Bypass or Engage?

Explaining Donor Delivery Tactics in Foreign Aid Allocation

Simone Dietrich[*][†]

Princeton University

dietrich.simone@gmail.com

Abstract

The conventional wisdom in the literature on aid allocation suggests that donors utilize bilateral aid as a tool to buy influence in the aid-receiving country. Those who conclude that aid is driven by donor self-interest focus on government-to-government aid transfers. However, this approach overlooks important variation in delivery tactics: bilateral donors frequently provide aid to non-state actors. This paper argues that donors resort to delivery tactics that increase the likelihood of aid achieving its intended outcome. In poorly governed recipient countries, donors bypass recipient governments and deliver more aid through non-state actors, all else equal. In recipient countries with higher governance quality, donors engage the government and give more aid through the government-to-government channel. Using OLS and Probit regressions, I find empirical support for this argument. Understanding the determinants of donor delivery tactics has important implications for assessing aid effectiveness.

Introduction

In 2008, Haiti, a developing country with an abysmal record of governance, received more than 700 million US dollars in bilateral development assistance from OECD donor countries, amounting to roughly 70 dollars of aid per capita. In the same year, Tanzania, whose institutions of intermediate strength bode well for effective aid implementation, received around 2 billion US dollars in bilateral assistance, equivalent to approximately 47 dollars in per capita aid. For recent accounts of aid policy by scholars who champion a donor government whose primary objectives are policy concessions over one that derives utility from aid effectiveness this outcome is consistent with an empirical regularity: in spite of a high probability of aid waste donors continue to provide high volumes of per capita aid to countries with poor governance. This regularity, coupled with the assumption that aid directly adds to a government's available resources has prompted scholars to question donors' development motivations (e.g. Alesina and Weder 2002; Bueno de Mesquita and Smith 2009; Neumayer 2003).

However, this image of the concession-driven government changes when one accounts for the mechanism of aid delivery: Over sixty percent of aid to Haiti bypassed the central government and is channeled through international and local non-governmental organizations, multilateral organizations, and private contractors. In Tanzania, on the other hand, only 15 percent of the aid to Tanzania is channeled through non-state actors. The balance was given to the Tanzanian government in a bilateral, state-to-state engagement (OECD 2010). The central focus of this paper addresses this empirical puzzle: why do OECD donors choose to bypass state institutions in some developing countries but not others? And, under what conditions do they do so?

This study argues that donor decisions about the selection of delivery mechanisms are not random but endogenous to the quality of recipient state institutions. Outcome-oriented donors, whose development strategy seeks to maximize the impact of their aid on recipient development, respond tactically to the quality of governance in the recipient country. Recipient institutions serve as a credible signal for gauging the probability of successful aid implementation. Strong institutions signal greater capacity and willingness of the recipient government to effectively disburse aid, thus encouraging donors to entrust the government with more of the aid. At the same time, bad governance raises the specter of aid misuse and creates an incentive for donors to seek out alternative development partners that allow them to protect a larger share of their aid from capture by the recipient government.

The results of this paper are important for understanding aid policy. At a fundamental level, the analysis of donor delivery decisions enhances our understanding of the complex nature

of real-world donor decision-making where mechanisms of aid provision assume a crucial role. As a senior French government official suggested during an interview: "Fifty percent, if not more, of total annual ODA-aid effort, meaning more than half of one hundred billion Euros, is about delivering the aid to the beneficiary in the recipient country. It's about selecting the right interface, the right channels of delivery. And this estimate is a conservative one."[1]

Understanding what these delivery tools and tactics are and why donors resort to them has the potential to shed light on donors' development strategies. While the examples from Haiti and Tanzania suggest that donors provide aid through channels other than recipient government, this study uses new OECD project-level data on foreign aid delivery channels to show that donors exhibit tactical awareness by systematically conditioning their delivery choices on the likelihood of aid success in the recipient country. Importantly, the analysis of aid delivery decisions not only informs our understanding of aid policy but also carries important implications for the study of aid effectiveness. The conventional framework for assessing development-effectiveness focuses on conditions within the recipient country, assuming all aid is equally fungible. By design, however, bypass tactics already incorporate information about the quality of recipient governance in the aid-receiving country, thus shielding valuable resources from waste by corrupt governments and weak state institutions as they enter the aid-receiving country. Conventional aid effectiveness frameworks, therefore, may underestimate donor ability to enforce development contracts and overestimate the influence of recipient country characteristics on the success of aid.

Previous Literature on Aid Allocation

Numerous studies explore bilateral aid policy by assessing OECD donors' aid commitments. Guided by analytical models and rigorous empirical studies many studies explain aid levels on the basis of recipient characteristics. The common focus of this research has overwhelmingly been on government-to-government aid transfers; and there are many good reasons for this analytical decision. Historically, foreign aid transfers have been predominantly government-to-government, starting with large-scale U.S. reconstruction efforts under the Marshall Plan. More recently, donor rhetoric on capacity-building emphasizes the role of government-to-government aid in helping recipient governments move towards sustainable development (e.g. OECD Paris Declaration). However, empirical evidence shows that OECD donors channel significant amounts of bilateral assistance around recipient governments and through non-state development actors: in 2008, OECD donors committed a total of US$ 112 billion and delegated over 30 percent of the aid, approximately US$ 41 billion, for implementation through non-state development actors,

which include NGOs, multilaterals, public-private partnerships, and private contractors (OECD 2010), only to name the more prominent bypass channels.[2] These non-state actors are hired for specific project delivery and remain accountable to the donors.[3]

Many studies of aid policy that assume bilateral aid flows are government-to-government have contributed to the emergence of a conventional wisdom suggesting that donor allocation behavior is not driven by aid effectiveness concerns. For instance, Alesina and Weder (2002) assess the extent to which donors condition their aid commitments on state institutions in the aid-receiving country based on the understanding that a good institutional environment provides a fertile ground for the effective implementation of aid projects. They show evidence that more corrupt governments receive more aid. Neumayer (2003), Stone (2006), and Bueno de Mesquita and Smith (2007, 2009) find that recipient governance has limited importance for shaping bilateral aid commitments.

The basso continuo of this literature is that donors are not actively pursuing effective development strategies. Rather, this line of inquiry emphasizes the role of bilateral foreign aid as a primary instrument of state-craft, used to gain influence over recipient governments to advance donor goals. These donor goals can include recipient government stability (e.g. Kono and Montinolla 2009), counter-terrorism (e.g. Bapat 2011; Boutton and Carter 2011), access to natural resources (e.g. Kapfer et al 2007), and democratization (e.g. Wright 2009; Bermeo 2009a). According to Bueno de Mesquita and Smith (2009) it would be mere coincidence if bilateral aid would substantially contribute to recipient development:

> "Recipient and donor leaders seek substantive policies and resource allocations that protect their hold on power. To the extent that such policies and allocations are compatible with good economic or social performance, they will make social-welfare enhancing, "good decisions." Yet, such instances are coincidental. If faced with a contradiction between actions that enhance their own political welfare and actions that advance societal well-being, donor and recipient leaders will select those policies that benefit themselves." (p. 312)

Allocation models a la Bueno de Mesquita and Smith (2009) rest on the supposition that donors derive utility mainly from buying policy concessions in the aid-receiving country and that they seek to maximize this utility by choosing the level of aid support to the recipient government. They assume that each aid dollar is equally fungible and can be spent at the discretion of recipient governments. However, if donor governments used aid solely to obtain policy concessions by recipient governments, the use of bypass tactics is puzzling. By definition,

bypass reduces the amount of available funds for striking non-developmental bargains with the recipient government.

The fact that donors use multiple bilateral aid delivery tactics may thus serve as prima facie evidence that donors derive more utility from aid success than the conventional wisdom would want us to believe. In fact, donor rhetoric over the last decade emphasizes the focus on poverty reduction as an end in itself, as well as a means to combat security threats in the developing world (Mosse 2005; Renard 2006). The Millennium Development Goals, for instance, not only serve as an explicit road map to reduce poverty. The agenda was also designed to help achieve greater stability in the world by stressing the inter-linkage between development and security in the development of poor states (United Nations 2009) Recently, the United States raised development to the status of one of three pillars of national foreign policy, along with defence and diplomacy: the 3Ds (Patrick 2007). In light of the positive externalities of development in the security realm and the normative importance of improving poor peoples' lives, it is important to advance a broad conception of donor development-orientation, one in which aid allocation decisions may be motivated by altruism (with development representing the end goal) and/or efficiency concerns (where development is a means to other ends.)[4] In either case or both, this study attempts to answer the question about whether donors allocate aid by employing tactics that increase the likelihood of achieving development outcomes. Do OECD donors systematically condition aid delivery decisions on the quality of recipient institutions?

Radelet (2004) explicitly recognizes the heterogeneity of aid delivery tools in bilateral aid allocation and the importance of donor decisions about how to deliver the aid for reaching the Millennium Development Goals. He advocates that "aid should be delivered to countries with better governance very differently than to countries with poor governance. To date, the move towards greater country selectivity has been conceived primarily as allocating more Official Development Assistance to countries with better policies and stronger institutions. However, the idea that aid is likely to be more effective in well-governed countries should influence more than just the amount of aid that donors provide -it should change the way that donors administer aid" (p.12). Recent empirical work by Winters (2010a) enriches our insights about the calculus of a development-oriented World Bank by leveraging heterogeneity of lending tools. He shows that the World Bank differentiates systematically among lending tools with a view towards effective aid implementation. Like previous studies Winters focuses on government-to-government aid flows.

This study provides an original line of inquiry by analyzing whether OECD donor govern-

ments condition decisions to channel funds through non-state development actors when state institutions present a problem for effective aid delivery. Through bypass tactics, development-oriented donors have a third-party mechanism that goes beyond the conventional government-to-government mode of delivery, thus altering the structure of aid provision. My answer to this research question has the potential to shed light on the development calculus of donor governments and carries implications for the study of aid effectiveness.

The Influence of Governance on Aid Delivery

Why do donor governments pursue a development strategy that delegates valuable bilateral aid resources to third-party development actors instead of channeling them through recipient governments? The risk of aid capture, coupled with a donor calculus that derives utility from development, offers a potential answer.[5]

Each year donors give development assistance to developing countries, many of which exhibit unproductive situations in which aid goes to waste through government incentives to pocket the aid for personal gain and/or limited capacity on the part of state institutions to ensure that aid reaches its intended beneficiaries. As analytical and empirical work on donors' aid implementation record shows, aid transfers between donor and recipient governments are at great risk of aid capture through agency problems and bureaucratic inefficiencies in poorly governed countries (Brautigam and Knack 2004; Djankov et al 2008; Gibson et al 2005; Reinikka and Svensson 2004, Svensson 2000). In these countries institutions fail to provide minimal levels of corruption control, rule of law, government effectiveness, and regulatory quality.[6]

In countries with better governance, on the other hand, the threat of aid capture is lower because more effective institutions provide rules and constraints that limit exploitative elite behavior and bolster administrative capacity (e.g. North 1990, 1991). Such countries typically have indigenous development capacity, have demonstrated the ability to pursue development by themselves, and have a record of cooperative relationships between government and local non-state development actors (OECD 2001). Arguably, these governments may have better knowledge than the donor or international implementing agents about what type of outside intervention is needed and how to make the aid implementation of development projects most cost-effective (e.g. Hefeker and Michaelowa 2005; Svensson 2000). If governance does not pose a problem, insofar as it limits the possibility of aid capture, then donors do not need to substitute third party development actors for the recipient government.[7] In fact, donors have a baseline preference for government-to-government aid as direct relations with the recipient government will strengthen bilateral ties in general, and may carry pay-offs in non-developmental issue areas

as well. This preference is reinforced by the understanding, shared by scholars and policymakers alike, that long-term sustainable development, as the ultimate goal of foreign assistance, is only realistic in environments where government capacity is moderate to strong.[8]

When making allocation decisions, donors turn to the quality of governance in recipient countries for credible signals about the extent to which foreign aid is threatened by aid capture. They assess governance quality through publicly available data on governance ratings as well as more detailed field reports provided through local implementation partners.[9]

From this perspective, the central issue in aid allocation is not how much aid donors provide but rather how it can be delivered so that it mitigates institutional failure and ensures efficacy of aid output in places like Haiti, Sudan, or Zimbabwe where need is high, yet existing governance deficiencies pose severe risks to effective aid implementation? In light of the negative effects of aid capture on aid outcomes, scholars and practitioners have suggested that donors reduce the risk of aid capture by pursuing a strategy of country selectivity, i.e. targeting countries with higher levels of governance where the probability of aid capture is low. And while country selectivity makes sense on its face, it also implies that the countries which need the aid most get very little. Scholars like Collier (2003) and Radelet (2004) make this short-coming explicit in their writing. Easterly et al (2003), too, suggest that country selectivity may not be the appropriate path to help the world's poorest countries develop. But there does not seem to be a general consensus about what other criteria they should use.

Among practitioners, there is a growing consensus on the need to maintain sustained engagement in the worlds' poorest and often most fragile states. A senior British DfID government official makes this point vividly: "It is important to move away from the Washington consensus, which stresses development cooperation with reforming states so that they get even better. The consensus implies that we leave the Sudans and Afghanistans behind because they are too difficult. Somewhere in the last five to ten years there has been a paradigm shift with us donors acknowledging that we cannot leave the tough spots. We need to deal with these countries and still take account of state capacity but the premise must be that it is not there. We need to intervene differently."[10]

This popular demand for more effective aid policy also responds to pessimism generated by scholarly assessments of the effectiveness of a common government-to-government allocation tool: aid conditionality. Numerous analytical and empirical accounts of interactions between donor and recipient governments argue that donors lack the ability to credibly enforce aid contracts, in general, and attached reform conditions, in particular (e.g. Collier 1997; Mosley 1987;

Stone 2004; Svensson 2003). A key insight drawn from this literature must be that conventional government-to-government aid contracts may not have sufficient bite to align recipient government incentives in ways that ensure assistance reaches the intended beneficiaries.

By accounting for variation in aid delivery channels, I uncover an important mechanism of aid delivery: bypassing recipient governments. This allows donors to work around the difficulties of enforcing aid contracts in situations where the probability of aid capture is high. In making the argument about endogenous bypass tactics, it is important to distinguish between government-to-government and bypass aid. I define government-to-government aid as any aid activity that involves the recipient government as an implementing partner.[11] In contrast, I categorize aid delivered through non-state development channels as that which does not engage government authorities at all. There are four main categories of non-state development actors: local/international NGOs, multilateral organizations, public-private partnerships, and "other", which subsumes a host of categories, such as private contracting businesses, research facilities, and international networks.

Local NGOs are important development partners for donors. Their issue focus and local knowledge about what types of projects are needed most make them attractive to donors who seek to deliver services effectively. Examples of local/regional NGO success stories in foreign aid delivery across the developing world include Love Live in South Africa, The AIDS Support Organization in Uganda, and the Grameen Bank in Bangladesh (see also Radelet 2004). Not all NGOs are equally virtuous and capable, however. In poorly governed countries, NGOs may not necessarily be a viable alternative for better service delivery.[12] To mitigate potential implementation problems of aid delivered through local NGOs, donors resort to funding international NGOs such as Oxfam, Doctors Without Borders or Care International. Like their local counterparts, international NGOs are issue-focused and typically have better knowledge of local capacities than donor officials in donor countries. Given their increased knowledge of local conditions and their dependence of funding on donor governments, international NGOs may be in a better position than donor agency officials to select local implementation partners that can help deliver aid more effectively than the recipient government.

In regions of the world where viable NGO partners are not represented on the ground, or where aid projects may require economy of development, donors can turn to multilateral organizations for service delivery. Organizations like UNICEF, for instance, have generated many aid success stories around the world. Like international NGOs, many multilaterals are specialized and involved with the local sector. What differentiates them from smaller NGOs is

the size of their operations and their capacity to quickly mount emergency response interventions as well as sustain more long-term service delivery programs. Yet another important type of non-state development channel is for-profit contracting. Donor governments often outsource development assistance to the private sector by awarding contracts to private contracting firms. They often complement the implementation of development activities by NGOs and IOs by offering technical expertise and capacity that other implementing agents may lack.[13]

While there is considerable variety among these bypass channels, they share two main characteristics that justify my decision to subsume them all under the category "bypass." First, they are mostly independent development actors that provide donors with the opportunity to channel their funds through actors other than the recipient government. Second, these entities have an issue-focus, which implies that non-state development actors generate the majority of their funding through poverty reduction projects (i.e. their promise of implementing aid projects effectively), thus making their organizational survival more dependent on their performance in this issue area. Recipient governments, on the other hand, have multiple objectives and can often tap sources other than aid for the process of revenue-generation, such as e.g. natural resources and investment. Also, given the multitude of non-state development actors, donors can potentially punish bad implementation performance by switching to another organization. In light of these characteristics, I claim that "bypass" is a preferred donor tactic in countries with low levels of governance. Specifically, donors view bypass aid as one step further removed from wholesale misallocation that can occur if aid goes through the government-to-government channel. I thus advance the following hypothesis: when the quality of governance is low, OECD donors bypass recipient governments and channel a greater proportion of their aid through non-state development actors.

In advancing the argument that donors condition aid delivery on the probability of aid capture, I presume that, across all recipient countries, donors can choose between two equally viable implementing channels: government-to-government aid and bypass aid. In some aid-receiving countries, however, most notably in failed states, donors might not face a true choice between the two channels because recipient governments may be functionally incompetent, potentially making bypass the only aid delivery channel.[14] If this is true, then the validity of my argument applies, first-and-foremost to the universe of functionally competent states, since in functionally incompetent states, government-to-government aid may not be a viable option, although one should expect donors to consider government-to-government aid to capable units within incompetence governments. In the latter type of states, we would expect donor allocation therefore

to generally exhibit some bias (which may be quite small) in favor of bypass actors. Separating recipient countries by (in-)competence is not easy to do, however, since donor definitions of this concept vary. For example, while the term "failed states" is used by the majority of donor governments, the definitions of the concept vary, ranging between simple governance related criteria, extended third party interventions, and multidimensional indexes subsuming different areas of government performance.

To convert this theoretical distinction into an appropriate empirical measure of functional competence, it is important to define what makes states functionally incompetent, or "failed". To identify an empirical measure that is used to inform decision-making in donor headquarters, I conducted a thorough web-search of donor policy reports on failed states across four major donors (United States, United Kingdom, France, and Germany). Among the various existing measures of state failure, the "Foreign Policy Failed States Index" (FSI) was among the most popular ones, with broad country coverage and annual updates on fragility ratings. The FSI ranks countries across a range of dimensions, including demographic pressures, complex humanitarian crises, human flight, group grievances, economic growth, uneven development, state legitimacy, public services, human rights, rule of law, security sector, external intervention, and factionalized elites. I will rely on this measure in the subsequent empirical tests.

In offering my expectation about bypass in poorly governed states it is important to clarify what I am not arguing. I do not claim that donors expect bypass aid to be completely insulated from aid capture. As evidence from officials with donor government suggests, donors are acutely aware of potential implementation difficulties arising from delegating aid to non-state development actors. However, as suggested above, non-state development actors largely depend on donor funds for their survival -a fact, which should generate considerable performance pressure on any organization and conceptually distinguishes the non-state actor from the recipient government. In addition, several for-profit NGO rating agencies exist (e.g. ForeignAID Ratings LLC) that provide donors with assessments about the financial efficiency and institutional development of NGOs. I thus re-emphasize the relative nature of my argument: donors will opt for bypass in poorly governed countries because they expect bypass aid to have a greater likelihood of achieving the desired outcome than government-to-government aid.

Research Design, Data and Measures

I explain donor decisions to bypass recipient governments across 22 OECD donor countries. The universe of recipient countries includes ODA eligible countries as defined by the OECD (including low, lower middle and upper middle income countries). I test my argument at two

9

levels of analysis. First, given the diversity of donors in my sample, the main unit of analysis is the donor-recipient dyad year. Second, I test my argument at the monadic recipient year level, taking into account my conjectures about average bypass behavior. My temporal domain ranges from 2005 to 2009.

The dependent variable: donor bypass

My empirical analysis asks: Does recipient governance explain donor decisions to bypass government institutions? The outcome of interest therefore are donor decisions to bypass government institutions. To construct a measure of bypass I use new data drawn from the OECD CRS aid activity database. The OECD began collecting (donor reported) information on the "channel of delivery" in 2004, when it became an optional reporting item on the new CRS++ reporting scheme. Information on the channel of delivery conveys how foreign aid is delivered: it records the amount of bilateral aid flows channeled through five channel categories. These include government-to-government aid as well as aid delivered to non-governmental organizations, multilaterals, public-private partnerships, and other development actors.

I operationalize the decision to bypass in two different ways: My main measure of bypass is continuous and captures the proportion of aid delivered through non-state development actors. When donors allocate funds to a particular country, what proportion of the assistance goes to non-state actors? Figure 1 presents the proportion of non-state aid each donor country allocates (y-axis) across the full volume of aid flows in 2009. Among OECD donors, Finland channels the greatest proportion of aid through bypass actors, nearly 70 percent, followed by Norway and Ireland. Italy pursues bypass tactics with nearly half of its bilateral funds, soon followed by the United States, which outsources more than 30 percent of its bilateral funds. At the left side on the bypass axis are Greece and France which send less than 10 percent of their aid through bypass channels.

Since reporting on the recently (2004) introduced data item "delivery channel" is optional, available data are affected by underreporting (OECD CRS Reporting Directives Manual 2008).[15] Before discussing my strategies to deal with underreporting it is important to highlight that existing evaluations of donor reporting practices suggest that underreporting is not a function of the nature of the channels of delivery. Rather, shortcomings in reporting are the result of time lags in the adoption of new reporting requirements coupled with lack of training of and resources for technical staff in aid agencies, which exhibits variation across time and donors. According to reports by Aidinfo (2008, p.16), a pro-transparency aid advocacy group, donors do not allocate enough resources, technology, or professional skills for data management and

Figure 1: Proportion of Bypass Aid by OECD Donors, 2009

11
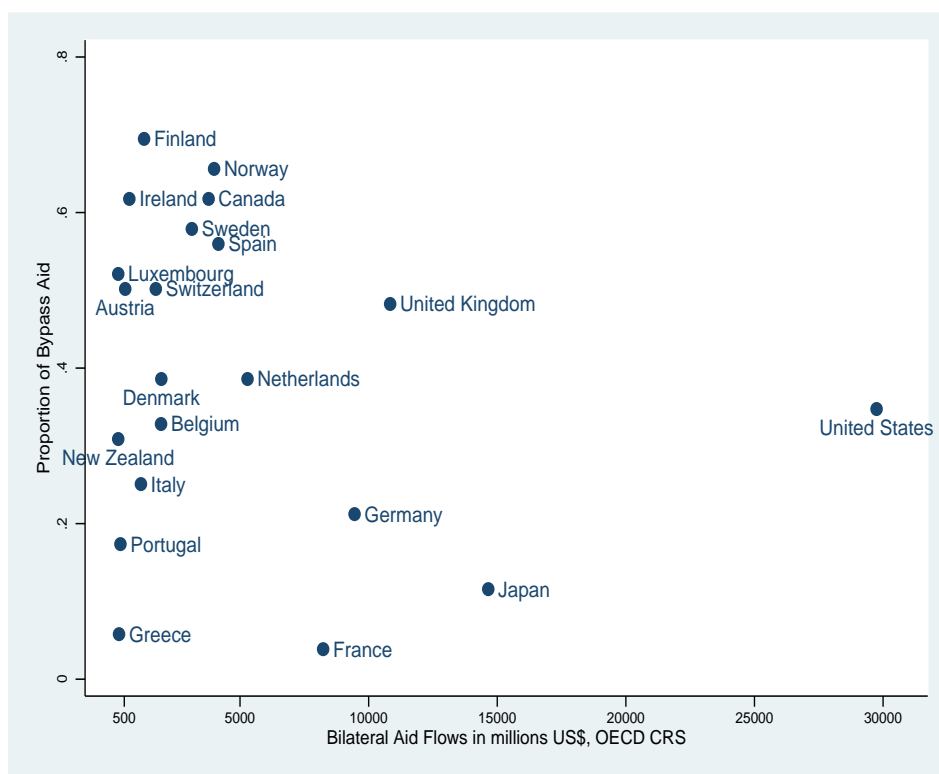
reporting, which is complicated by the fact that management requires the integration of multiple implementation levels, e.g. field and country level systems.[16]

To ensure the robustness of my estimations, I construct an alternative binary bypass measure, with "1" indicating that donors deliver aid exclusively through non-state development partners. This may be any combination of international/local NGOs, multilateral institutions, or public-private partnerships but it excludes government-to-government aid. Zero, on the other hand, implies that donors engage the recipient government directly, either in the context of mixed strategies (which allows for a combination of state-to-state and non-state aid) or exclusive cooperation with the recipient government. The simple coding of my binary outcome, bypass yes/no, considerably reduces the potential for bias due to reporting problems. Since my bypass measure is coded as "1" only when donors give 100 percent of their aid through bypass the expected bias in reporting is unlikely to be the cause of either false positives or false negatives, since the expected bias in reporting would be to not have information that the aid was going through non-state channels. I limit the fraction of missing data per recipient-dyad to be less than 20 percent.

In addition I augment missing data through multiple imputation techniques. Specifically, I approach missing data analysis from a counterfactual perspective, building on work by Frisina et al (2008). I ask: what would the aid shares looks like for any donor-recipient dyad had the donor allocated 100 percent of the aid across the channels? To answer this question I reallocate unreported aid flows between government-to-government and non-state aid. The extent to which the aid shares of both types increase or decrease is a function of the imputation model, which imputes values for the dependent variable at the level of the log-transformed non-state aid share. I follow Amelia II imputation principles for the imputation (King et al 1999).[17]

The explanatory variable: quality of governance

At the heart of donor decisions about aid delivery are assessments about the likelihood of aid reaching the intended outcome in the recipient country. If state institutions are of poor quality, donors expect a higher probability of aid capture and consequently increase the proportion of aid that bypasses governments. The main variable of interest, therefore, is *Governance Quality*. To capture the quality of governance I draw on data from the Governance Matters project (Kaufman et al 2009).[18] I select this particular source of governance measures for two reasons: first, it provides excellent cross-sectional coverage and is available up to 2009. Second, author interviews with donor officials suggest that donor governments consult this publicly available governance source in their assessments, with a particular focus on economic institutions such as

corruption control, government effectiveness, regulatory quality, and rule of law.[19]

Drawing from six available indicators I construct two different governance measures: *Governance, All Inst* is a measure at the highest level of aggregation, aggregating all six governance dimensions. *Governance, Ec. Inst* is a measure which captures a state's economic institutions by including corruption control, government effectiveness, regulatory quality, and rule of law as indicators.[20] The values of both governance measures range between 0 to 5, with higher values representing a higher quality of governance. To illustrate recent donor aid delivery decisions in various situations of governance quality, I plot donor development cooperation four aid-receiving countries in 2009, where individual donors contributed at least 2 million US dollars in development assistance. Figure 2 shows the bypass behavior of all active OECD donors in Sudan (an abysmally governed, "failed" state), Sri Lanka (still poorly governed, functionally competent state), Tanzania (a better-governed, functionally competent state), and Cape Verde (a well-governed, functionally competent state) across the full range of possible bypass behavior (as captured along the x-axis). In the case of Sudan, which has a governance score of 0.86 (on a scale from 0 (lowest) to 5 (highest)), all donor governments, with the exception of Greece, bypass the Sudanese government with more than 50 percent of their bilateral assistance. In the case of Sri Lanka, which has a governance score of 1.90, a clear majority of donors bypass with more than 50 percent of their bilateral assistance, and some donors bypassing with a somewhat lower bypass proportion. Tanzania, scores a 2.3 on the scale, and, as expected, the majority of donors, with the exception of Norway, Finland, and Switzerland, channel less than half of their aid through bypass channels. In Cape Verde, which scores 2.98 on the governance scale, donors channel only a small proportion through bypass actors.

Controls

As the previous literature on aid policy maintains, various other factors shape donor decisions about the allocation of aid resources, including other recipient characteristics and non-developmental donor goals. I include them as controls to provide a fully specified model. All time-varying right-hand side variables are lagged one year. I begin with the confounding effects of *Democracy* based on the understanding that some donors may conceive of democratic institutions as political constraints that limit the ability of recipient governments and bureaucratic officials to capture aid flows. *Democracy* is measured using the combined score of the Freedom House (2009) civil liberty and political rights indicators. To make the scale of the measure more intuitive I invert *Democracy* so that "1" represents the lowest level of democracy, while

13

Figure 2: OECD Donor Bypass Behavior, 2009
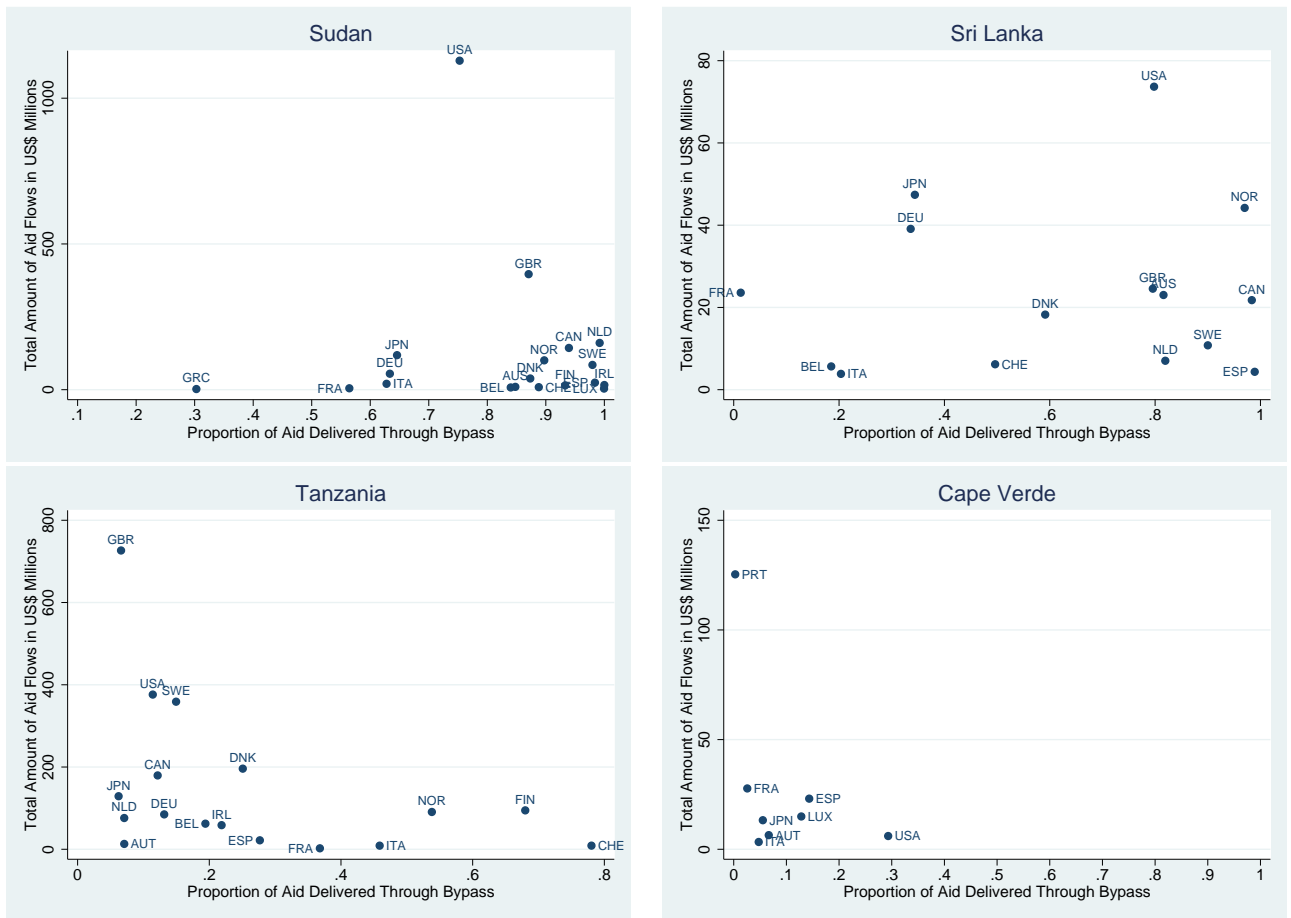
"7" stands for the highest level of democracy.[21] I control for *Natural Disasters* based on the understanding that a greater number of natural disasters in the aid recipient, as recorded by the EM-DAT database, may prompt donors to provide a larger share of the pie to non-state development actors that are specialized in post disaster reconstruction efforts. Following a similar logic, low-scale *Civil Conflict*, as recorded by Gleditsch et al's (2002) PRIO database, may create grievances that provide incentives for donors to favor more outcome-orientated aid delivery about ensuring that aid reaches the affected, thus increasing donor propensity to by-pass. I further include *Distance* to account for the geographical proximity between donor and the aid-receiving countries. As distance between donors and aid-receiving countries grows, government-to-government relations between donor and recipient governments are expected to weaken, thus increasing donor propensity to channel aid through non-state development actors. The distance data are drawn from Bennett and Stam's (2000) Eugene software and are logged.

Following previous studies, I also include confounders that capture donor non-developmental objectives. *Former Colony* status, as recorded by the CIA World Factbook, allows me to account for long-lasting diplomatic ties between the donor and the aid receiving governments that may bias aid delivery in favor of government-to-government aid. *Trade Intensity*, measured as the logged sum of imports and exports between the recipient and the OECD countries by the IMF-DOT database, is a straightforward indicator of donor efforts to strengthen economic ties with the recipient government. To control for security related donor goals, I include *Security Council*, which is a binary variable indicating whether the aid recipient is a rotating member on the UN Security Council. As research by Kuziemko and Werker (2006) finds, donor governments use aid to buy votes from rotating members of the UN Security Council. I also include *Terrorism*, which captures the number of terrorist attacks in the aid-receiving country as recorded by the Global Terrorism Database. I use this measure based on the understanding that donors have incentives to assist recipient governments in their fight of terrorism (e.g. Bapat 2011, Button and Carter 2011).

To account for the confounding influence of donor ideology and economic conditions on the propensity to bypass I include *Donor Welfare*, measured as social spending over GDP by the OECD's Social Expenditures Database, based on the understanding that greater donor commitment to domestic redistribution may translate into more generous aid giving (e.g. Noel and Therien 2000, Tingley 2010), yet may fail to generate pressure on governments to ensure the aid gets delivered effectively. Finally, I control for *Donor Growth*, recorded by the Penn World Tables, based on the understanding that as a donor's growth performance improves, the

pressure on governments to maximize aid success lightens, thus reducing the donor propensity to bypass recipient governments.

Further, I include a time trend variable to ensure that the observed relationship between the quality of governance and bypass is not a function of the two variables exhibiting a trend in either direction over time. To deal with structural factors that could systematically affect donor decisions to bypass recipient governments I add a set of donor fixed effects. I also include a set of regional fixed effects.[22]

Analysis and Results

Before I proceed to the analysis of the data it is important to provide a brief discussion of the statistical implications of using a proportional outcome measure, which requires compositional data analysis.[23] For any donor-recipient dyad the aid channel share is positive and the sum of the aid channels shares must be one hundred percent. Consider the aid share A, in donor-recipient dyad i for channel j. The compositional nature of the variable is expressed by the constraints that the fraction of the aid share that government-to-government or non-state channels might receive is doubly bounded, falling between 0 and 1,

$$A_{i,j} \in [0,1] \qquad \forall \quad i,j, \tag{1}$$

with $A_{i,j}$ denoting the fraction of the aid in donor-recipient dyad i (i=1, ..., N) for delivery channel j (j=1, J). Government-to-government aid and non-state aid in a given donor-recipient dyad sums to unity,

$$\sum_{j=1}^{J} A_{ij} = 1 \qquad \forall \quad i,j, \tag{2}$$

where J is the total number of delivery channels, which equal 2 (government-to-government and non-state aid) in my case.

Following Aitchison (1986), I create a $(J-1)$ log aid ratio, which compares the non-state aid to government-to-government aid:

$$Y_{i1} = ln(A_{i1}/A_{i2}) = ln(A_{i1}/(1-A_{i1})) \tag{3}$$

The advantage of log transforming proportional outcomes is that the outcome is unconstrained, allowing for a straightforward estimation through OLS. The coefficient of the log-transformed non-state share variable then describes how the log ratio of non-state aid changes

with respect to government-to-government aid. After modeling, the estimates are transformed back into their original scale of interest:

$$A_{i1} = (1 + e^{-}Y_{i1})^{-1}. \tag{4}$$

and Y is log-transformed following the steps (1) through (4) above.

I now estimate my model using OLS regressions with robust standard errors clustered on the recipient country. In order to investigate possible bias from serial correlation, I apply the Wooldrige test for panel data (Wooldridge 2002, p. 282-283). The insignificance of the test-statistic (p = 0.33) indicates that I cannot reject the null hypothesis of "no first-order autocorrelation" and conclude that my findings are not biased by temporal correlation of the errors. The following equation (1) delineates my statistical model.

$$Bypass_{it} = \beta_0 + \beta_1 QG + \beta_2 Z + \epsilon_{it}, \tag{5}$$

where $Bypass$ is the continuous log-transformed (OLS) variable (see equations 1 through 3), i represents country and t represents year, β_0 is the intercept, β_1 and β_2 represent the vectors of coefficients to be estimated, QG denotes the quality of recipient governance as described in Section 4.3.1., Z denotes the vector of control variables described in section 4.3.2., and ϵ_{it} is the error term of the equation.

In Table 1, I present the central findings of the model. The first column presents OLS results for a base model (Model 1) estimating the proportion of aid delivered through non-state development actors, which includes the *Governance, All Inst.* measure and draws on data that are completely reported across delivery channels. The second column offers OLS results for the fully specified model (Model 2), which focuses on the effect of economic institutions on donor delivery decisions as captured by the *Governance, Ec. Inst* measure, controlling for *Democracy*, *Civil Conflict*, *Terrorism* and all other confounding covariates. In the third column, I present Probit results for my binary bypass measure (Model 3), modeling the probability of donor decisions to exclusively deliver all aid through bypass channels. The sample size now includes donor-recipient observations for which at least 80 percent of all transactions are accounted for by delivery channels. On the basis of this slightly larger sample, I re-estimate Model 2 and present the findings in the fourth column. Finally, the fifth column presents results where the data of the continuous dependent variable was augmented through multiple augmentation techniques.[24]

Table 1: Explaining Bypass to Aid-Receiving Countries, 2005-2009

|	Model 1 OLS	Model 2 OLS	Model 3 OLS	Model 4 Probit	Model 5 OLS MI
Governance Quality, All Inst.	-1.873**				
	(0.23)				
Governance Quality, Ec. Inst.		-1.569**	-1.670**	-0.127**	-1.703**
		(0.20)	(0.30)	(0.04)	(0.18)
Freedom House		-0.110+	-0.093	-0.063**	-0.032
		(0.07)	(0.09)	(0.02)	(0.07)
Civil Conflict		0.427**	0.474**	0.001	0.478**
		(0.11)	(0.15)	(0.03)	(0.10)
Natural Disaster	0.050	0.063	0.069	-0.111**	0.083
	(0.09)	(0.06)	(0.09)	(0.01)	(0.06)
Distance	0.554**	0.502**	0.548**	0.333**	0.759**
	(0.19)	(0.14)	(0.17)	(0.04)	(0.15)
Former Colony	0.319	0.288	0.424	0.077+	0.188
	(0.30)	(0.18)	(0.29)	(0.04)	(0.182
Trade Intensity	-0.189**	-0.188**	-0.169*	-0.027*	-0.171**
	(0.07)	(0.05)	(0.08)	(0.01)	(0.49)
Security Council	-0.559	-0.519	-0.308	-0.072	-0.399
	(0.40)	(0.36)	(0.33)	(0.09)	(0.32)
Terrorism		-0.001	-0.001*	-0.000+	-0.001
		(0.00)	(0.00)	(0.00)	(0.00)
Donor Welfare	-0.958**	-0.958**	-0.952**	-0.065**	-0.958**
	(0.10)	(0.10)	(0.09)	(0.02)	(0.08)
Donor Growth	-0.530**	-0.531**	-0.637**	-0.059**	-0.332
	(0.06)	(0.08)	(0.05)	(0.02)	(0.07)
Year	-0.041	-0.041	-0.376**	-0.091**	-0.087
	(0.10)	(0.11)	(0.09)	(0.02)	(0.06)
Africa	0.469	0.479	-0.154	0.081	0.14
	(0.35)	(0.34)	(0.35)	(0.07)	(0.33)
Latin America	0.447	0.519	-0.183	0.124	0.061
	(0.42)	(0.39)	(0.37)	(0.08)	(0.35)
Asia Pacific	-0.551	-0.667+	-1.262**	-0.202*	-0.428
	(0.37)	(0.37)	(0.35)	(0.08)	(0.33)
Middle East	-0.729	-0.573	-1.161*	0.064	0.244
	(0.62)	(0.46)	(0.57)	(0.10)	(0.38)
Constant	101.043	101.221	772.798**	180.155**	192.08
	(197.75)	(228.60)	(174.27)	(41.96)	(124.18)
R^2	0.332	0.331	0.330		
chi^2				2058.028	
N	6728	6728	8142	8142	7425

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

Donor dummies and time trend included but not reported

Across all models, the coefficients for the governance measures clearly stands out. The coefficient is negative and highly significant when holding constant the effects of confounding covariates. This result holds across differences in model specifications, bypass measures, and degrees of missingness, thus providing robust empirical evidence for my thesis: to the extent that governance is a problem for aid success, donors will delegate development cooperation to non-state development actors.[25] The other predictors of bypass that are most consistent in their statistical impact on bypass across different model specifications influence the outcome variable in the predicted direction: *Civil Conflict* and *Distance* increase donor decisions to bypass across the majority of models, while *Trade Intensity*, *Donor Welfare*, and *Donor Growth* reduce the amount of aid delegated to non-state development actors. The remaining controls, *Democracy*, *Natural Disasters*, and *Security Council* behave in the predicted direction but their statistical significance fluctuates across the models.

Figure 3 highlights the substantive significance of recipient governance, as estimated in Model 2 of Table 1 for donor bypass decisions using statistical simulation techniques. The figure graphs the expected value of bypass (on left y-axis) across the entire range of governance, surrounded by 90 percent confidence intervals. Figure 3 also features a histogram of *Governance, Ec. Inst.* (on right y-axis). At low levels of governance (around 1) -as observed 2009 in Sudan, Chad, or Haiti- the model predicts donors to bypass with more than 90 percent of their aid. At the mean level of governance (around 2.5) - as in El Salvador or Bolivia the expected value of bypass is lower at approximately 0.45 percent. Finally, at a governance quality level of 3.5 -as observed in Chile and Micronesia in 2009- donors are expected to provide an even smaller proportion of their aid flows through non-state development actors, with less than 20 percent delegated aid.

In Table 2, I present results for the governance coefficients (with standard errors) from additional analyses that exclude functionally incompetent states.[26] In light of the possibility that bypass may represent the only real option for donors in functionally incompetent states, the most stringent empirical test of my bypass thesis is conducted on an exclusive sample of functionally competent states. To avoid arbitrariness I use a series of cut-off points that define the samples. Specifically, the first column presents the results for the broad governance indicator that emerge from a re-estimation of Model 1 (Table 1) on a sample that excludes the "top 10" failed states. The second column offers results for the economic governance measure from a re-estimation of Model 2 (Table 1) on a sample that, again, excludes the "top 10" failed states. Rows 2-4 use the same two model specification but result from samples that exclude the "top

Figure 3: Expected Values of Bypass Across Quality of Governance
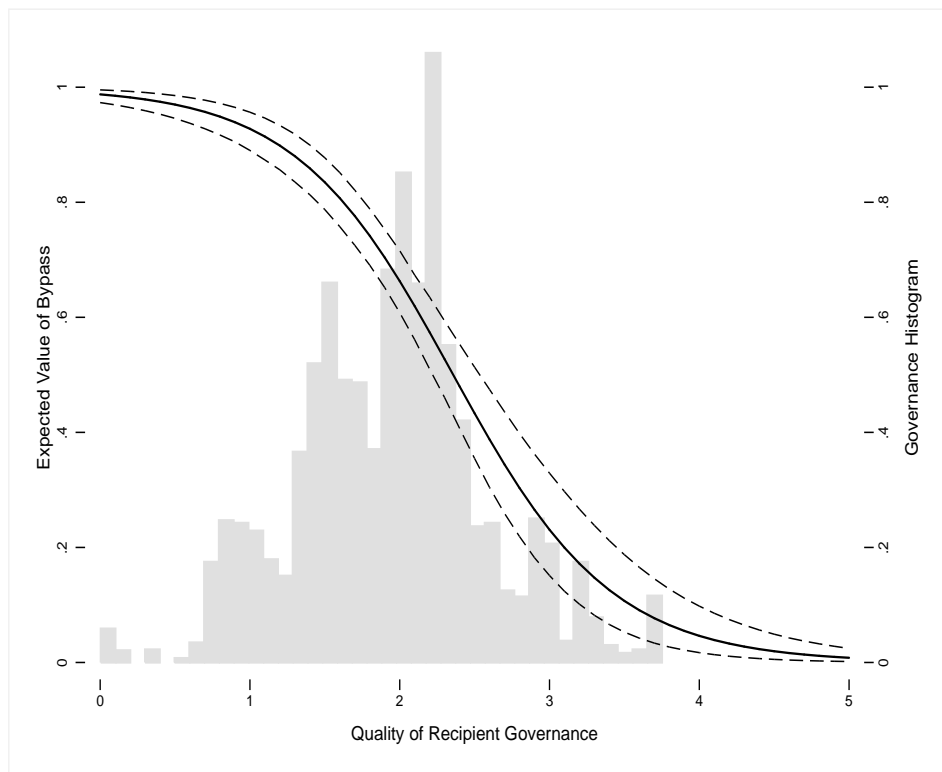
15," "top 20," and even "top 25" failed states respectively. Across all specifications the main result is robust (and not limited to the full sample of countries): donors condition bypass on the probability of aid capture in functionally competent states.[27]

Table 2: Governance Coefficients and SEs, Various Cut-Off Points for Government Competence

Sample	*Governance, All Inst.* Table 1, Model 1	*Governance, Ec. Inst.* Table 1, Model 2	N
w/o "top 10" failed states	-1.691**	-1.418**	6093
	(0.26)	(0.32)	
w/o "top 15" failed states	-1.493**	-1.226**	5794
	(0.25)	(0.31)	
w/o "top 20" failed states	-1.436**	-1.199**	5537
	(0.25)	(0.32)	
w/o "top 15" failed states	-1.457**	-1.261**	5266
	(0.26)	(0.33)	

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

To ensure the robustness of my findings, which demonstrated the statistical and substantive significance of recipient governance on donor propensity to use bypass tactics, I perform a series of additional estimations. Since most economic and political data are strongly related to their recent histories, readers might be concerned about my decision to use time-series cross section analysis. To the extent that the sample now includes up to five observations for any given donor-recipient dyad that may potentially offer very similar information across many of the right-hand side variables, the coefficient standard errors may be "artificially" deflated. I therefore re-estimate the main models using pure cross-sectional analysis that tests for the (1) proportion of bypass in the dyad from 2005-2009 as well as (2) the count of bypass tactics in the dyad over the same period. Again, the results are very robust: the coefficient of governance quality continues to be significant at the highest level of statistical significance across different model specifications, different measures of the outcome variable (continuous and count), and on samples that exclude functionally incompetent states (across the full range of cut-off points offered in Table 2).[28] To account for the possibility that entities of one particular type of bypass actor, namely for-profit development contractors, are chosen on the basis of commercial motives rather than efficiency concerns, I re-estimate Models 1 and 2 in Table 1 with a dependent variable that excludes the category of bypass aid that subsumes for-profit contracting firms. The results remain robust to this specification.[29]

Since my argument suggests that, on average, donors are outcome-oriented, readers will

request a test of my hypothesis at the recipient-year level of analysis. Monadic tests of donor bypass behavior should further strengthen confidence in the robustness of my results. This new estimation sample incorporates 131 recipient countries. At the recipient-year level my continuous bypass variable measures the proportion of total aid received through bypass by a recipient in a given year. Following the coding logic of the alternative binary bypass measure I construct a second dependent variable that counts the number of times OECD donor countries pursue an exclusive bypass strategy in a recipient in a given year.[30] Table 3 presents the results. Using OLS to estimate the proportion of bypass I show that the quality of governance continues to be a crucial factor that drives donor decision-making. While the first column (Model 6) captures results from the broad governance measure (as specified in the dyadic analyses), the second column (Model 7) focuses on the effect of economic institutions on bypass, controlling for important confounders. The third column re-analyzes Model 7 on a sample that excludes the "top 10" failed states.[31] The results are consistent: the proportion of bypass (out of total aid flows) increases as the quality of governance decreases. The last column (Model 9) presents findings from a Poisson regression to estimate the bypass count model, using the independent variable specification of Model 7. As expected, I find that recipient countries are more likely to experience a greater number of donor bypass tactics as governance quality decreases.

Finally, readers might be concerned about selection effects, since the group of countries for which donors choose to bypass government institutions is not randomly selected but a function of earlier self-selection. To model the interdependence between these two decisions, I employ a Heckman sample selection model (Heckman 1979). My empirical model of the aid recipient selection stage includes *Governance Quality* as well as the set of confounders used in estimations of bypass behavior based on the understanding that these covariates all affect donor decisions whether to give aid in the first place. However, the selection stage also includes an instrumental variable that allows the estimator to uniquely identify both stages. In the present case the identification question asks: what factor influences donor decisions to give aid but is unrelated to their decision to bypass? I exploit donor wealth, as measured in GDP, as an instrument that satisfies the exclusion restriction theoretically. My logic is that the size of donor economies affects donor decisions to provide funds but is not causally related to donor decisions to bypass recipient governments.[32] Controlling for prior selection effects, the quality of governance remains a robust predictor of bypass: as the quality of governance decreases, donors increase the proportion of bypass aid. This result remains robust when estimated on samples that contain only functionally competent states. To the extent that aid capture is a problem for effective aid implementation

Table 3: Explaining the Prevalence of Bypass Aid in Aid-Receiving Countries, 2006-2009

	Model 6 OLS	Model 7 OLS	Model 8 OLS Comp. Gov't	Model 9 Poisson
Governance, All Inst.	-1.059**			
	(0.16)			
Governance, Ec. Inst.		-1.078**	-0.943**	-0.330**
		(0.20)	(0.21)	(0.10)
Freedom House		0.016	0.044	-0.056
		(0.07)	(0.08)	(0.03)
Civil Conflict		0.269	0.284	0.046
		(0.19)	(0.17)	(0.05)
Natural Disaster	0.119+	0.117+	0.109+	0.021
	(0.06)	(0.07)	(0.06)	(0.03)
Former Colony	-0.278	-0.287+	-0.400*	0.135
	(0.17)	(0.17)	(0.17)	(0.10)
Trade Intensity	-0.130**	-0.101+	-0.067	-0.003
	(0.05)	(0.05)	(0.05)	(0.02)
Security Council	-0.161	-0.181	-0.197	-0.136
	(0.32)	(0.32)	(0.32)	(0.16)
Terrorism		-0.002*	-0.005+	-0.000
		(0.00)	(0.00)	(0.00)
Year	0.059	0.056	0.057	0.264**
	(0.08)	(0.08)	(0.08)	(0.05)
Africa	-0.371	-0.382	-0.410	0.383**
	(0.28)	(0.28)	(0.30)	(0.12)
Latin America	-0.414	-0.457	-0.524	0.382*
	(0.34)	(0.35)	(0.36)	(0.15)
Asia Pacific	-0.261	-0.318	-0.176	-0.058
	(0.25)	(0.26)	(0.26)	(0.14)
Middle East	-1.169**	-0.989*	-1.337**	-0.057
	(0.41)	(0.42)	(0.39)	(0.23)
Constant	-116.369	-109.793	-111.929	-529.790**
	(153.36)	(155.09)	(160.33)	(91.56)
R^2	0.27	0.27	0.23	
chi^2				188.471
N	527	527	487	527

$+p < 0.10, *p < 0.05, **p < 0.01$
Donor dummies and time trend included but not reported

in the aid-receiving country, donors systematically condition aid on the quality of a recipient's economic institutions.

Implications and Conclusion

My empirical findings are congruent with my account of donor decision-making. OECD donors allocate aid with an eye towards effective aid implementation: they are more likely to bypass governments in countries where the risk of aid capture is high and government-mediated aid is likely to fail due to poor state institutions. This argument contributes to the literature by showing that donors have allocation tactics other than government-to-government aid to pursue their goals, and the empirical evidence demonstrates that donors, on average, employ bypass tactics to increase the prospect of aid success in the aid-receiving country.

While the empirical evidence presented above enhances our insights into a donor decision calculus that derives utility from development, this research also carries implications for the study of aid effectiveness. The conventional aid effectiveness framework focuses on what happens to the aid in the recipient country, making aid success dependent on governance and cooperation by the recipient government. If, however donors systematically resort to aid delivery tools that increase the likelihood of the aid reaching the intended beneficiaries, then research may overestimate the influence of recipient country characteristics on the success of aid, and consequently underestimate donor ability to enforce development contract. Naturally, the question becomes whether the donor calculus indeed pays off for the poor: does delegating bilateral assistance to non-state development actors really help donors overcome the implementation hurdles inherent in government-to-government transactions? Does donor selectivity in aid delivery help the poor? Recent work by Bearce and Tirone (2010) stresses the importance of donor motivations for the study of aid effectiveness by showing that aid, when primarily allocated for non-developmental purposes (as during the Cold War), is largely ineffective at promoting economic growth. As donors become more development-oriented (as in post-Cold War) they are more effective at enforcing the aid contract in the aid receiving country. This study offers an important stepping stone for expanding this important line of inquiry by explaining the selection mechanism with regards to aid delivery tactics.

Another interesting avenue for future research is to account for existing variation in bypass behavior among donor countries, as shown in Figure 1. This paper has established that, on average, a recipient characteristic, i.e. the quality of governance, affects donor bypass decisions, controlling for differences across donor countries. The next step would be to identify a causal relationship between domestic factors and aid delivery decisions. For instance, questions that

24

arise include: how are preferences for bypass decisions aggregated domestically across OECD donors? What may be structural factors that shape these preferences? To answer these questions, one may draw on existing knowledge generated by a burgeoning literature that examines the domestic determinants of foreign aid allocation, with a focus on ideology and partisanship (e.g. Therien and Noel, 2000, Milner and Tingley 2010). To capture structural factors it may be useful to explore variation in domestic attitudes on different agents of public service provision (government versus non-governmental entities) or general trust in government and non-governmental entities across donors. Publics in donor countries that rank high on the bypass list, e.g. Netherlands and Norway, also exhibit a more positive attitudes towards non-governmental organizations than publics in countries on the low end of the list, e.g. Japan (Gallup, 2005). This certainly is an area ripe for further inquiry.

Finally, from a policy perspective, bypassing state structures may offer immediate relief for the poor but bypass is also a double-edged sword. It might hamper or even undermine long-term efforts to build-up a state capable of managing its own development.[33] Underlying this donor dilemma are differences in the nature of short- and long-term development assistance. Donors often fund countries where there is need for short-term relief and development. The question of "how many lives can be saved right now" might get answers that are difficult to reconcile with strategies related to long-term development. Should development assistance focus on providing antiviral drugs to people infected with HIV/AIDS or should they invest in setting up health care systems in a sustainable way? Donors often offer a combination of short- and long-term approaches in countries where capacity building is possible. If it is not, then bypassing government might be the only option.

Notes

1. Author's interview with senior French government official, Ministry of Foreign Affairs, Paris, July 16, 2009.

2. Other bypass channels include e.g. research facilities and international networks.

3. To further illustrate the problem associated with this assumption I offer a breakdown of US aid by delivery channels across a small sample of US aid recipients in Figure A1 in the Appendix.

4. Bermeo (2009b) provides an excellent discussion of the strategic character of development aid in post-Cold War donor allocation.

5. I define aid capture broadly as resulting from the mismanagement of aid in the recipient, either by intentional diversion of aid through corrupt authorities/bureaucrats or the waste of aid due to a lack of absorptive capacity. This definition differs from Svensson's (2000) and Winters (2010b) who define aid capture as acts of corruption.

6. What is more, others argue that government-to-government aid can increase corruption in the recipient country and incur long-term costs on the quality of state institutions (Bates 2001; Knack 2001; Remmer 2004; Weinstein 2005).

7. The exception here are aid donations to civil society actors in the name of democracy promotion.

8. A series of international donor conferences, including Rome (2002), Paris (2005), Accra (2008), and most recently Busan (2011), have helped establish the view that donors should give preference to government-to-government aid over bypass aid.

9. Multiple interviews with senior donor officials documented keen awareness and utilization of governance ratings, such as e.g. the World Bank's Governance Matters Project.

10. Author's interview with senior British government official, Washington D.C., June 9, 2009.

11. In some instances, a recipient government receives budgetary support or programmatic aid from a donor government and is fully responsible for the implementation process. In other instances, donor governments directly engage recipient authorities by delivering aid projects or providing them with consulting services.

12. According to evidence reported in Barr, Fafchamps and Owens (2005) local NGOs in Uganda are often quite young with limited expertise in delivering the kind of services that donors are interested in. What is more, local NGOs may also engage in corrupt behavior. As Barr et al (2005) find, many NGOs in Uganda do not file tax returns and are subject to little or no government scrutiny regarding the distribution of profits.

13. Skeptics might be concerned about the possibility that, in addition to pursuing an efficiency-focused calculus, donor agencies may offer contracts to for-profit agents simply to strengthen domestic business. While separating these two motives would be ideal, in

reality it would require intrinsic knowledge and evaluation of the procurement process of every project implemented by a private contractor, which is difficult to do. What is more, the aggregation of the data subsumes private contracting under the category "other," which also includes not-for profit implementing agents such as e.g. research institutions, universities, and international networks. Overall, the "other" category accounts for less than 15 percent of bilateral aid flows. Among the donors that channel at least 30 percent of their total bilateral aid through bypass channels, only Finland relies more heavily on implementing agents in the heterogeneous "other category," through which it channels 45 percent of its bypass aid. The United States ranks second with a little less than 20 percent of its bypass aid. Therefore, the primary development partners for bypass are not-for-profit entities. Table A2 in the Appendix provides a breakdown of bypass aid channeled through the individual bypass categories. I thank one anonymous reviewer for raising this important point and incorporate it in the subsequent empirical tests.

14. I thank one anonymous reviewer for raising this point.

15. The level of underreporting varies across time and donor. Germany, for instance, exhaustively reports all its aid activities across channels of delivery since adopting the C++ format in 2005. The United States reports across channels since 2004 but its reporting on the channel of delivery category nears completion only in 2007. Canada, on the other hand, only provides complete channel information in 2008.

16. To get a sense of the volume of reporting, note that in 2008 the United States provided its bilateral foreign aid in 15,510 individual aid transactions using more than seven different implementing agencies (including but not limited to USAID, the Millenium Challenge Corporation, U.S. departments of State, Defense, Agriculture, Interior, and Energy).

17. To illustrate the feasibility of this method, consider the following hypothetical example: suppose a donor allocates US$ 20 million to a recipient in 2009. Based on donor reports we know that 40 percent (or eight million US$) was provided as government-to-government aid and 45 percent (or nine million US$) was provided as non-state aid. 15 percent of the aid is unobserved, not accounted for by channel of delivery. At a minimum, we know that the recipient will not receive less than nine million dollars in aid through non-state channels or eight million dollars in aid through state-channels. The observed shares thus contain some information about latent values, suggesting that the partially observed channel shares would be (equal to previous levels or) strictly increasing. Similarly, we know that the recipient country's government will never receive more than (or equal to) US$ 12 million from the donor, as the observed non-state channel share places an upper bound for how much government-to-government aid could change. The program written for the imputation in R is available from the author upon request.

18. The project offers data for six governance dimensions: voice and accountability, reg-

ulatory quality, government effectiveness, rule of law, corruption control, and political stability and violence.

19. In over half of the author's interviews with donor elites, officials across US, British, German, and French donor governments specifically mentioned World Bank governance data as informing their assessments. Table A3 in the Appendix includes the full list of interviews as conducted by the author.

20. I exclude political stability and violence because I include variables for civil conflict (PRIO) and terrorism (GTD) in my multivariate tests. Further, I exclude political institutions from the governance indicator since donors are generally reluctant to associate governance with democracy. Rather they explicitly distinguish between good governance and good government. I therefore include a Freedom House democracy measure as a control in the multivariate tests.

21. I also run the models using the Polity2 measure of democracy. The findings are qualitatively similar. I opt for Freedom House because of greater country-year coverage.

22. The regional categories are Sub-Saharan Africa, Latin America, Middle East, and Asia. The omitted regional category is Central and Eastern Europe.

23. Honaker and Linzer (2006) provide an excellent discussion about this type of data. I subsequently draw on their notation style.

24. I provide descriptive statistics of the variables used in Models 2 and 3 in Table A4 in the Appendix.

25. In light of considerable variation in bypass behavior across donors, as shown in Figure 1, critics might argue that high bypass propensity may largely be explained by structural biases in donor countries, leaving little variation to be explained by my argument. To address this concern heads-on, in addition to model specifications that include donor fixed effects, I run separate multivariate regressions for all donor countries. With the exception of France, Portugal, Austria, and Greece, the large majority of OECD donors condition the proportion of bypass behavior on recipient governance at conventional levels of significance. I thank the one anonymous reviewer for raising this issue.

26. Appendix Table A5 lists the FSI ranking of the "top 20" failed states in 2009.

27. These results are reproduced for all other model specifications offered in Table 1.

28. The results are presented in Table A6 in the Appendix.

29. The results are presented in Table A7 in the Appendix.

30. I offer descriptive statistics of the variables in Table A8 in the Appendix.

31. This result is robust to different cut-off points for functional competence.

32. One potential criticism of this particular instrument might be that the largest economies are more embedded in the global economy, with a motivation to strengthen their global economic positions. Such dynamics might systematically bias aid delivery in favor of government-to-government aid. Obvious candidate donors for which the exclusion restriction might be violated are the United States, Japan, United Kingdom, Germany,

and France. However, my model specifications already control for donors' economic motives through the *Trade Intensity* variable. To further address potential skepticism I estimated two separate selection models for which I present the results in Table A9 of the Appendix. Model 9A is estimated on the basis of the full sample, while Model 9B excludes the five major economies from the analysis.

33. In 2010, the United States government announced a shift in their aid policy in Haiti. To improve the prospect of sustainable development, the U.S. government announced a move away from government bypass and towards state-to-state assistance. As Cheryl Mills, Clinton's chief of staff suggests: "We are now completely focused on how to build the capacity of the Haitian government effectively, to improve Haiti's long-term developmental prospects. That is something everyone has recognized as being one of the failures of aid in the past." Quote in "In U.S. plan for Haiti, Rebuilding Government is Key." The Washington Post, March 31, 2010.

References

Aidinfo. 2008. "Better Information, Better Aid." Available from [http://www.aidinfo.org] Accessed 3 December 2009.

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

Bates, Robert H. 2001. *Markets and States in Tropical Africa* Berkely, CA: University of California Press.

Bapat, Navin. 2011. "Transnational Terrorism, U.S. Military Aid, and the Incentive to Misrepresent." *Journal of Peace Research*. Forthcoming.

Barr, Abigail, Marcel Fafchamps, and Trudy Owens. The Governance of Non-governmental Organizations in Uganda. *World Development* 33(4): 657-679.

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

Bennett, Scott D., and Allan Stam. 2000. "EUGene: A Conceptual Manual." *International Interactions* 26:179-204.

Bueno de Mesquita, Bruce, and Alastair Smith. 2007. "Foreign Aid and Policy Concessions." *Journal of Conflict Resolution* 51 (2):251-284.

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

Bermeo, Sarah. 2009a. "Foreign Aid and Regime Change: The Impact of Democratic and Authoritarian Donors." Paper Presented at the Annual Meeting of the American Political Science Association, Toronto.

Bermeo, Sarah. 2009b. Donors and Development: Sector Allocation in Foreign Aid. Unpublished Manuscript. Yale University.

Brautigam, Deborah, and Stephen Knack. 2004. "Foreign Aid, Institutions and Governance in Sub-Saharan Africa." *Economic Development and Cultural Change* 52 (2):255-286.

Boutton, Andrew and David Carter. 2010. "Carrots and Counterterrorism: Security Motivations for U.S. Foreign Aid." Paper Presented at the Annual Meeting of the American Political Science Association. Washington, D.C.

Collier, Paul, Patrick Guillaumont, Sylviane Guillaumont, and Jan Willem Gunning. 1997. "Redesigning Conditionality." *World Development* 25 (9):1399-1407.

Djankov, Simeon, Jose Montalvo, and Marta Reynal-Querol. 2008. "The Curse of Aid." *Journal of Economic Growth* 13 (3):169-194.

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

Frisina, Laurin, Michael C. Herron, James Honaker, Jeffrey B. Lewis. 2008. Rules, Politics, and Policy. *Election Law Journal* 7(1): 25-47.

Gibson, Clark C., Krister Andersson, Elinor Ostrom, and Sujai Shivakumar. 2005. *The Samaritan's Dilemma: The Political Economy of Development Aid.* New York: Oxford University Press.

Gleditsch, Nils Petter, Peter Wallensteen, Mikael Eriksson, Margareta Sollenberg, and Hvard Strand. 2002. "Armed Conflict 19462001: A New Dataset." *Journal of Peace Research* 39 (5):615-637.

Heckman, James. 1979. "Sample Selection Bias as a Specification Error." *Econometrica* 43 (5):153-161.

Hefeker, Carsten, and Katharina Michaelowa. 2005. "Can Process Conditionality Enhance Aid Effectiveness? The Role of Bureaucratic Interests and Public Pressure." *Public Choice* 122(1): 15975.

Honaker, James, and Drew Linzer. 2006. "Analysis of Voteshares Across Party Systems. Paper presented at Annual Meeting of Midwest Political Science Association, Chicago.

International Monetary Fund (IMF). 2009. "Direction of Trade Statistics." Available from http://www2.imfstatistics.org/DOT/. Accessed 1 December 2009.

Imai, Kosuke, Gary King, and Oliva Lau. 2007. "ls: Least Squares Regression for Continuous Dependent Variables" in Zelig: Everyone's Statistical Software.

Kaufman, Daniel, Aart Kraay, and Massimo Mastruzzi. 2009. "Governance Matters VI." Available from http://info.worldbank.org/governance/wgi/index.asp. Accessed 9 January 2010.

Killick, Anthony. 1997. "Principals, Agents, and the Limitations of BWI Conditionality." *Journal of International Development* 9 (4):483-495.

King, Gary, James Honaker, Anne Joseph, and Kenneth Scheve. 2001. Analyzing Incomplete Political Science Data: An Alternative Algorithm for Multiple Imputation. *American Political Science Review* 95: 49-69.

Knack, Stephen. 2001. "Aid Dependence and the Quality of Governance." *Southern Economic Journal* 68 (2):483-495.

Kono, Daniel Y., and Gabriella R. Montinola. 2009. "Does Foreign Aid Support Autocrats, Democrats, or Both?" *Journal of Politics* 71 (2):704-718.

Kuziemko, Hyana, and Eric Werker. 2009. "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.

Marshall, Monty G., Keith Jaggers, and Ted Gurr. 2008. "Polity IV Project: Political Regime Characteristics and Transitions, 1800-2008." Accessed 3 December 2009.

Mosley, Paul. 1987. *Conditionality as Bargaining Process: Structural adjustment lending 1980-86.* Princeton, NJ: Princeton University Press.

National Consortium for the Study of Terrorism and Responses to Terrorism (START). 2011. Global Terrorism Database. Available from http://www.start.umd.edu/gtd

Neumayer, Eric. 2003. *The Pattern of Aid Giving: The Impact of Good Governance on Development Assistance.* New York: Routledge.

Organisation for Economic Cooperation and Development (OECD). 2001. "Policies to Enhance Sustainable Development." Paris: OECD Publications

Organisation for Economic Cooperation and Development (OECD). 2005. "OECD Social Ex-

penditures Database." Available from http://www.oecd.org/els/social/expenditure. Accessed 10 December 2009.

Organisation for Economic Cooperation and Development (OECD). 2010. "Development Database on Aid Activities: CRS." Available from http://stats.oecd.org. Accessed 14 January.

Patrick, Stewart. 2007. "'Failed States' and Global Security. Empirical Questions and Policy Dilemmas" *International Studies Review* 9(4): 644-662.

Radelet, Steven. 2004. "Aid Effectiveness and the Millenium Development Goals." Working Paper 39. Washington, D.C: Center for Global Development.

Remmer, Karen L. 2004. "Does Foreign Aid Promote the Expansion of Government?" *American Journal of Political Science* 48 (1):77-92.

Renard, Robrecht. 2005. "The Cracks in the New Aid Paradigm." Paper Presented at EADI Conference, Bonn, Germany.

Stone, Randall W. 2006. "Buying Influence: The Political Economy of International Aid." Paper presented at the 2006 International Studies Association Annual Convention. San Diego, CA, March 22-26.

Svensson, Jakob. 2000. "Foreign Aid and Rent-Seeking." *Journal of International Economics* 51(2): 437-461.

Therien, Jean-Phillippe and Alain Noel. 2000. "Political Parties and Foreign Aid." *American Political Science Review* 94 (1):151-162.

Tingley, Dustin H. 2010. "Donors and Domestic Politics: Political Influences on Foreign Aid Effort." *The Quarterly Review of Economics and Finance* 50 (1):40-49.

United Nations. 2009. Millennium Development Goal Website. Available from http://un.org/millenniumgoals Accessed 6 January 2012.

Weinstein, Jeremy M. 2005. "Autonomous Recovery and International Intervention in Comparative Perspective." Working Paper 57. Washington D.C: Global Center for Development.

Winters, Matthew. 2010a. "Choosing to Target: What Types of Countries Get Different Types

of World Bank Projects." *World Politics* 62(3):422-458.

Winters, Matthew. 2010b. "Targeted Aid and Capture in World Bank Projects." Presented at the Annual Meeting of the American Political Science Association, Washington D.C.

Wooldrige, Jeffrey. 2002. *Econometric Analysis of Cross Section and Panel Data.* Cambridge, MA: MIT Press.

World Bank. 2009. *World Development Indicators.* Washington, DC: World Bank.

Younas, Javed. 2008. "Motivation for Bilateral Aid Allocation: Altruism or Trade Benefits." *European Journal of Political Economy* 24 (3):661-674.

Appendix

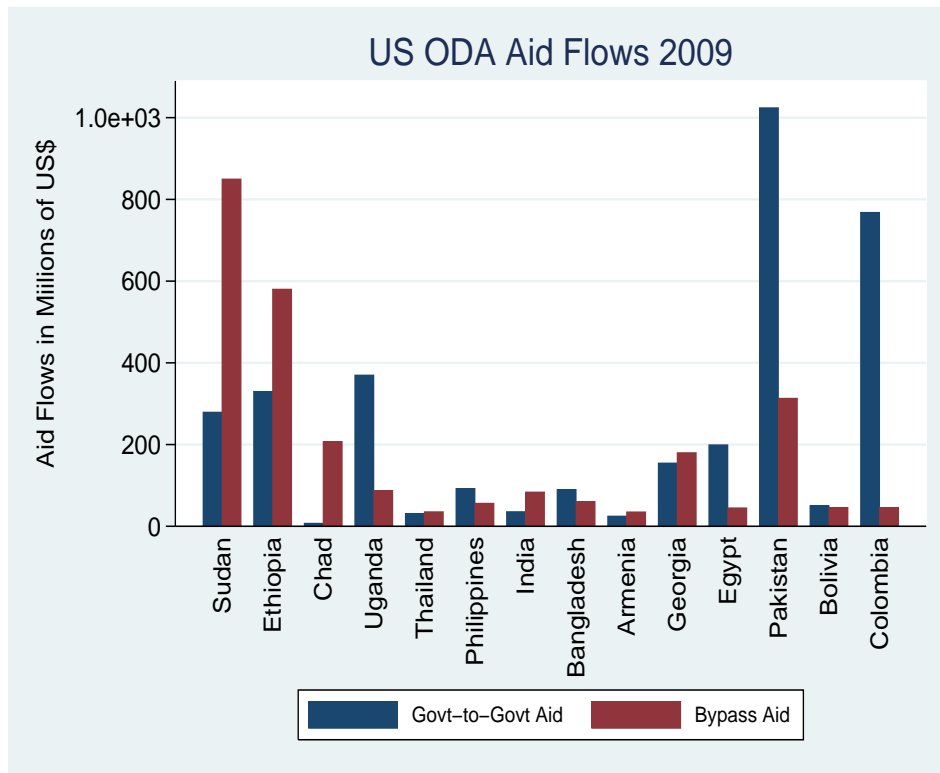Figure A1: US Aid Flows by Channel of Delivery, 2009

Figure A2: Proportion of Bypass Aid Delivered through Individual Bypass Channels
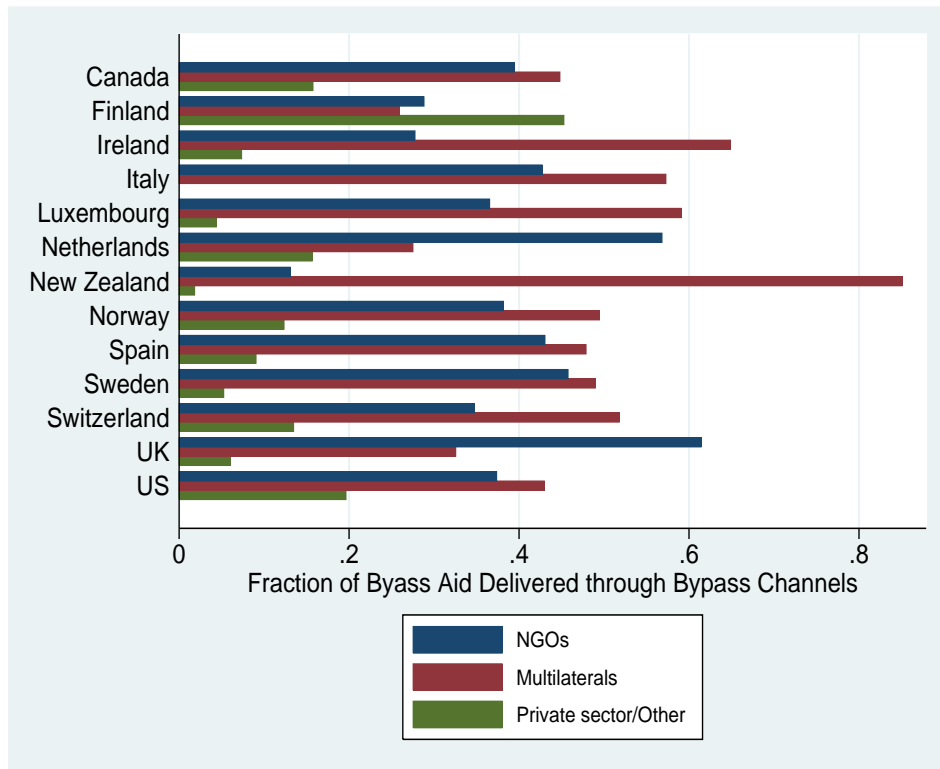
Table A3: Interviews With Senior Donor Officials

Interview	Date	Donor Government
1	12-6-09	U.S. State Department, African Affairs
2	12-6-09	U.S. State Department, South & Central Asian Affairs
3	12-6-09	U.S. State Department, European & Eurasian Affairs
4	30-6-09	Germany, Ministry of Development Cooperation,
		Cooperation with Countries & Regions
5	2-7-09	Germany, Ministry of Development Cooperation, Evaluation
6	29-6-09	Germany, Ministry of Development Cooperation, Sub-Saharan Africa
7	15-7-09	France, Ministry of Foreign Affairs,
		Directorate General for International Cooperation & Development
8	17-7-09	France, Ministry of Economic Affairs, Finance & Industry,
		Directorate for External Economic Relations
9	20-7-09	United Kingdom, British Foreign & Commonwealth Office,
		Directorate Europe & Globalisation
10	21-7-09	United Kingdom, British Foreign & Commonwealth Office,
		Directorate Political
		Donor Agency
11	30-9-09	USAID, Office of Development Partners
12	17-6-09	USAID, Office of Strategic Planning and Operations
13	10-6-09	Millennium Challenge Corporation, Compact Operations
13	3-7-09	Kreditanstalt für Wiederaufbau (KfW), Sub-Saharan Africa
14	3-7-09	Kreditanstalt für Wiederaufbau (KfW), Development Policy
15	29-6-09	Deutsche Gesellschaft für Technische Zusammenarbeit,
		Planning and Development Department
16	16-7-09	Agence Française de Développement,
		Developing Countries Division
17	12-6-09	Department for International Development (DfID), India
18	22-7-09	Department for International Development (DfID, Afghanistan

Table A4: Descriptive Statistics of Estimation Sample (Table 1-Model 3(OLS) and 4(Probit))

Variable	Observations	Mean	St. Deviation	Minimum	Maximum
Variable	Obs	Mean	Std. Dev.	Min	Max
Log(Bypass Share)	8142	.96	7.61	-18.61	19.53
Bypass Count	8142	.20	.40	0	1
Governance, Ec. Inst.	8142	1.93	.62	.04	3.86
Democracy	8142	-4.02	1.68	-7	-1
Civil Conflict	8142	.23	.67	0	6
Log(Natural Disaster)	8142	.77	1.57	-2.30	4.62
Log(Distance)	8142	8.24	.62	5.11	9.35
Former Colony	8142	.65	.47	0	1
Log(Trade Intensity)	8142	8.40	2.06	2.45	14.52
Security Council	8142	.05	.22	0	1
Terrorism	8142	16.61	77.75	0	1041
Donor Welfare	8142	22.66	4.14	15.75	30.35
Donor Growth	8142	2.15	1.50	-.87	9.97

Table A5: 'Top 20" Failed States Index, 2009, The Fund For Peace

FSI Ranking	Country
1	Somalia
2	Zimbabwe
3	Sudan
4	Chad
5	Congo, Dem. Rep.
6	Iraq
7	Afghanistan
8	Central African Rep.
9	Guinea
10	Pakistan
11	Cote d'Ivoire
12	Haiti
13	Myanmar
14	Kenya
15	Nigeria
16	Ethiopia
17	North Korea
18	Yemen
19	Bangladesh
20	Timor-Leste

Table A6: Cross-Sectional Analysis of Donor Bypass, 2005-2009

	Model 6A OLS	Model 6B OLS	Model 6C OLS Comp. Gov't†	Model 6D Poisson	Model 6E Poisson Comp. Gov't†
Governance, All Inst.	-1.223**				
	(0.26)				
Governance, Ec. Inst		-0.978**	-0.842*	-0.301**	-0.271**
		(0.33)	(0.34)	(0.10)	(0.10)
Democracy		-0.111	-0.080	-0.051	-0.053
		(0.11)	(0.11)	(0.04)	(0.04)
Natural Disaster	0.257*	0.284*	0.224+	-0.143**	-0.159**
	(0.13)	(0.13)	(0.14)	(0.04)	(0.04)
Civil Conflict		0.259+	0.294	0.008	-0.007
		(0.15)	(0.18)	(0.05)	(0.04)
Distance	0.590**	0.562**	0.591**	0.460**	0.484**
	(0.21)	(0.21)	(0.21)	(0.09)	(0.09)
Former Colony	0.140	0.133	0.031	0.157+	0.120
	(0.29)	(0.29)	(0.31)	(0.09)	(0.10)
Trade Intensity	-0.244**	-0.236**	-0.175*	-0.001	0.018
	(0.08)	(0.09)	(0.08)	(0.02)	(0.02)
Security Council	-0.159	-0.195	-0.197	-0.054	-0.053
	(0.19)	(0.21)	(0.20)	(0.08)	(0.09)
Terrorism		-0.001**	-0.002	-0.000+	0.000
		(0.00)	(0.00)	(0.00)	(0.00)
Donor Welfare	-1.406**	-1.407**	-1.428**	-0.090	-0.086
	(0.12)	(0.12)	(0.13)	(0.07)	(0.07)
Donor Growth	-0.843*	-0.842*	-0.891*	0.505**	0.442**
	(0.33)	(0.33)	(0.34)	(0.13)	(0.13)
Constant	27.004**	26.219**	25.907**	-3.902*	-4.232**
	(3.25)	(3.50)	(3.58)	(1.58)	(1.54)
R^2	0.40	0.40	0.38		
chi^2				911.719	809.788
N	2264	2264	2061	2264	2061

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

Donor dummies included but not reported

†Sample excludes the "top 10" failed states. The results remain robust across all other cut-off points (top 15, top 20, top 25)

Table A7: Explaining Bypass to NGOs/IOs in Aid-Receiving Countries, 2005-2009

	Model 6A	Model 6B Comp. Gov't†	Model 6C	Model 6D Comp. Gov't†
Governance, All Inst	-1.897**	-1.681**		
	(0.23)	(0.26)		
Governance, Ec. Inst			-1.578**	-1.438**
			(0.29)	(0.30)
Freedom House			-0.115	-0.055
			(0.10)	(0.10)
Civil Conflict			0.442**	0.353*
			(0.14)	(0.16)
Natural Disaster	0.025	0.008	0.036	0.007
	(0.08)	(0.09)	(0.09)	(0.09)
Distance	0.860**	0.844**	0.825**	0.813**
	(0.20)	(0.20)	(0.20)	(0.20)
Former Colony	0.247	0.130	0.207	0.084
	(0.30)	(0.31)	(0.30)	(0.31)
Trade Intensity	-0.184*	-0.148*	-0.185*	-0.141+
	(0.07)	(0.07)	(0.08)	(0.07)
Security Council	-0.600	-0.581	-0.553	-0.526
	(0.41)	(0.40)	(0.41)	(0.39)
Terrorism			-0.001	0.000
			(0.00)	(0.00)
Donor Welfare	-0.906**	-0.867**	-0.906**	-0.866**
	(0.10)	(0.11)	(0.10)	(0.11)
Donor Growth	-0.512**	-0.562**	-0.514**	-0.564**
	(0.06)	(0.06)	(0.06)	(0.06)
Year	-0.068	-0.097	-0.072	-0.105
	(0.10)	(0.10)	(0.10)	(0.10)
Africa	0.351	0.182	0.359	0.177
	(0.35)	(0.37)	(0.36)	(0.37)
Latin America	0.191	0.017	0.257	0.036
	(0.42)	(0.43)	(0.41)	(0.41)
Asia Pacific	-0.743+	-0.728+	-0.877*	-0.820*
	(0.38)	(0.39)	(0.36)	(0.37)
Middle East	-0.667	-0.644	-0.511	-0.470
	(0.62)	(0.72)	(0.63)	(0.74)
Constant	152.336	209.674	159.269	224.987
	(195.40)	(205.99)	(199.42)	(208.25)
R^2	0.334	0.315	0.333	0.314
N	6728	6093	6728	6093

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

Donor dummies and time trend included but not reported

†Sample excludes the "top 10" failed states. The results remain robust across all other cut-off points (top 15, top 20, top 25)

Table A8: Descriptive Statistics of Estimation Sample (Table 2-Models 7 & 9)

Variable	Observations	Mean	St. Deviation	Minimum	Maximum
Variable	Obs	Mean	Std. Dev.	Min	Max
Log(Bypass Share)	527	-1.12	1.68	-8.22	3.50
Bypass Count	527	2.54	1.88	0	10
Governance, Ec. Inst.	527	1.99	.65	.04	3.86
Democracy	527	-3.85	1.76	-7	-1
Civil Conflict	527	.18	.60	0	6
Log(Natural Disaster)	527	.47	1.67	-2.30	4.62
Former colony	527	.64	.47	0	1
Log(Trade Intensity)	527	8.17	2.10	2.95	14.52
Security Council	527	.04	.20	0	1
Terrorism	527	13.56	71.43	0	1041

Table A9: Sample Selection Model for Donor Propensity to Bypass, 2005-2009

Outcome stage	Model 9A OLS Full sample	Model 9B OLS w/o 5 major economies
Governance, Ec. Inst	-1.550**	-1.152**
	(0.20)	(0.26)
Democracy	-0.118+	-0.171*
	(0.07)	(0.08)
Civil Conflict	0.437**	0.445**
	(0.12)	(0.14)
Natural Disaster	0.026	-0.230*
	(0.07)	(0.09)
Distance	0.842**	1.180**
	(0.16)	(0.21)
Former Colony	0.200	0.293
	(0.17)	(0.21)
Trade Intensity	-0.186**	-0.251**
	(0.05)	(0.06)
Security Council	-0.562	-0.675
	(0.35)	(0.43)
Terrorism	-0.001	-0.000
	(0.00)	(0.00)
Donor Welfare	-0.909**	-1.033**
	(0.09)	(0.10)
Donor Growth	-0.513**	-0.343**
	(0.08)	(0.10)
Year	-0.075	-0.339*
	(0.11)	(0.14)
Constant	165.480	695.151*
	(226.60)	(279.94)

(next page)

43

(Continued)

Table A7: Sample Selection Model for Donor Propensity to Bypass, 2005-2009

Selection stage	Model 9A	Model 9B
Governance, Ec. Inst	-0.656**	-0.595**
	(0.03)	(0.04)
Democracy	0.065**	0.070**
	(0.01)	(0.01)
Civil Conflict	0.275**	0.299**
	(0.04)	(0.05)
Natural Disaster	0.239**	0.264**
	(0.01)	(0.01)
Distance	-0.449**	-0.576**
	(0.03)	(0.03)
Former Colony	0.228**	0.196**
	(0.03)	(0.04)
Trade Intensity	0.028**	0.033**
	(0.01)	(0.01)
Security Council	0.219**	0.158+
	(0.08)	(0.08)
Terrorism	0.001**	0.001**
	(0.00)	(0.00)
Donor Welfare	0.081**	0.216**
	(0.01)	(0.03)
Donor Growth	-0.030+	0.043*
	(0.02)	(0.02)
Year	0.079**	0.085**
	(0.02)	(0.02)
Constant	1.812**	1.869**
	(0.01)	(0.01)
ρ (est.)	-0.015	-0.137*
	(0.05)	(0.06)
LR test of indep.	0.10	4.49
p	[0.75]	[0.03]
Wald χ^2 (whole model)	3334.82	2209.81
p	[0.001]	[0.001]
N (Uncensored N)	10411 (6728)	8334 (5003)

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

Donor and region dummies, and year trend variable included but not reported