Donor fragmentation

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1. Introduction

Every few years, there are calls to launch a "new Marshall Plan," whether for Africa, Central America, the ex-Soviet bloc countries, or to fight scourges such as HIV/AIDS. Most recently, Condoleeza Rice framed US plans for spreading democracy in the Middle East in terms of a "new Marshall Plan."

Why is the Marshall Plan analogy so popular? Because advocates for grand new aid initiatives must go back all the way to the 1940s for an example that was widely acknowledged as a success. Performance of aid programs for less-developed nations in recent decades is generally considered to be abysmal, even by many aid industry advocates and practitioners. What accounts for the difference in performance?

Today's aid recipient nations are certainly different from Marshall Plan beneficiaries in important ways. Despite wartime death and destruction, Western Europe had skilled labor, experienced managers and entrepreneurs, and a history of reasonably effective financial and judicial systems, and public administrations (Degnbol-Martinussen and Engberg-Pedersen, 2003: 288).

Donors are also different today, however. There are many, many more of them. Marshall Plan recipients had to deal only with a single donor, in contrast to the dozens of bilateral and multilateral agencies and hundreds of NGOs in the aid business today. "The Marshall Plan worked because there was one donor, the U.S., and the U.S. set up rules that ensured the Europeans would themselves take charge." [1] Marshall Plan aid was similar to a structural adjustment program (De Long and Eichengreen, 1993), but with conditions both fewer in number and more aligned with preferences of recipient governments than characterize many latter-day programs. Moreover, unlike much of

[1] From Nancy Birdsall's "Foreword" in Kanbur and Sandler (1999).

today's aid, Marshall Plan loans were not disbursed in the form of hundreds of separate donor-managed projects in each recipient nation.

The success of aid programs in Taiwan, Botswana and Korea are also commonly attributed in part to the presence of a single or dominant donor (Brautigam, 2000; Azam, Devarajan and O'Connell, 2002). In contrast, most recent recipients of large amounts of foreign aid interact with dozens of donors, each with projects in a large and increasing number of economic sectors (World Bank, 2001). The UNDP Resident Representative in Lesotho in 1981 counted 61 donors financing 321 projects, in a country of only 1.4 million people (Morss, 1984). In 2002, there were 25 bilateral and 19 multilateral donors and about 350 international NGOS operating in Vietnam, accounting for over 8000 development projects (Acharya et al., 2003). In the typical African country, aid is provided by "some thirty official donors in addition to several dozen international NGOs…through over a thousand distinct projects and several hundred resident foreign experts" (van de Walle, 2001: 58). Thousands of quarterly project reports are submitted to multiple oversight agencies. Hundreds of missions monitor and evaluate these projects and programs annually in many recipients, and each mission expects to meet with key government officials and to obtain comments from officials on its reports (van de Walle and Johnston, 1996).[2]

Why should aid may be more effective when delivered by a single (or dominant) donor? Where many donors -- each responsible for only a small part of development assistance – operate, responsibility is diffused. Any single donor has little reputational stake in success or failure of the recipient's development program (Belton, 2003). From the perspective of a recipient country's welfare, incentives for any one donor to shirk on

[2] Tanzania in desperation recently imposed a temporary moratorium on donor missions.

activities that maximize overall development in favor of activities that contribute to donor-specific goals strengthen as the number of donors increases.

Donors' multiple and conflicting objectives exacerbate this basic collective action problem. Donors are undoubtedly in most or all cases concerned with development of the recipient country, but must trade this objective off against other goals as well, such as commercial and security objectives. Aid agencies additionally have the objective of maximizing their budgets, requiring them to satisfy key domestic constituencies in parliament – requiring in turn that they sacrifice development objectives when those inevitably sometimes conflict with the need to maintain good relations with domestic aid contractors and advocacy groups. To build domestic support for large aid budgets -- particularly in donor nations such as the U.S. where voters tend to be more skeptical of the value of foreign aid – the impact of aid programs must be visible, quantifiable, and directly attributable to the donor's activities. These requirements often can be met only at the expense of reducing the actual developmental benefits from aid programs.

Costs associated with a proliferation of donors can be grouped into two broad categories. Some costs are felt immediately, with the burden falling primarily on the projects or sectors in question. Tying aid to the employment of donor-country contractors is a major example.[3] Also detracting from aid's value are transactions costs associated with numerous and diverse donor rules and procedures for managing aid projects and programs, different languages and fiscal calendars, etc. (see Berg, 1993: 81; UNDP, 2003: 148).4

3 This practice is estimated to reduce aid's real value by between 15% and 30% (Jepma, 1991).
4 In Vietnam, it took 18 months and the involvement of 150 government workers to purchase five vehicles for a project funded by several donors with diverse procurement policies (World Bank, 2003). In Bolivia, five donors sponsoring a single poverty survey each required separate financial and technical reporting,

The second category of costs is more insidious and long-lasting, involving donor practices that tend to undermine the quality of governance or retard the development of public sector capacity. A few examples of these practices include providing aid through projects rather than through budget support, bypassing central government units (for example, by the use of project implementation units), relying on expatriates instead of subsidizing "learning by doing" by hiring local staff, and funding investment projects that in the aggregate imply unrealistically high recurrent expenditures in future years – so that roads are often built but not repaired, and schools are built but not staffed (Brautigam, 2000). Donors engage in these practices to increase the visibility of their efforts and the short-term appearance of success for their individual projects, at the expense of coherent policy making and capacity building in the recipient country's public sector (World Bank, 1998: 84). It is well-known in the aid business that however successful a project appears on its own terms, it will have little or no sustained impact in a poor sector-policy environment, and where it is not integrated into other donor-funded or government projects (Easterly, 2003: 7; Kanbur and Sandler, 1999: 29). However, where there are numerous donors, any one of them would gain only a small share of the total benefits, in terms of project success, from devoting resources to improving administrative capacity in the country, and would be subsidizing the success mostly of other donors' projects.

Shifting this discussion from conceptual arguments and anecdotes toward systematic measurement and testing, the next section introduces measures of the degree of donor fragmentation in aid recipient countries. Using these measures, section 3

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leading the government official assigned to the project to spend nearly as much of her time meeting these requirements as in undertaking the actual survey (World Bank, 2003). "Country analytic work" (e.g. poverty assessments, public expenditure reviews, governance and investment climate assessments) sponsored by donors is often duplicated, with authors of these reports often unaware of each other's work (OECD, 2003: ch. 2; Easterly, 2003: 15).

describes several pieces of cross-country evidence, suggesting that fragmentation may reduce quality of the public administration in aid recipients, distort public expenditure allocations, and impair progress on public budgetary management reform efforts.

2. Measuring Donor Fragmentation and Project Proliferation

Two different data sources can be used for constructing useful measures of donor fragmentation and project proliferation. A breakdown of annual disbursements of official development assistance (ODA) by various bilateral and multilateral donor agencies, treating the various UN agencies as separate donors, is provided in OECD (2004). From these data, an index of donor fragmentation can be calculated for each aid recipient country, for each year, by summing the squared shares of aid over all donor agencies and subtracting the resulting Herfindahl index from 1, to form an index for which higher values reflect greater fragmentation of aid.[5] Values for this index increase with the number of donors providing aid to the country, and with greater equality of aid shares among donors, reflecting the absence of a dominant donor.

During the year 2000 among recipients of substantial amounts of aid, fragmentation averages about .7. Values were lowest for Jordan (.21) and Zimbabwe (.25). Many African countries had values above .9, including Mozambique (.91), Ethiopia (.92), Lesotho and Cape Verde (.93).

Year-by-year changes in this fragmentation index, averaged over all countries, show an upward trend from 1975 onward (figure 1). This increase largely reflects an increase in the number of DAC donors. For example, the European Bank for Reconstruction and Development (EBRD) was founded in 1991, to aid the transition

[5] O'Connell and Saludo (2001) compute Herfindahl indexes of donor concentration for aid recipients in Africa in the 1990s using the DAC data.

economies in Eastern Europe and former Soviet Union. Over time, some aid recipients such as Greece and Portugal became donors.[6]

In addition to the DAC disbursements data, the Development Gateway's AiDA (Accessible Information on Development Activities) data base is used to construct an alternative fragmentation index. This source contains records provided by the DAC and other sources on hundreds of thousands of investment projects and other activities financed by various donor agencies.[7] A count of projects sponsored by each donor can be made. From these counts, a fragmentation index is computed from donors' shares of projects. Fragmentation indexes were computed two different ways, first treating each agency or department as separate donors (for example, USAID and USDA), and second, treating each funding nation (e.g. the USA) or multilateral institution as a single donor. The mean for the first index is (by construction) somewhat higher, but the two indexes turn out to be nearly perfectly correlated. For this project-based fragmentation index for the post-1990 period, values range from .07 for Suriname to .90 for Niger and Mongolia, and .92 for Turkey.

The fragmentation indexes calculated from project counts in AiDA provide a somewhat different picture of donor fragmentation across countries than does the index calculated from DAC aid volumes. The latter, averaged for the 1990s, is correlated at only .44 with indexes based on projects with start dates in the 1990s. The two types of indexes are not directly comparable, however. First, the DAC data used include only ODA, while the AiDA data base also includes some non-concessional loans. Second, it is more difficult to pin down relevant dates for the projects data. About 60% of all

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6 The trend in this measure may overstate the increase in donor uncoordination, however, as budget support and the prevalence of sector-wide approaches has increased somewhat in recent years.

[7] See http://aida.developmentgateway.org/AidaHome.do

activities included in AiDA lack project start and end dates. Indexes computed for any given sub-period, such as the post-1990 period, require dropping all projects without start dates. Particularly for years prior to 1987, such indexes will therefore be based on very incomplete project data.[8] Unlike the case using the DAC disbursements data, AiDA cannot be used to generate annual fragmentation values at all. However, it is likely that fragmentation is fairly stable across countries over time; e.g. the fragmentation indexes for 1982 and 1997 based on DAC aid volumes are correlated at .87. An index based on all AiDA records (some dating to the late 1940s) is correlated with one based on activities with start dates of 1990 or later at .81.

Certain caveats apply equally to interpretation of both sets of fragmentation measures. Most notably, a donor's expenditure share or project count share will not always accurately reflect its level of involvement and influence in a recipient's development program. Both the DAC- nor AiDA-based indexes measure only donors' "market shares." One donor may undertake its activities in ways that are less intrusive and less institutionally corrosive than another donor with a similar share of aid.

Fragmentation can be computed for different aid sectors, such as education, health, and water, because projects (in AiDA) and aid commitments (but not disbursements, in the DAC data) are coded by sector. A high level of fragmentation overall is in principal consistent with donor specialization and hence low fragmentation in individual sectors. Mean levels of fragmentation in fact are somewhat -- but not dramatically -- lower within individual sectors. However, in countries where fragmentation overall is high, fragmentation within sectors also tends to be high.

[8] The number of projects with start dates for 1987 is five times the number for 1986, and the number doubled from 1994 to 1995, suggesting that some donors failed to report start dates until recently.

The AiDA data base can also be used to construct a project proliferation measure, from the total count of projects recorded in a period (with or without adjusting for size of the recipient country), subject to the limitations noted above. Table 1 lists the ten countries with the largest number of projects with start dates after 1990.[9] Larger countries, unsurprisingly, tend to have more projects. The correlation between (log of) 1990 population and (the log of) projects is .62. Also not surprising, fragmented aid tends to be associated with project proliferation: the DAC-based and AiDA-based fragmentation indexes for the 1990s are each correlated at about .51 with (the log of) the number of projects with start dates of 1990 or later. This relationship remains very strong controlling for population.

3. Where is Aid More Fragmented?

Table 2 reports mean levels of fragmentation and project counts (for 1990 and later) for various country groups. Donor fragmentation and project proliferation tends to be more extreme in low-income than in middle-income aid recipients. By region, Latin America and East Asia/Pacific stand out for having lower rates of fragmentation. Both project counts and fragmentation measures are highest in South Asia; an obvious hypothesis is that this has something to do with the average size of countries and low average incomes in this region, which includes India, Bangladesh and Pakistan.

Table 3 reports regressions of country-level fragmentation and project counts on aid/GNI, per capita income, country size, and as et of regional dummies (with sub-Saharan Africa as the reference category). The partial effect of aid levels on the AiDA-based fragmentation variables is insignificant (equations 1 and 2). Aid is actually

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[9] These counts of projects with post-1990 start dates were obtained from Virginia Yee of the Development Gateway in 2002. Updated counts presumably would be substantially higher.

negatively related to fragmentation averaged over 1990-2001 as measured by DAC disbursements (equation 3). As expected, aid is positively and significantly associated with project counts (equation 4).

Per capita income is significantly related only to the disbursements-based fragmentation measure, with higher incomes associated with lower fragmentation (equation 3). Some but not all fragmentation measures are positively and significantly associated with country size (equations 1-3). Other things (including aid/GNI) equal, larger countries have more projects (equation 4).

Even with the control variables, the same two regions -- Latin America/Caribbean and East Asia/Pacific – stand out for their lower rates of fragmentation. Latin America however has significantly more projects than otherwise predicted by country size, and aid and income levels (equation 4). East Europe/Central Asia stands out for its high fragmentation values (equations 1 and 2). The South Asia dummy is insignificant in every case: the high average rates of fragmentation and project proliferation for these countries in Table 2 are explained very well in Table 3 by their large populations, and to a lesser extent by their relatively low incomes and aid/GNI levels.

4. Does Fragmentation Matter? Cross-Country Evidence

Poaching

Pressures to show tangible results for their projects commonly leads donors to pay salary supplements to the more talented local staff. This practice distorts incentives for civil servants to turn their attention away from their other responsibilities—even those with greater impact on development--and towards the donor's projects (Arndt, 2000: 166-

7).[10] It also creates incentives for officials to protect and extend aid projects from which they benefit, regardless of their merit, and to help perpetuate the practice of spending aid funds in the form of independent projects rather than in the form of coordinated, sector-wide programs or budget support (Acharya et al., 2003). Examples of these problems are prevalent in Africa.

> In Niger, for instance, the majority of NGOs appear to be operated by moonlighting civil servants and ex-ministers of cabinet. In several cases, high-level officials left government to create NGOs in order to receive donor support that had once gone to the official's ministry (van de Walle, 2001: 165).

In Malawi and other southern African countries, doctors and nurses are leaving public hospitals and clinics in droves, "to take more lucrative positions in foreign-funded HIV-AIDS programs" (Burkhalter, 2004). Fallon and da Silva (1994: 98) write of Mozambique:

> Donor-driven competition for skilled personnel is creating immense problems for government. The preoccupation of many donors with ensuring that their local administrations have a full complement of qualified staff and with securing, at all costs, the manpower required to implement their projects is depriving the government of the capacity to effectively manage its administration.

In this spirit, Knack and Rahman (2003) write down a simple formal model of donors' choices regarding whether or not to "poach" the better-qualified civil servants to run their own projects. A competent government bureaucracy increases the returns to all donor-run projects, but in maximizing the likelihood of success in their respective projects, each donor treats the government bureaucracy as a common-pool resource. Where there are fewer donors, each with a larger share of projects adversely affected by

[10] In Malawi some years ago, 33 of the 36 permanent secretaries attended a week-long meeting to discuss the EU's aid program. This level of participation was achieved by paying them the same daily rate as Brussels staff on mission. "The EU had bought the government for a week – doubtless on the agenda was the government's inability to implement its policies" (private correspondence with World Bank specialist on African civil services).

deteriorating administrative capacity, the external costs from poaching may be sufficiently high for an individual donor to influence its decision.

The model predicts that bureaucratic quality will erode more in recipients with greater donor fragmentation, i.e. with a larger number of donors each with a smaller share of the project market. Bureaucratic quality can be measured by a subjective index available for most countries from the International Country Risk Guide (ICRG), over the 1982-2001 period. Controlling for aid/GNI, the initial level of bureaucratic quality, the length of the interval over which ICRG data are available for each country, population growth, and per capita income growth, Knack and Rahman (2004) find that donor fragmentation is associated with larger declines (or smaller improvements) in bureaucratic quality. Figure 2 depicts the partial relationship between fragmentation (measured by the AiDA project counts) and changes in bureaucratic quality for sub-Saharan Africa, the most aid-intensive region.

Public Expenditures

Greater donor fragmentation, implying reduced donor accountability, can increase the risk of uncontrolled investment spending. A donor with a small share of the aid market in a country is less likely to be concerned about whether future recurrent spending implied by today's investment projects are sustainable, and about whether the projects are mutually consistent. It is more likely to bypass the central finance and planning ministries to work directly with line ministries or local governments which view future budgets as a common resource pool (Brautigam, 2000).

Unless aid is fully fungible, more aid can be expected to raise capital expenditure as a share of total public spending. The arguments here imply that this tendency should be stronger where donor fragmentation is greater. Equations 1 and 2 of Table 4 test this proposition using cross-country annual data for the period 1975-2001. Control variables include per capita income, population, and a time trend.[11] In both random (equation 1) and fixed (equation 2) effects estimation, the interaction term aid x fragmentation has a positive and significant coefficient as expected. The mean value for capital expenditure in the sample is about 22% of central government spending. The insignificant coefficient on the fragmentation term indicates that when aid/GNI is near 0, the level of fragmentation unsurprisingly has no significant effect on capital spending. This effect increases significantly as aid increases, however. For aid/GNI of about 10% (a threshold exceeded in about 1/6 of the observations), an increase in fragmentation from .4 to .9 is associated with an increase of about 2 percentage points to the capital spending share.

Fragmentation can also free donors to target their aid to more "fashionable" sectors that appeal to home-country constituencies. In recent years, education and health have emerged as the clear fashionable sectors among most donors, in part because of their more apparently direct impacts on poverty reduction, which has displaced growth and other objectives as the primary motive of aid for most major donors.[12]

Equations 3 and 4 test the hypothesis that the share of aid targeted to the fashionable sectors, education and health, is higher where fragmentation is higher. The hypothesis is supported in the random effects test in equation 3. Each .1 increment in fragmentation is associated with an increase of nearly 0.5 percentage points in the share of aid targeted at health and education. This is a fairly large effect, relative to the sample

[11] Results on fragmentation are unchanged when year dummies are substituted for the linear time trend variable.

[12] The positive and significant coefficients on the time trend variable in equations 3 and 4 reflects the increased popularity of social sector aid over time among donors.

mean of 11.5% of aid going to those sectors. Fragmentation is not significant in the more demanding fixed effects test of equation 4, however, in which estimates are influenced only by within-country variation over time.

Public Budgetary Management Reform

Even where recipient countries are committed to public sector reform programs advocated by donors, fragmentation can impair progress if donors' ideas of "best practice" vary at all, or if donors are each responsible for only a small part of the overall reform program. As part of the HIPC debt relief initiative, 24 HIPC countries agreed to participate in an IMF-World Bank assessment of their public budgetary systems. With assistance from these institutions, countries agreed to "action plans" to address various weaknesses that were diagnosed in these systems, with the goal of improving donors' confidence that debt relief would be used by recipient governments for worthy poverty-fighting purposes. In some countries, a very small number of donor agencies were involved in these budgetary reform efforts, while in other countries numerous donors provided technical support and advice. A systematic review found that, controlling for other factors, more progress was made on budgetary reform in countries with fewer donors "helping" them (IMF/World Bank, 2004).

5. Conclusions

If fragmentation has damaging consequences, why aren't more recipients more selective about the aid they accept? In principal, aid recipient governments can take measures to prevent the inefficiencies associated with competitive donor practices, either by refusing some aid[13] or by attempting to reduce the number of donors active in the

[13] Uganda's stated policy is to decline all offers of stand-alone donor projects (OECD, 2003: 121). Eritrea also has a reputation for being highly selective about accepting aid offers.

country (or, at least, the number active in each sector). In practice, principal-agent problems within the recipient country, either between a government with short time horizons and its citizens, or between line ministries and central ministries (Wuyts, 1996: 742; van de Walle, 2001: 208), often reduce the government's ability or willingness to curtail donor activities that are destructive for the long-run development of the country overall. For political leaders without sufficiently lengthy time horizons, the short-term personal benefits of corruption and patronage practices often outweigh the long-term costs of subverting administrative capacity (and judicial systems); insecure leaders treat the rational-legal order essential for development as a common-pool resource (van de Walle, 2001).

At least in some cases, therefore, poor people in recipient countries could be made better off if donors organized to undertake measures aimed at reducing fragmentation. This does not mean that a donor cartel should decide on a sole or lead donor to be matched with each recipient. Each recipient could be encouraged to select for itself a lead donor, at least for each sector receiving significant volumes of aid. Presumably recipients would normally choose as its lead donor the one with the most relevant expertise (based on region or sector) or which comes with the least commercial/security objective baggage.

Strong political forces and other interests work against further increases in donor specialization by country or by sector, however. Leaving certain problems or countries for other donors to deal with exposes an aid agency to charges by NGOs or the media that it is irresponsibly under-funding critically important development problems.[14] Arcane

[14] For example, a Washington Post editorial ("Action for AIDS," December 6 2003) complained that "Australia has not given a cent" to the Global Fund to Fight AIDS, Tuberculosis and Malaria.

justifications based on efficiency benefits of donor harmonization and comparative advantage are unlikely to be an effective public-relations response. Inter-agency funding could be a partial solution to this problem. Norway and Sweden both fund education and health sector programs in Ethiopia, but Sweden is arranging to channel its health funding through Norway, while Norway will channel its education funding through Sweden (OECD, 2003: 97).

Competition at the global level among aid agencies also tends to inhibit specialization; for example the World Bank attempts to establish intellectual leadership in as many development themes and sectors as possible. Despite the ongoing high-level harmonization initiatives by aid agencies, there remain grounds for skepticism that political and bureaucratic exigencies of donors will be trumped by demands for improved aid effectiveness (van de Walle, 2001: 233; OECD, 2003: 118).

Publicizing various measures of donor performance, by the OECD DAC or by independent organizations such as the Center for Global Development, could marginally improve the incentives faced by aid agencies. Performance measures could include not only the share of aid that is tied, but also measures of how each donor proliferates aid across recipients and sectors (Acharya et al., 2003), the share of aid channeled through multilateral organizations, the number of missions and reports required relative to aid levels, and frequency of delegation to lead donors.

Table 1
Project Counts (start date of 1990 or subsequent)
Source: AidA, 2003 (Development Gateway)

India	3013
South Africa	2393
Tanzania	2382
Mozambique	2147
Bangladesh	1972
Russia	1911
Indonesia	1909
Zimbabwe	1867
Kenya	1833
Ethiopia	1762

Table 2
Fragmentation and Proliferation
by income and region groupings

	AiDA (agency)	AiDA (donor)	DAC	Projects (AiDA)
Low-income	.79	.78	.80	606
Middle-income	.68	.67	.68	325
Sub-Saharan Africa (45)	.79	.78	.80	606
East Europe/Central Asia (10)	.86	.85	.66	537
South Asia (6)	.81	.80	.85	809
Middle East/North Africa (8)	.80	.79	.75	242
Latin America/Caribbean (18)	.58	.57	.64	361
East Asia/Pacific (22)	.57	.56	.57	269

Table 3
Correlates of Donor Fragmentation

Equation	1	2	3	4
Dependent variable	AIDA (agency)	AIDA (donor)	DAC	Project count
Constant	14.60 (44.27)	12.87 (43.97)	201.71 (40.31)	-3.50 (1.52)
Aid/GNI	0.11 (0.12)	0.12 (0.12)	-0.20* (0.10)	0.02** (0.01)
Log GDP per capita, 1990	-0.85 (3.53)	-0.68 (3.52)	-13.21* (3.52)	0.04 (0.12)
Log population, 1990	4.48** (1.56)	4.46** (1.54)	-2.36 (1.31)	0.58** (0.06)
Latin America/Caribbean	-13.01* (6.36)	-12.84* (6.32)	1.26 (5.61)	0.59** (0.21)
East Europe/Central Asia	8.79** (3.28)	8.08* (3.29)	-7.04 (4.75)	-0.26 (0.27)
Middle East/North Africa	-0.66 (7.84)	-1.09 (7.45)	4.46 (5.59)	-0.66 (0.34)
South Asia	0.83 (5.83)	1.04 (5.83)	1.61 (2.60)	0.22 (0.18)
East Asia/Pacific	-12.70* (4.99)	-12.32* (4.94)	-12.27* (5.15)	0.19 (0.20)
R^2	.50	.49	.52	.69
Std. error of est.	13.9	13.7	12.8	0.65
Mean, dep. var.	73.6	72.9	75.6	5.63

Sample includes countries with aid's share of GDP exceeding 2%. Sample size is 89 in equations 1-2 and 4, and 90 in equation 3. Robust standard errors are in parentheses. A * (**) indicates significance at .05 (.01) for two-tailed tests. Dependent variable is fragmentation index in equations 1-3 (multiplied by 100) and log of projects count in equation 4. Dependent variables are based on AiDA projects with start dates of 1990 or later in equations 1-2 and 4, and for equation 3 is the average over 1990-2001 of annual values constructed from DAC disbursements data.

Table 4
Donor Fragmentation and Distortion of Public Expenditures

Equation	1	2	3	4
Dependent variable	Capital expenditure as share of total		Social sector share of aid	
Method	Random effects	Fixed effects	Random effects	Fixed effects
Year	-0.396** (0.035)	-0.666** (0.056)	0.461** (0.037)	0.576** (0.082)
Log GDP per capita	3.796** (0.898)	10.809** (1.163)	-0.449 (0.512)	1.196 (1.502)
Log population	0.081 (0.586)	8.684** (2.014)	-0.854** (0.221)	-6.078* (3.009)
Aid/GNI (%)	-0.045 (0.153)	-0.040 (0.153)	-0.136** (0.039)	-0.165** (0.047)
Fragmentation (DAC)	0.368 (1.734)	0.211 (1.717)	4.583** (1.745)	0.620 (2.328)
Aid*fragmentation	0.393* (0.185)	0.368* (0.186)		
N	1338		2867	
R^2 (within group)	.13	.16	.05	.05
Mean, dep. var.	21.8		11.5	

Dependent variable in equations 1 and 2 is capital expenditure as a percentage of all central government expenditure (capital and current). Dependent variable in equations 3 and 4 is health and education sector aid as a percentage of all official development assistance. A * (**) indicates significance at .05 (.01) for two-tailed tests.

References

Acharya, Arnab; Ana Fuzzo de Lima and Mick Moore (2003). "The Proliferators: Transactions Costs and the Value of Aid." Institute of Development Studies.

Arndt, Channing (2000). "Technical Cooperation." In *Foreign Aid and Development: Lessons Learnt and Directions for the Future*, edited by F. Tarp. London: Routledge.

Azam, Jean-Paul; Shantayanan Devarajan and Stephen A. O'Connell (2002). "Equilibrium Aid Dependence." Unpublished manuscript, University of Toulouse.

Belton, Rachel (2003). "Rebuilding Iraq: No Job For a Coalition." *Washington Post*, April 28 (op-ed page).

Berg, Elliot (1993). *Rethinking Technical Cooperation: Reforms for Capacity Building in Africa*. New York: UNDP.

Brautigam, Deborah (2000). *Aid dependence and governance*. Stockholm: Almqvist & Wiksell International.

Burkhalter, Holly (2004). "Misplaced Help in the AIDS Fight." Washington Post, May 25, A17 (op-ed page).

Degnbol-Martinussen, John and Poul Engberg-Pedersen (2003). *Aid: Understanding International Development Cooperation*. London: Zed Books.

DeLong, J. Bradford and Barry Eichengreen (1993). "The Marshall Plan: History's Most Successful Structural Adjustment Program." In *Postwar Economic Reconstruction and Lessons for the East Today*, edited by Rudiger Dornbusch, Wilhelm Nolling, and Richard Layard. Cambridge, MA: MIT Press.

Easterly, William (2003). "The Cartel of Good Intentions: The Problem of Bureaucracy in Foreign Aid." *Journal of Policy Reform* 5(4): 1-28.

Fallon, Peter R. and Luiz A. Pereira da Silva (1994). "Recognizing Labor Market Constraints: Government-Donor Competition for Manpower in Mozambique." In *Rehabilitating Government: Pay and Employment Reform in Africa*, edited by D. L. Lindauer and Barbara Nunberg. Washington DC: The World Bank.

IMF/World Bank (2004). *Update on Implementation of Action Plans to Strengthen Capacity of HIPCS to Track Poverty-Reducing Public Spending*. Washington DC.

Jepma, Catrinus J. (1991). *The Tying of Aid*. Paris: OECD Development Center.

Kanbur, Ravi and Todd Sandler (1999). *The Future of Development Assistance: Common Pools and International Public Goods*. ODC Policy Essay No. 25. Washington DC: Overseas Development Council.

Knack, Stephen and Aminur Rahman (2004). "Donor Fragmentation and Bureaucratic Quality in Aid Recipients." World Bank Policy Research Working Paper 3186.

Morss, Elliott R. (1984). "Institutional Destruction Resulting from Donor and Project Proliferation in Sub-Saharan African Countries." *World Development* 12(4): 465-70.

OECD (2004). *Geographical Distribution of Financial Flows to Aid Recipients 1998-2002* (CD-ROM). Paris: OECD Development Assistance Committee.

OECD (2003). *Harmonizing Donor Practices for Effective Aid Delivery*. Paris: OECD.

O'Connell, Stephen A. and Charles C. Soludo (2001). "Aid Intensity in Africa." *World Development* 29(9): 1527-52.

UNDP (2003). *Human Development Report 2003*. New York: Oxford University Press.

Van de Walle, Nicolas (2001). *African Economies and the Politics of Permanent Crisis*. Cambridge: Cambridge University Press.

Van de Walle, Nicolas and Timothy Johnston (1996). *Improving Aid to Africa*. ODC Policy Essay No. 21. Washington DC: Overseas Development Council.

World Bank (2003). "Cutting the Red Tape: Better Aid Delivery Through Better Donor Coordination." Press Release, February 21. Washington, DC.

World Bank (2001). *The Drive to Partnership: Aid Coordination and the World Bank*. Operations Evaluation Department. Washington, DC.

World Bank (1998). *Assessing aid: What works, what doesn't, and why*. New York: Oxford University Press.

Wuyts, Marc (1996). "Foreign Aid, Structural Adjustment, and Public Management: The Mozambican Experience." *Development and Change* 27: 717-49.

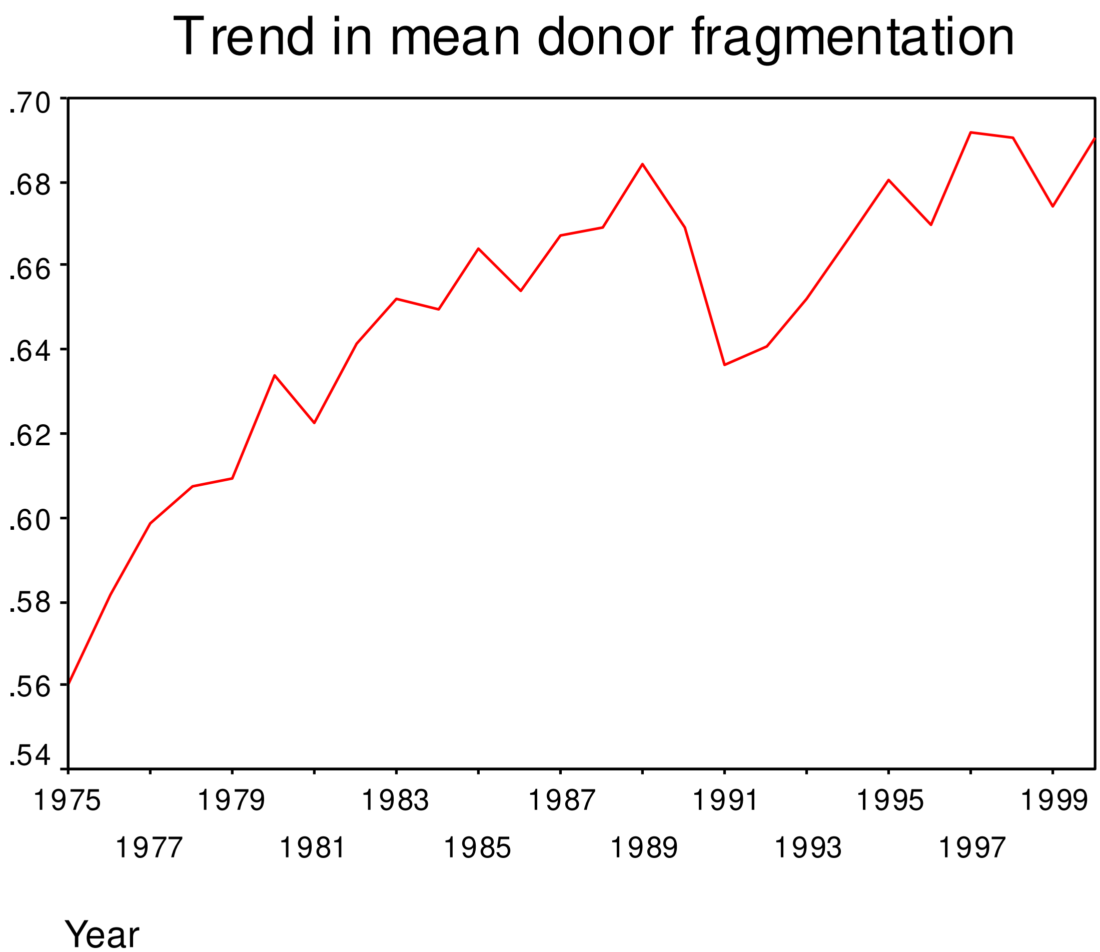
Trend in mean donor fragmentation
.70
.68
.66
.64
.62
.60
.58
.56
.54
1975
1977
1979
1981
1983
1985
1987
1989
1991
1993
1995
1997
1999
Year

figure 1

Donor fragmentation & bureaucratic quality

(partial plot, Sub-Saharan Africa)

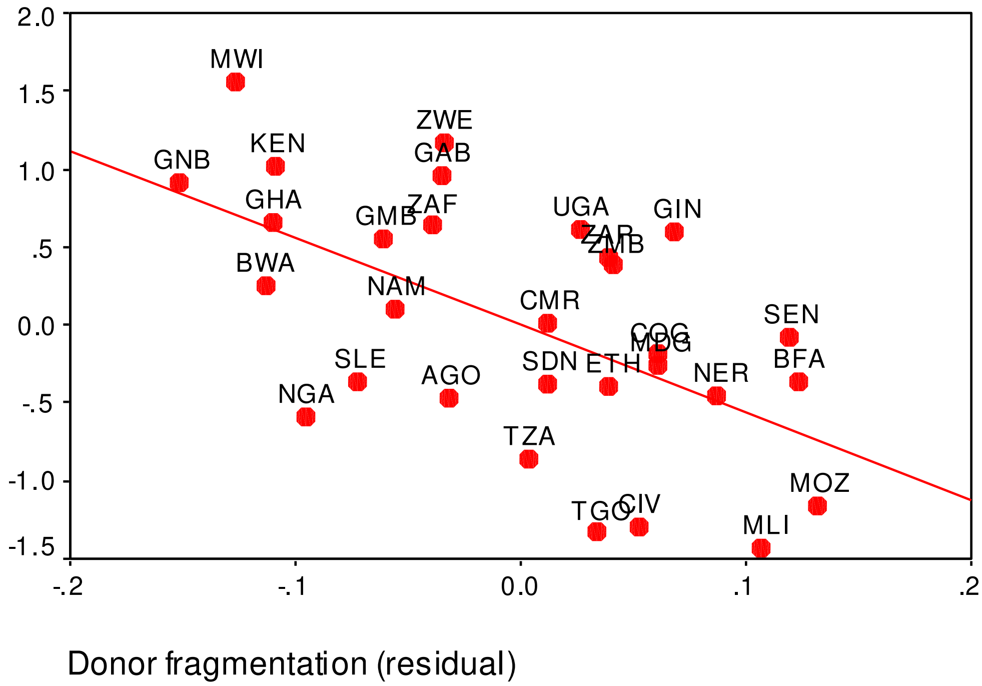

figure 2