)	(0.35)
N	605	534	496

Bold coefficients significant at $p \leq .05$. Standard errors in parentheses.

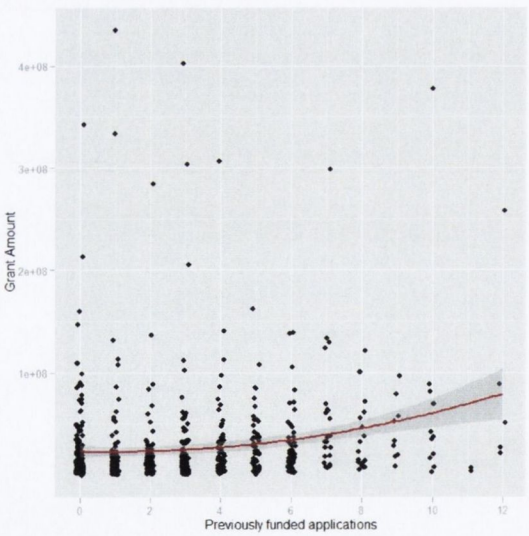
influence. In fact, including a 'prevention' component increases the awarded amount by more than 23%. Experience at acquiring and managing Fund grants is also rewarded: the strongly significant positive effect of the number of previous recommendations means that an experienced state that already has between two and three grants more in its portfolio can also expect to receive around 60% more money, compared to the average applicant. Application length is no longer a reliable predictor of grant amounts. In contrast to recommendation, involving public actors as principal recipients is not beneficial here, but a larger *number* of PRs does have such an effect. Lastly, proposing to spend more per infection leads to a grant having its overall budget adjusted downwards (which ironically results in lower approved spending per infection). This is to be expected, since there are incentives for applicants to at least modestly overstate their financial needs, which the Fund then attempts to correct for.

Moving on to the principals' preferences, the pattern of non-significance seen in previous models continues. Among all variables, only bilateral trade exhibits a significant relationship with grant amounts. However, this effect is opposite to expectations, since states that are more important trading partners for donors actually receive smaller grants from the Global Fund. In concrete terms, moving from one standard deviation below the mean of bilateral trade to one above results in 18% smaller grants; since the average approved grant amount is around $28 million, this translates into a non-trivial $5 million difference. Neither an applicant's quality of democracy, nor its grasp on corruption, economic importance, colonial status, or geopolitical alignment result in any meaningful change in outcomes. The same is true for measures of donor preference, including heterogeneity regarding trade which had shown statistical significance earlier. Lastly, higher disease prevalence and longer running time both predictably lead to larger grant amounts. Figures 4.3 and 4.4 show the effect of a number of statistically significant independent variables on the size of approved grants (Kastellec and Leoni 2007).

The results—and the substantial influence exerted by expert preferences—can again

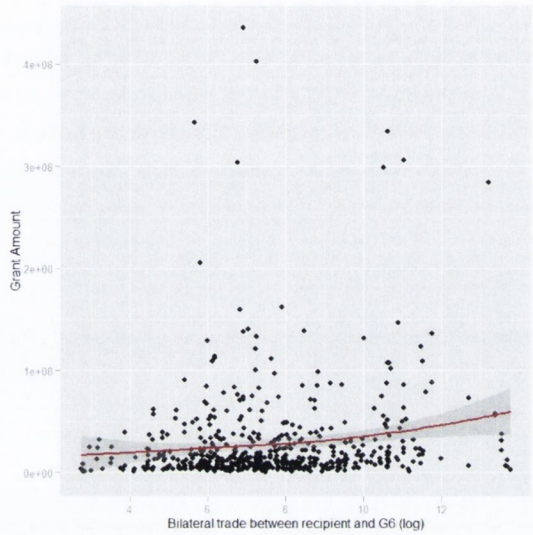


(a) Number of principal recipients

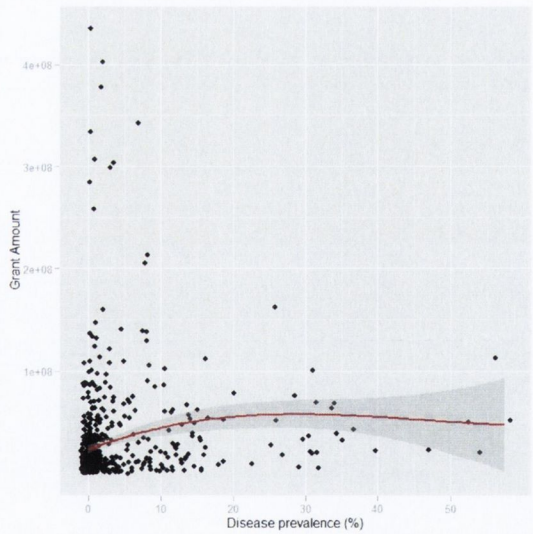


(b) Previously funded grants

Figure 4.3: Grant amounts by number of principal recipients, and number of previously funded grants.



(a) Bilateral trade with G6



(b) Prevalence of relevant disease

Figure 4.4: Grant amounts by bilateral trade between recipient and G6, and prevalence of relevant disease.

be summarized with the previously used states Alpha and Beta. For Alpha, all variables are held at their means, making it an entirely average applicant. Beta, however, is disliked as a recipient by donors, but meets the technical agents' highest standards in the same way as in the previous section. Does Beta lose funding due to its unattractiveness to donors? Calculating the predicted probabilities, the average application Alpha will receive $12 million, yet the expert's preferred applicant Beta is expected to receive $32 million, despite the fact that this is not in the donors' direct interest.

4.6.3 Grant Discrepancy

Table 4.4 provides the results of the multilevel linear regressions which model the discrepancy between proposed and approved grant amounts. Discrepancy is expressed as a percentage with a possible range of plus/minus 100, and the coefficients can be directly interpreted as such.[3] As outlined above, this part of the analysis is especially important because normally the direction and strength of the influence of institutional decision-making cannot be directly observed. This is because there is no 'baseline' unaltered by institutional processes to which the eventual outcomes could be compared. In the Fund's case, information about deviations from such a baseline is available and can be precisely expressed as grant discrepancy. The previous section is based only on approved grant amounts, but this does not tell us by how much the original budget was cut to arrive at those grant amounts.

Some agent preferences still affect grant discrepancy, such as applying with a more detailed proposal, which brings approved budgets 3% closer to what was proposed. A bigger portfolio of past grant approvals has the opposite effect—the more success a state has already had, the less likely it is to get what it requested.

Crucially however, it is evident that donor preferences do play a role in the Fund's

[3] Positive numbers do not necessarily mean a recipient gets more than what they asked for. The intercept in all models is strongly negative, so almost all budgets go through *some* cuts. In most cases, positive variables thus help prevent underfunding, rather than contribute to overfunding.

Table 4.4: Modeling Grant Discrepancy

	Model 1	Model 2	Model 3
Agent (expert) preferences			
PA: Prevention	**8.70**		4.22
	(2.40)		(2.59)
PA: Treatment	2.86		0.72
	(2.18)		(2.30)
Previous recommendations	**-10.70**		**-9.30**
	(3.37)		(3.81)
Grants currently running	2.58		3.66
	(3.27)		(3.62)
Application length	**2.27**		**3.08**
	(1.11)		(1.17)
PR includes governmental	-6.01		-3.82
	(5.31)		(5.01)
PR includes NGO	-10.62		-5.30
	(5.60)		(5.29)
PR includes IO	-3.58		1.01
	(5.47)		(5.21)
Number of PRs	-0.23		-0.57
	(2.27)		(2.11)
Proposed amount/infection	**-2.44**		-2.41
	(1.07)		(1.34)
Principal (donor) preferences			
Bilateral aid per capita		1.91	**2.65**
		(1.40)	(1.31)
Freedom House score		**6.81**	**5.95**
		(1.55)	(1.52)
Control of corruption		**4.57**	**3.77**
		(1.58)	(1.68)
Bilateral trade		**-4.20**	**-2.97**
		(1.28)	(1.24)
Former G6 colony		-1.72	0.56
		(2.59)	(2.68)
UN voting affinity		**2.50**	**2.72**
		(1.26)	(1.22)
Control variables			
CoV, bilateral aid		-1.61	-0.82
		(1.12)	(1.01)
CoV, bilateral trade		1.83	-0.58
		(1.37)	(1.38)
GDP/capita at PPP			0.55
			(1.45)
Disease prevalence			-1.45
			(1.26)
Grant running time			**7.83**
			(1.31)
Constant	-28.19	-25.52	-28.31
	(6.52)	(1.98)	(6.70)
N	605	529	496

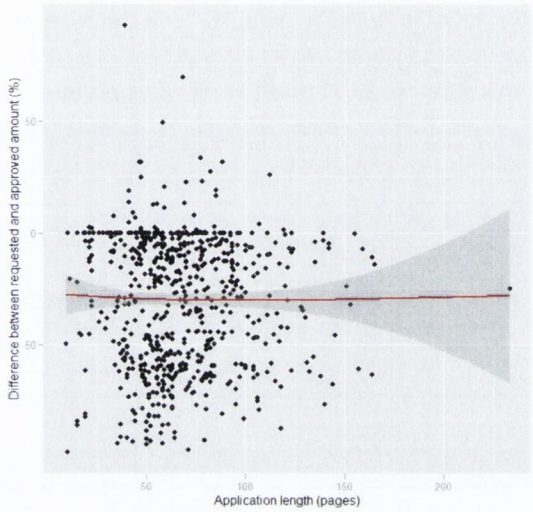
Bold coefficients significant at $p \leq .05$. Standard errors in parentheses.

decision-making after all. Not only are four out of six preference measures statistically significant, but their effects also point in the hypothesized direction. The exception to this is bilateral trade between the G6 and the recipient. Trade's negative effect goes against the finding in much of the development aid literature that more important trading partners also receive more aid (Alesina and Dollar 2000; Lundsgaarde, Breunig and Prakash 2010); but it is in line with a logic of 'trade, not aid', which is used to justify reduced aid flows to countries that seem able to better themselves through increased trade. Three other measures of donor preferences have a positive influence on discrepancy: quality of democracy, control of corruption, and voting affinity. For example, scoring 1.6 points above the mean on Freedom House's 7-point scale positively affects discrepancy by roughly 6%. This may seem modest, but the average grant proposes a $50 million budget, so getting 6% closer to this value translates into a substantial sum of money. Overall, states that are more democratic, less corrupt, and more geopolitically aligned with donors, will also be able to more effectively make use of the Fund.

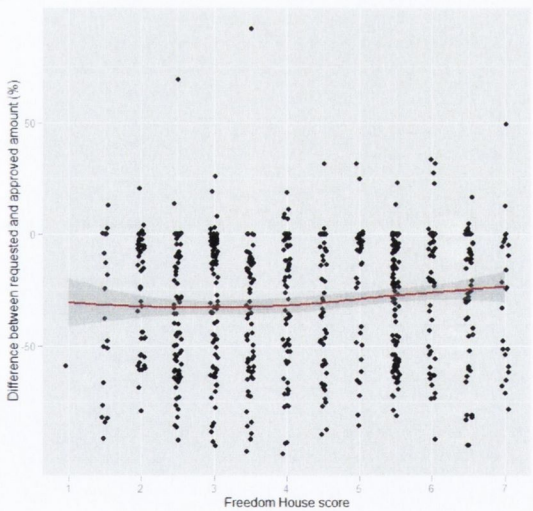
Lastly, the only significant control variable is a grant's running time, which also has the largest substantial effect among all variables. Irrespective of their total budgets, programs designed to run longer get approval for budgets that are much closer to what was originally proposed, meaning that the Fund is more interested in long-term solutions rather than short-term fixes. Figures 4.5 and 4.6 summarize the effect of some significant independent variables on grant discrepancy in graphical form.

4.6.4 Summary

The main finding from the statistical analysis is that the Global Fund has been successful in keeping some key aspects of grant decision-making free of political influences. The preferences of the Fund's expert agents do indeed determine whether or not a grant is recommended for funding, and what is more, their influence is carried over to grant amounts, where applications attractive to experts receive significantly more money in

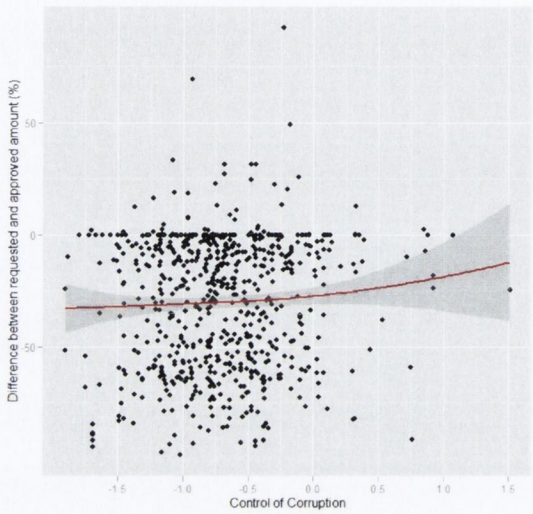


(a) Length of application

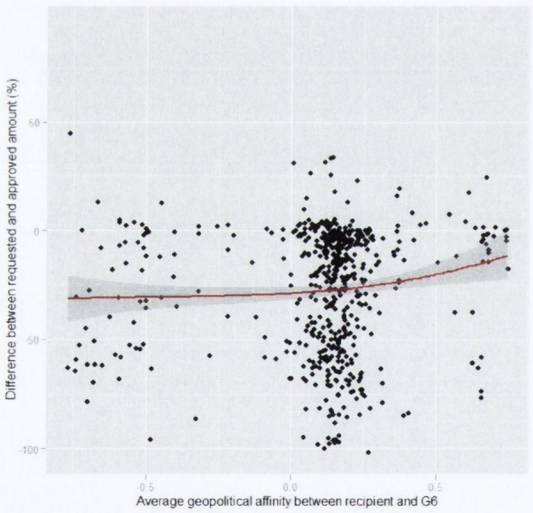


(b) Freedom House score

Figure 4.5: Grant discrepancy by length of application and Freedom House score.



(a) Control of corruption



(b) Geopolitical alignment with G6

Figure 4.6: Grant discrepancy by control of corruption, and geopolitical alignment with G6.

absolute terms. During these two phases of the decision-making process, the principals play next to no role. This changes, however, when grant discrepancy is concerned: total grant amounts indicate who gets how much from the Fund, but grant discrepancies show who is especially effective at this. Here, the preferences of political stakeholders re-enter the equation. Recipient states with certain macro-level characteristics attractive to donors are clearly more likely to get approval for what they asked for. Taken together, the results find mixed support for the notion that the evaluation and approval of grants by the Global Fund is an 'apolitical' process (Barnes and Brown 2009). While large parts of grant decision-making seem to be insulated from donor preferences, political variables still explain the varying effectiveness of recipient states at getting what they want.

4.7 Conclusion

The chapter has addressed the questions of variation in grant decision-making by the Global Fund to Fight AIDS, Tuberculosis and Malaria, and who really controls the institution. The theoretical framework is a principal-agent approach, in which decisions about grants can be influenced by the strategic and political preferences of the six most powerful donor states, and by the technocratic preferences of the independent health experts. The statistical analysis of the distribution of grants shows that technocratic variables explain whether grants are recommended for funding, and their approved grant amounts. But when it comes to discrepancies between proposed and approved amounts, political variables influence whether or not an applicant will receive what they asked for. In other words, which states get how much funding is mainly dependent on the experts; yet donors still seem to be able to influence decision-making so that attractive recipients are also more effective with their funding requests, and get more of what they asked for. Nevertheless, the degree to which the Fund has managed to keep politics out of the process of aid allocation can only be seen as a success of its particular institutional

design.

Common views of the Global Fund must therefore be considered simplistic: the Fund is neither a technocratic, expert-led, decision-making machine, nor is it mainly subject to donor state control. Instead, both actors play a role in the decision-making, although their influence varies at different stages of the process. These results tie into newer research efforts on other international organizations (Carter and Stone 2010; Copelovitch 2010; Winters 2010) that aim to replace black-and-white characterizations of institutions with a more detailed empirical analysis, and which allow for a more careful assessment of the marginal impacts of particular actors and interests.

Chapter 5

Conclusion

International institutions play an increasingly important role in providing goods with strong cross-border externalities such as global health. This has been recognized both by developed nations that use institutions as a channel for their resources, and by developing states that aim to acquire multilateral aid. Yet *how* countries engage with these international institutions varies greatly across states, across time, and across contexts. While there is a substantial literature on development aid in general that includes empirical studies (Alesina and Dollar 2000; Carbone 2007; Bueno de Mesquita and Smith 2009; Milner and Tingley 2010; Esser and Keating Bench 2011; Vreeland 2011; McLean 2012), political science has rarely investigated the dimensions of variation in the interactions of states and institutions for global health. Data-driven empirical analyses are even rarer. This project has sought to advance the literature by adapting well-established theoretical frameworks to this new issue area, and by testing the theories on a number of original datasets of state-institution interactions.

Each chapter answers its own distinct question, but the central theme is that how states engage with multilateral institutions is determined by the same preferences and strategies as in unilateral or bilateral contexts (Frieden 1999), with some notable exceptions. In other words, state behavior towards and within institutions is a strategic,

mostly self-interested choice that is heavily influenced by domestic-level variables, and few special rules apply (see Milner 1997; Moravcsik 1997). While the fact that preferences matter is in itself not a surprise, the analyses shown here explain *when* and *how* they matter, and allow us to discern the marginal effects of certain actors and interests. Accordingly, the statistical analyses conducted throughout the project demonstrate that even relatively parsimonious models based on specific constraints and motivations serve to explain variation convincingly.

The core findings from each chapter support this overarching theme in different ways. Chapter 2 investigates how donor states decide through which institutions they channel their multilateral health aid. I find that donors' alignment with other member states of an institution is an important predictor of how much of their budget they entrust to the organization. Note that this fact cannot really be influenced by the institution, while a variable over which it *does* have some control—on which types of programs it spends its budget—seems to be almost entirely unimportant to donors. Similarly, the results from Chapter 3 show that much of a developing state's decision to apply to the Global Fund can be explained by variables related to an executive's domestic political situation, while economic factors and past relationships with the institution play a secondary role at best. Chapter 4 introduces the only note of caution into the account of the continued importance of state preferences: an analysis of Global Fund grants reveals that the organization's structure minimizes the influence of state principals at certain stages of the decision-making process, as it was indeed designed to do. But even here I find that a core dimension of institutional output—which countries actually receive the amount of resources that they requested, rather than seeing their budgets cut—is still dependent on donor state preferences.

The project does not contend that its findings can be generalized to every other issue area. The primary purpose of the study was an empirical exploration of a previously neglected field of research, rather than the creation of broader theoretical or conceptual

frameworks. In addition, generalizing from the results presented here must mean recognizing that a number of institutions for global health are unusual in their structure and processes. This is especially true in the case of the Global Fund, with its strict division of labor between principals and agents, and its design as a funding agency, rather than an implementer. Nonetheless, the findings about the influence—and, at times, primacy—of state preferences tie in well with research on other institutions (Carter and Stone 2010; Copelovitch 2010; McLean 2012), and its measurements of the marginal impacts of specific variables on the demand and supply of aid can inform the literature on bilateral and multilateral development assistance.

A number of policy recommendations may be drawn from these three studies. First, for donor state contributions to multilateral institutions, the selection of participants is vastly more important than actual policies. To ensure substantial resources are delegated to a particular institution, membership must be confined to well-aligned donors and recipients. This does not mean that aid cannot ultimately be channeled to non-aligned states, but that these should remain outside the institution in order to maximize contributions. Including a broader range of countries in the decision-making may be a legitimate goal, but will inevitably lead to hesitation on the part of donors regarding delegation (cf. Koremenos, Lipson and Snidal 2001).

Second, whether or not developing states decide to avail of the resources provided by the Global Fund depends on an executive's domestic political constraints. If states are to be encouraged to apply, easing the weight of these constraints must be a priority—this might include technical assistance to increase government effectiveness, or systematically supporting those political actors that are dedicated to openness and inclusiveness, rather than nationalism or xenophobia.

Third, a number of recommendations may be made to states applying for Global Fund grants. To increase the chance that an application gets the green light from experts, and receives the desired amounts of funding, it needs to satisfy technocratic preferences: for

example, this means that an application should be both long and detailed, and that it should name a governmental or intergovernmental actor as its principal recipient. Including certain program components—such as prevention—that are supposedly popular with experts does not increase the likelihood of funding. Ensuring that the Fund approves as much of the originally proposed amount as possible is harder for an applying state, because it partly involves changing broad systemic variables. Increasing the quality of democracy, controlling corruption, and higher geopolitical alignment with donors all positively influence whether a state gets what it applied for. Developing countries *can* control two variables to reduce grant discrepancy, namely the depth and detail of an application, and proposing long-term programs.

This study has investigated the interactions between states and institutions for global public health in order to provide a more comprehensive and empirical account not only of a specific issue, but of state behavior in general. The project hopes to encourage more theoretically informed, data-driven work on the nexus between stakeholders and institutions in areas beyond health. Multilateral cooperation is considered one of the cornerstones of how the world will tackle the problems of the 21st century, and understanding when and how this cooperation works is a central task for international relations as a discipline.

Appendix A

Technical Notes

The data used throughout this thesis was collected from a variety of well-established sources as shown in the tables below. Where variables were not directly available, but had to be calculated or entered manually, this is indicated by the phrases "own calculation" or "own research".

Building the datasets themselves was done in the *LibreOffice Calc* and *LibreOffice Base* version 3.5.3.2 spreadsheet and database managing programs. All analyses were conducted with the *R* version 2.15.0 statistical language and environment (R Foundation 2012). The multilevel models are based on the framework and code developed by Gelman and Hill (2007), mainly using the *lmer* package. Graphs were in part constructed with the *ggplot2* package for *R* (Wickham 2012). All datasets and the *R* code necessary to reproduce the results are available from the author on request at `theinerp@tcd.ie`.

This document was typeset in LaTeX 2_ε.

Table A.1: Multilateral Health Aid: Variable Sources

Variable	*Source*
Share of multilateral health aid (%)	OECD (2012) / own calculation
Alignment with member states	Voeten (2000); Gartzke (2006)
Alignment of spending patterns	OECD (2012) / own calculation
Number of institution's members	own research
United States dummy	—
Population size (log)	World Bank (2012)
GDP per capita (log)	World Bank (2012)
Government spending (%)	World Bank (2012)
t *	own calculation

Table A.2: Global Fund Applications: Variable Sources

Variable name	*Source*
Application decision	Global Fund (2012) / own research
Application ratio	own calculation
Control of corruption	World Bank (Kaufmann, Kraay and Mastruzzi 2010)
Government effectiveness	World Bank (Kaufmann, Kraay and Mastruzzi 2010)
Executive election year	Database of Political Institutions (Beck et al. 2001; Keefer 2010)
Executive with nationalist base	Database of Political Institutions (Beck et al. 2001; Keefer 2010)
Executive's parliamentary majority	Database of Political Institutions (Beck et al. 2001; Keefer 2010)
GDP per capita at PPP	International Monetary Fund (2012)
Ratio of foreign aid to GDP	International Monetary Fund (2012)
Population size	United Nations Population Division (2012)
Disease prevalence	WHO / UNAIDS (WHO 2012)
Health as % of government spending	WHO / World Bank (WHO 2012)
External resources for health	WHO / World Bank (WHO 2012)
Successes in last round	Global Fund (2012) / own research
Funding round	Global Fund (2012) / own research
Disease applied for	Global Fund (2012) / own research

Table A.3: Global Fund Grants: Variable Sources

Variable	*Source*
Grant recommendation	Global Fund (2012) / own research
Grant amount	Global Fund (2012) / own research
Grant discrepancy	Global Fund (2012) / own research
Program areas covered	Global Fund (2012) / own research
Previous recommendations	Global Fund (2012) / own research
Principal grant recipients	Global Fund (2012) / own research
Length of application	Global Fund (2012) / own research
Proposed amount/infection	Global Fund (2012) / own research
Bilateral aid	OECD (2012)
Freedom House score	Freedom House (2011)
Control of corruption	World Bank (Kaufmann, Kraay and Mastruzzi 2010)
Trade G6–recipient	International Monetary Fund (2012)
Former G6 colony	Central Intelligence Agency (2012)
UN voting affinity	Voeten (2000); Gartzke (2006)
CoV, bilateral aid	own calculation
CoV, bilateral trade	own calculation
CoV, UN voting affinity	own calculation
G6 TRP experts	own research
Population size	United Nations Population Division (2012)

Bibliography

Alesina, Alberto and Beatrice Weder. 2002. "Do Corrupt Governments Receive Less Foreign Aid?" *The American Economic Review* 92(4):1126–1137.

Alesina, Alberto and David Dollar. 2000. "Who gives foreign aid to whom and why?" *Journal of Economic Growth* 5(1):33–63.

Ashcroft, Bill, Gareth Griffiths and Helen Tiffin. 2007. *Post-Colonial Studies: The Key Concepts*. Routledge.

Balogh, T. 1967. "Multilateral v. Bilateral Aid." *Oxford Economic Papers* 19(3):328–344.

Barnes, Amy and Garrett Wallace Brown. 2009. "The Global Fund to Fight AIDS, Tuberculosis and Malaria: Expertise, Accountability and the Depoliticisation Of Global Health Governance.".
URL: *http://goo.gl/4iocj*

Bearce, David H. and Daniel C. Tirone. 2010. "Foreign Aid Effectiveness and the Strategic Goals of Donor Governments." *Journal of Politics* 72(3):837–851.

Beck, Thorsten, George Clarke, Alberto Groff, Philip Keefer and Patrick Walsh. 2001. "New Tools in Comparative Political Economy: The Database of Political Institutions." *World Bank Economic Review* 15(1):165–176.

Bendor, Jonathan and Adam Meirowitz. 2004. "Spatial Models of Delegation." *American Political Science Review* 98(2):293–310.

Berthelemy, Jean-Claude. 2006. "Bilateral Donors' Interest vs. Recipients' Development Motives in Aid Allocation: Do All Donors Behave the Same?" *Review of Development Economics* 10(2):179–194.

Börzel, Tanja A. 2009. "Governance without Government - False Promises or Flawed Premises?".
URL: *http://goo.gl/YM2gg*

Bown, Chad P. 2005. "Participation in WTO Dispute Settlement: Complainants, Interested Parties, and Free Riders." *The World Bank Economic Review* 19(2):287–310.

Brown, Garrett Wallace. 2009. "Multisectoralism, Participation and Stakeholder Effectiveness: Increasing the Role of Non-State Actors in The Global Fund to Fight AIDS, Tuberculosis and Malaria." *Global Governance* 15:169–177.

Broz, J. Lawrence and Michael B. Hawes. 2006. US domestic politics and international monetary fund policy. In *Delegation and Agency in International Organizations*, ed. Darren Hawkins, David A. Lake, Daniel Nielson and Michael J. Tierney. Cambridge: Cambridge University Press pp. 77–106.

Bueno de Mesquita, Bruce and Alastair Smith. 2009. "A Political Economy of Aid." *International Organization* 63(2):309–340.

Bueno de Mesquita, Bruce, Alastair Smith, Randolph Siverson and James D. Morrow. 2003. *The Logic of Political Survival.* MIT Press.

Burnell, Peter and Oliver Morissey. 2004. *Foreign Aid in the New Global Economy.* Cheltenham: Edward Elgar.

Burnside, Craig and David Dollar. 2004. "Aid, Policies, and Growth: Revisiting the Evidence.".
URL: *http://goo.gl/WjIUg*

Carbone, Maurizio. 2007. *The European Union and International Development: The Politics of Foreign Aid.* New York City: Routledge.

Carter, David B. and Randall W. Stone. 2010. "Sincere or Strategic? U.S. Aid Disbursements and Voting in the United Nations General Assembly.".
URL: *http://goo.gl/WpK1r*

Central Intelligence Agency. 2012. "World Fact Book.".
URL: *https://www.cia.gov/library/publications/the-world-factbook/*

Chigwedere, Pride, George R. Seage, Sofia Gruskin, Tun-Hou Lee and M. Essex. 2008. "Estimating the lost benefits of antiretroviral drug use in South Africa." *Journal of Acquired Immune Deficiency Syndromes* 49(4):410–5.

Chong, Alberto and Mark Gradstein. 2006. "Who's Afraid of Foreign Aid? The Donors' Perspective.".
URL: *http://idbdocs.iadb.org/wsdocs/getdocument.aspx?docnum=844837*

Cohen, Justin M., Inder Singh and Megan E. O'Brien. 2008. "Predicting Global Fund grant disbursements for procurement of artemisinin-based combination therapies." *Malaria Journal* 7:200.

Collier, Paul and David Dollar. 2004. "Development Effectiveness: What Have We Learnt?" *The Economic Journal* 114(496):244–271.

Copelovitch, Mark S. 2010. "Master or Servant? Common Agency and the Political Economy of IMF Lending." *International Studies Quarterly* 54(1):49–77.

Creese, Andrew, Katherine Floyd, Anita Alban and Lorna Guinness. 2002. "Cost-effectiveness of HIV/AIDS interventions in Africa: a systematic review of the evidence." *The Lancet* 359(9318):1635–43.

de Renzio, Paolo and Joseph Hanlon. 2007. "Contested Sovereignty in Mozambique: The Dilemmas of Aid Dependence.".
URL: *http://goo.gl/5hs4B*

De Wet, Erika. 2008. "Holding International Institutions Accountable : The Complementary Role of Non-Judicial Oversight Mechanisms and Judicial Review." *German Law Journal* 9(11):572–573.

Dijkstra, A. Geske. 2002. "The Effectiveness of Policy Conditionality: Eight Country Experiences." *Development and Change* 33(2):307–334.

Dollar, David and Victoria Levin. 2006. "The Increasing Selectivity of Foreign Aid, 1984-2003." *World Development* 34(12):2034–2046.

Dreher, Axel and Jan-Egbert Sturm. 2006. "Do IMF and World Bank Influence Voting in the UN General Assembly?".
URL: *http://goo.gl/8MGJA*

Dreher, Axel, Jan-Egbert Sturm and James Raymond Vreeland. 2009*a*. "Development aid and international politics: Does membership on the UN Security Council influence World Bank decisions?" *Journal of Development Economics* 88(1):1–18.

Dreher, Axel, Jan-Egbert Sturm and James Raymond Vreeland. 2009*b*. "Global horse trading: IMF loans for votes in the United Nations Security Council." *European Economic Review* 53(7):742–757.

Dreher, Axel, Peter Nunnenkamp and Rainer Thiele. 2008. "Does US aid buy UN general assembly votes? A disaggregated analysis." *Public Choice* 136(1-2):139–164.

Dreher, Axel and Roland Vaubel. 2004. "The Causes and Consequences of IMF Conditionality." *Emerging Markets Finance and Trade* 40(3):26–54.

Edele, Andreas. 2006. All Hands on Deck: The Establishment of Global Public-Private Partnerships from a Resource Exchange Perspective. Master's thesis University of Tuebingen.

Esser, Daniel E. and Kara Keating Bench. 2011. "Does Global Health Funding Respond to Recipients' Needs? Comparing Public and Private Donors' Allocations in 20052007." *World Development* 39(8):1271–1280.

Feachem, Richard G. and Oliver J. Sabot. 2006. "An examination of the Global Fund at 5 years." *The Lancet* 368(9534):537–40.

Fenio, Kenly G. 2011. "Tactics of Resistance and the Evolution of Identity from Subjects to Citizens: The AIDS Political Movement in Southern Africa." *International Studies Quarterly* 55:717–735.

Flinders, Matthew and Jim Buller. 2006. "Depoliticisation: Principles, Tactics and Tools." *British Politics* 1(3):293–318.

Freedom House. 2011. Freedom in the World 2011. Technical report.
URL: *http://www.freedomhouse.org/images/File/fiw/FIW_2011_Booklet.pdf*

Frieden, Jeffry. 1999. Actors and Preferences in International Relations. In *Strategic Choice and International Relations*, ed. David A. Lake and Robert Powell. Princeton University Press pp. 39–77.

Garmaise, David. 2006. An Analysis of the Strengths and Weaknesses of Proposals Submitted to the Global Fund in Rounds 3-6 Based on Comments by the Technical Review Panel. Technical report Aidspan.
URL: *http://www.aidspan.org/index.php?page=publications*

Garmaise, David. 2009. A Beginner's Guide to the Global Fund. Technical report Aidspan.
URL: *http://www.aidspan.org/index.php?page=publications*

Garmaise, David. 2010. Key Strengths of Rounds 8 and 9 Proposals to the Global Fund. Technical report Aidspan.
URL: *http://www.aidspan.org/index.php?page=publications*

Garrett, Laurie. 2007. "The Challenge of Global Health." *Foreign Affairs* 86(1).

Gartzke, Erik. 2006. "The Affinity of Nations Index.".
URL: *http://goo.gl/zVW0R*

Gauri, Varun and Evan S Lieberman. 2004. "AIDS and the State: The Politics of Government Responses to the Epidemic in Brazil and South Africa.".

Gelman, Andrew. 2006. "Multilevel (Hierarchical) Modeling: What It Can and Cannot Do." *Technometrics* 48(3):432–435.

Gelman, Andrew. 2008. "Scaling regression inputs by dividing by two standard deviations." *Statistics in Medicine* 27:2865–2873.

Gelman, Andrew and Jennifer Hill. 2007. *Data Analysis Using Regression and Multilevel/Hierarchical Models*. Cambridge: Cambridge University Press.

Gilligan, Andrew. 2012. "India tells Britain: We don't want your aid." *The Telegraph* Feb 4.
URL: *http://goo.gl/iKMjm*

Global Fund to Fight AIDS, Tuberculosis and Malaria. 2007. "Guidelines for Proposals Round 7.".
URL: *http://www.theglobalfund.org/en/library/*

Global Fund to Fight AIDS, Tuberculosis and Malaria. 2008. Country Coordinating Mechanisms Secretariat Funding. Technical report Global Fund to Fight AIDS, Tuberculosis and Malaria.
URL: *http://goo.gl/tsdKF*

Global Fund to Fight AIDS, Tuberculosis and Malaria. 2009*a*. "Board Operating Procedures of the Global Fund to Fight AIDS, Tuberculosis and Malaria.".
URL: *http://www.theglobalfund.org/en/library/*

Global Fund to Fight AIDS, Tuberculosis and Malaria. 2009*b*. "Terms of Reference of the Technical Review Panel.".
URL: *http://www.theglobalfund.org/en/library/*

Global Fund to Fight AIDS, Tuberculosis and Malaria. 2011. "Information Note on Eligibility, Counterpart Financing and Prioritization.".
URL: *http://www.theglobalfund.org/en/library/*

Global Fund to Fight AIDS, Tuberculosis and Malaria. 2012. "Grant Portfolio.".
URL: *http://portfolio.theglobalfund.org/en/Home/Index*

Goldsmith, Arthur A. 2001. "Foreign Aid and Statehood in Africa." *International Organization* 55(1):123–148.

Haas, Peter M. and Emanuel Adler. 1992. "Introduction: Epistemic Communities and International Policy Coordination." *International Organization* 46(1):1–35.

Haas, Peter M. and Ernst B. Haas. 1995. "Learning to Learn: Improving International Governance." *Global Governance* 1(1):255–284.

Hawkins, Darren G., David A. Lake, Daniel L. Nielson and Michael J. Tierney. 2006. *Delegation and Agency in International Organizations*. Cambridge: Cambridge University Press.

Headey, Derek D., D. S. Prasada Rao and Alan Duhs. 2004. "All the Conditions of Effective Foreign Aid.".
URL: *http://ideas.repec.org/p/qld/uqcepa/09.html*

Heimans, Jeremy J. 2002. "Multisectoral Global Funds as instruments for financing spending on global priorities.".
URL: *http://www.un.org/esa/esa02dp24.pdf*

Hill, Jenny, Jo Lines and Mark Rowland. 2006. "Insecticide-Treated Nets." *Advances in Parasitology* 61:77–128.

Huckel Schneider, Carmen. 2008*a*. "Global public health and International relations: pressing issues - evolving governance (book review)." *Australian Journal of International Affairs* 62(1):94–108.

Huckel Schneider, Carmen. 2008*b*. Legitimacy and Global Governance in Managing Global Public Health . phd dissertation University of Tuebingen.

International Monetary Fund. 2012. "World Economic Outlook Databases.".
URL: *http://www.imf.org/external/ns/cs.aspx?id=28*

Jones, Emily and Lindsay Whitfield. 2009. Ghana: Breaking Out of Aid Dependence? Economic and Political Barriers to Ownership. In *The Politics of Aid*, ed. Lindsay Whitfield. Oxford: Oxford University Press pp. 185–216.

Kahler, Miles. 1995. *International Institutions and the Political Economy of Integration.* Washington, D.C.: Brookings Institution.

Kastellec, Jonathan P. and Eduardo Leoni. 2007. "Using Graphs Instead of Tables to Improve the Presentation of Empirical Results in Political Science." *Perspectives on Politics* 5(4):755–771.

Kaufmann, Daniel, Aart Kraay and Massimo Mastruzzi. 2010. "The Worldwide Governance Indicators - Methodology and Analytical Issues.".
URL: *http://info.worldbank.org/governance/wgi/pdf/WGI.pdf*

Keefer, Philip. 2010. "Database of Political Institutions: Changes and Variable Definitions.".

Kilby, Christopher. 2010. "An empirical assessment of informal influence in the World Bank.".
URL: *http://ideas.repec.org/p/vil/papers/9.html*

Killick, Tony. 1998. *Aid and the Political Economy of Policy Change.* London: Routledge.

Knack, Stephen. 2001. "Aid Dependence and the Quality of Governance: Cross-Country Empirical Tests." *Southern Economic Journal* 68(2):310–329.

Koremenos, Barbara. 2008. "When, what, and why do states choose to delegate?" *Law and Contemporary Problems* 71:151–192.

Koremenos, Barbara, Charles Lipson and Duncan Snidal. 2001. "The Rational Design of International Institutions." *International Organization* 55(4):761–799.

Kosack, Stephen. 2003. "Effective Aid: How Democracy Allows Development Aid to Improve the Quality of Life." *World Development* 31(1):1–22.

Kuziemko, Ilyana and Eric Werker. 2006. "How Much Is a Seat on the Security Council Worth? Foreign Aid and Bribery at the United Nations." *Journal of Political Economy* 114(5):905–930.

Lake, David A. 2007. "Delegating divisible sovereignty: Sweeping a conceptual minefield." *The Review of International Organizations* 2(3):219–237.

Lu, Chunling, Catherine M Michaud, Kashif Khan and Christopher Murray. 2006. "Absorptive capacity and disbursements by the Global Fund to Fight AIDS, Tuberculosis and Malaria: analysis of grant implementation." *The Lancet* 368(9534):483–8.

Lundsgaarde, Erik, Christian Breunig and Aseem Prakash. 2010. "Instrumental Philanthropy: Trade and the Allocation of Foreign Aid." *Canadian Journal of Political Science* 43(3):733–761.

Maizels, Alfred and Machiko Nissanke. 1984. "Motivations for Aid to Developing Countries." *World Development* 12(9):879–900.

Martin, Lisa L. 2006. Distribution, Information, and Delegation to International Organizations: The Case of IMF Conditionality. In *Delegation and Agency in International Organizations*, ed. Darren G. Hawkins, David A. Lake, Daniel L. Nielson and Michael J. Tierney. Cambridge: Cambridge University Press.

Mavrotas, George and Mark McGillivray. 2009. *Development Aid: A Fresh Look*. Basingstoke: Palgrave Macmillan.

Mckinley, R. D. and R. Little. 1979. "The US Aid Relationship: a Test of the Recipient Need and the Donor Interest Models." *Political Studies* 27(2):236–250.

McLean, Elena V. 2012. "Donors' Preferences and Agent Choice: Delegation of European Development Aid." *International Studies Quarterly* 56(2).

Mearsheimer, John J. 1994. "The False Promise of International Institutions." *International Security* 19(3):5.

Miller, Gary J. 2005. "The Political Evolution of Principal-Agent Models." *Annual Review of Political Science* 8(1):203–225.

Milner, Helen V. 1997. *Interests, Institutions, and Information*. Princeton: Princeton University Press.

Milner, Helen V. 2006. Why Multilateralism? Foreign Aid and Domestic Principal-Agent Problems. In *Delegation and Agency in International Organizations*, ed. Darren G. Hawkins, David A. Lake, Daniel L. Nielson and Michael J. Tierney. Cambridge: Cambridge University Press pp. 107–139.

Milner, Helen V. and Dustin Tingley. 2010. "The Choice for Multilateralism: Foreign Aid and American Foreign Policy.".
URL: *http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1900147*

Moe, Terry M. 1987. Interests, institutions and positive theory. In *Studies in Ameircan Political Development*, ed. K. Orren and S. Skowronek. New Haven: Yale University Press chapter 2, pp. 236–299.

Moravcsik, Andrew. 1997. "Taking Preferences Seriously: A Liberal Theory of International Politics." *International Organization* 51(4):513–553.

Moravcsik, Andrew. 2000. "The Origins of Human Rights Regimes: Democratic Delegation in Postwar Europe." *International Organization* 54(2):217–252.

Mosley, Paul, Jane Harrigan and John Toye. 1991. *Aid and Power: The World Bank and Policy-Based Lending in the 1980s.* London: Routledge.

Nahlen, Bernard L. and Daniel Low-Beer. 2007. "Building to Collective Impact: The Global Fund Support for Measuring Reduction in the Burden of Malaria." *American Journal of Tropical Medicine and Hygiene* 77(Suppl 6):321–327.

Nathanson, Constance. 1996. "Disease Prevention as Social Change: Toward a Theory of Public Health." *Population and Development Review* 22(4):609–637.

Neumayer, Eric. 2003. "The Determinants of Aid Allocation by Regional Multilateral Development Banks and United Nations Agencies." *International Studies Quarterly* 47(1):101–122.

Nielson, Daniel L. and Michael J. Tierney. 2003. "Delegation to International Organizations: Agency Theory and World Bank Environmental Reform." *International Organization* 57(2):241–276.

Oatley, Thomas H. and Jason Yackee. 2004. "American Interests and IMF Lending." *International Politics* 41:415–429.

OECD Development Co-operation Directorate. 2011. "Aid to Health.".
URL: *www.oecd.org/dac/stats/health*

OECD Development Co-operation Directorate. 2012. "International Development Statistics.".
URL: *http://goo.gl/TGNZ7*

Phelan, William. 2011. "Open international markets without exclusion: encompassing domestic political institutions, international organization, and self-contained regimes." *International Theory* 3(02):286–306.

Powell, Andrew and Matteo Bobba. 2006. "Multilateral Intermediation of Foreign Aid: What is the Trade-Off for Donor Countries?".
URL: *http://www.iadb.org/res/publications/pubfiles/pubWP-594.pdf*

Price-Smith, Andrew. 2002. *The Health of Nations: Infectious Disease, Environmental Change, and Their Effects on National Security and Development.* Cambridge: MIT Press.

Primo, David M, Matthew L Jacobsmeier and Jeffry Milyo. 2007. "Estimating the Impact of State Policies and Institutions with Mixed-Level Data." *State Politics and Policy Quarterly* 7(4):446–459.

Przeworski, Adam and James Raymond. 2000. "The effect of IMF programs on economic growth." *Journal of Development Economics* 62.

R Foundation for Statistical Computing. 2012. "R Programming Language and Software Environment.".
URL: *http://www.r-project.org/foundation/*

Radelet, Steven and Bilal Siddiqi. 2007. "Global Fund grant programmes: an analysis of evaluation scores." *The Lancet* 369(9575):1807–13.

Rajan, Raghuram and Arvind Subramanian. 2005. "Aid and Growth: What Does the Cross-Country Evidence Really Show?".
URL: *http://papers.ssrn.com/sol3/papers.cfm?abstract_id=887996*

RTI International. 2004. "RTI International AIDS researcher chosen for Global Fund's Technical Review Panel.".
URL: *http://goo.gl/oa3nd*

Sachs, Jeffrey. 2010. "Funding a Global Health Fund." *The Guardian* .
URL: *http://goo.gl/cRaQC*

Schraeder, Peter J., Steven W. Hook and Bruce Taylor. 1998. "Clarifying the Foreign Aid Puzzle: A Comparison of American, Japanese, French, and Swedish Aid Flows." *World Politics* 50(2):294–323.

Shiffman, Jeremy. 2008. "Has donor prioritization of HIV/AIDS displaced aid for other health issues?" *Health Policy and Planning* 23(2):95–100.

Skolnik, Richard. 2007. *Essentials of Global Health.* Sudbury, MA: Jones and Bartlett.

Sogge, David. 2002. *Give and Take - What's the Matter With Foreign Aid?* New York City: Palgrave.

Spence, Michael and Richard Zeckhauser. 1971. "Insurance, Information, and Inidividual Action." *American Economic Review* 61(2):380–387.

Stone, Randall W. 2008. "The Scope of IMF Conditionality." *International Organization* 62(4):589–620.

Sturm, Jan-Egbert, Helge Berger and Jakob de Haan. 2005. "Which Variables Explain Decisions on IMF Credit? An Extreme Bounds Analysis." *Economics and Politics* 17(2):177–213.

Thacker, Strom. 1999. "The High Politics of IMF Lending." *World Politics* 52(1):38–75.

United Nations. 2010. The Millennium Development Goals Report. Technical report United Nations.
URL: *http://goo.gl/Nz2Rc*

United Nations Population Division. 2012. "Population Estimates.".
URL: *http://esa.un.org/unpd/wpp/unpp/panel_population.htm*

Voeten, Erik. 2000. "Clashes in the Assembly." *International Organization* 54(2):185–215.

Voeten, Erik. 2008. "Resisting the Lonely Superpower: Responses of States in the United Nations to U.S. Dominance." *The Journal of Politics* 66(03):729–754.

Vreeland, James R. 2003. "Why Do Governments and the IMF Enter into Agreements? Statistically Selected Cases." *International Political Science Review* 24(3):321–343.

Vreeland, James R. 2011. "Foreign aid and global governance: Buying Bretton Woods - the Swiss-bloc case." *The Review of International Organizations* 6(3-4):369–391.

Weber, Max. 1958. *From Max Weber: Essays in Sociology.* New York City: Oxford University Press.

Weingast, Barry R. 1984. "The congressional-bureaucratic system: a principal-agent perspective (with applications to the SEC)." *Public Choice* 44:147–188.

Weingast, Barry R. and Michael Moran. 1983. "Bureaucratic discretion or congressional control? Regulatory policymaking by the Federal Trade Commission." *Journal of Political Economy* 91:765–800.

Whitfield, Lindsay. 2009. *The Politics of Aid.* Oxford: Oxford University Press.

Wickham, Hadley. 2012. "ggplot2 Plotting System for R.".
URL: *http://had.co.nz/ggplot2/*

Willett, Thomas. 2001. "Understanding the IMF Debate." *The International Review* n.V.(4):593–610.

Winters, Matthew. 2010. "Choosing to Target: What Types of Countries Get Different Types of World Bank Projects." *World Politics* 62(3):422–458.

Woods, Ngaire. 2008. "Whose aid? Whose influence? China, emerging donors and the silent revolution in development assistance." *International Affairs* 84(6):1205–1221.

World Bank. 2012. "World Bank Data Catalog.".
URL: *http://data.worldbank.org/*

World Health Organization. 2006. The Stop TB Strategy. Technical report World Health Organization.
URL: *http://www.who.int/tb/strategy/en/*

World Health Organization. 2012. "Global Health Observatory.".
URL: *http://apps.who.int/ghodata/*