

## **Aid Quality and Donor Rankings**

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## Abstract

This paper offers new measures of aid quality covering 38 bilateral and multilateral donors, as well as new insights about the robustness and usefulness of such measures. The 2005 Paris Declaration on Aid Effectiveness and the follow-up 2008 Accra Agenda for Action have focused attention on common donor practices that reduce the development impact of aid. Using 18 underlying indicators that capture these practices—derived from the OECD-DAC's Survey for Monitoring the Paris Declaration, the new AidData database, and the DAC aid tables—the authors construct an overall aid quality index and four coherently defined sub-indexes on aid selectivity, alignment, harmonization, and specialization. Compared with earlier indicators used in donor rankings, this indicator set is more comprehensive and representative of the range of donor practices addressed in the Paris Declaration, improving the validity, reliability, and robustness of rankings. One of the innovations is to increase the validity of the aid quality indicators by adjusting for recipient characteristics, donor aid volumes, and other factors. Despite these improvements in data and methodology, the authors caution against overinterpretation of overall indexes such as these. Alternative plausible assumptions regarding weights or the inclusion of additional indicators can still produce marked shifts in the ranking of some donors, so that small differences in overall rankings are not meaningful. Moreover, because the performance of some donors varies considerably across the four sub-indexes, these sub-indexes may be more useful than the overall index in identifying donors' relative strengths and weaknesses.

**Keywords:** aid effectiveness, official development assistance, aid quality, aid selectivity, donor harmonization, donor proliferation

## 1. INTRODUCTION

How should aid quality be evaluated and compared across donors? A number of recent papers have proposed rankings of bilateral and multilateral donors, on the assumption that donor performance can be measured and ranked globally in a meaningful and robust way ([Birdsall, Kharas, & Mahgoub, 2010], [Center for Global Development, 2007], [Easterly & Pfutze, 2008], [Mosley, 1985], [Roodman, 2006 and 2009] and [Sinha, 2010]). These public rankings are intended to inspire both bilateral and multilateral donors to improve their effort, effectiveness, and efficiency in ways that will move them up in the rankings. And there is evidence that donors do in fact pay attention to these rankings and care about public perceptions (see, for example, Ramankutty, Berglof, Easterly, & Pfutze, 2009). A sustained and focused “peer pressure” campaign within the DAC appears to have contributed to a marked decline in the share of aid that is tied to purchases of goods and services in donor countries (OECD, 2009a).<sup>1</sup>

Whether this approach is successful or not is likely to depend on the perceived validity and robustness of the rankings. While the ranking of aid agencies on well-defined individual components is hard to argue with, this paper investigates the robustness of these overall rankings to inclusion of new indicators and to different weightings of the components.

In assessing aid quality by donors, this paper extends and enlarges upon the methodologies of Roodman (2006 and 2009) and Easterly and Pfutze (2008) in several respects. First, it includes a more comprehensive set of performance indicators, combining existing indicators with new ones that reflect the content of the Paris Declaration in a more comprehensive and representative way. Second, as explored in the methodological sections below, most of our aid quality indicators adjust for important factors that are not directly under the control of the donor agencies. And third, in computing indicators of sectoral fragmentation and project proliferation, we take advantage of the new AidData database produced by researchers at the College of William and Mary and Brigham Young University (Tierney *et al.*, 2011).

The results from this exercise in collecting and combining aid quality indicators are both encouraging and instructive. First, we show that it is possible to group these indicators into logical and statistically valid sub-indexes that capture key aspects of aid quality: selectivity, alignment with country systems, harmonization in country, and specialization. Donor rankings within these sub-indexes should be useful in and of themselves, by helping donors to identify areas of relative strength and weakness.

Second, we offer a new overall ranking of donor quality, constructed from these sub-indexes. This ranking has the advantage of incorporating more aspects of quality than other rankings, so that it is likely to be a fairer representation of overall donor quality.

Third, we show that weightings do matter to the rankings: because donor rankings vary among the different sub-indexes, the ultimate overall ranking will be sensitive to the weightings of those sub-indexes. We argue that ranking exercises need to take into account this sensitivity to weightings and

should make their weighting choices explicit, to allow the reader to decide whether he or she agrees with them. In the interest of transparency, we aggregate our sub-indexes several different ways and show how the rankings change with each reweighting.

## **2. RANKING DONORS: CHALLENGES, MOTIVATIONS, AND METHODS**

Any effort to rank donors on aid quality faces a number of challenges, some of which we cannot address satisfactorily. First, most indicators of donor performance are based on plausible but largely untested beliefs about best practices in aid management. Policy selectivity has received the most attention in the literature ([Burnside & Dollar, 2000] and [World Bank, 1998]). Nevertheless, the evidence linking the quality of policies to the effectiveness of aid has been disputed ([Easterly, Levine, & Roodman, 2003, 2004] and [Hansen & Tarp, 2000, 2001]). In the case of other aid quality indicators, such as donor use of country systems, there is an even stronger consensus in the donor community on their importance, despite an even weaker base of empirical evidence. In selecting plausible indicators of aid quality, we follow the approach of Easterly and Pfutze (2008) in selecting our indicators based on the consensus in the donor community and academic literature—which means that “we are asking in effect if aid agencies operate the way they themselves say they should operate” (Easterly & Pfutze, 2008, p.32).

Second, we do not know whether the relationship between aid characteristics and better outcomes is monotonic over the relevant range. In making the assumption that it is, we follow the existing ranking efforts.

Third, some of the indicators included in the rankings ignore interactions among donors, which could be important. For example, if most donors “herded” toward the poorest countries, it would improve those donors’ poverty-selectivity ratings, but would not necessarily improve outcomes at the margin, if aid’s impact on growth diminishes at higher aid levels. In that case, the marginal donor might reduce poverty more by avoiding the stampede and instead allocating its aid to countries that are slightly less poor.

In this paper we largely set those three issues aside to focus on the following question: Even if we assume that the donor behaviors captured by the indicators are important for development, does it follow that one can aggregate them into a single index of donor quality that is valid and reliable? Or are the component measures sufficiently uncorrelated that any overall ranking of donors on aid quality will be sensitive to subjective judgments regarding weighting or grouping into sub-indexes?

In ranking donors, it is important to match the methodology to the purpose. Donor-ranking exercises to date have been “name and shame” exercises: their goal has been to motivate lagging donor agencies to improve the quantity and quality of the aid they deliver by benchmarking donors against each other. Both Roodman/CGD and the Easterly and Pfutze ranking exercises have made this aim explicit: they write of hoping to cause aid agencies to become more transparent (Easterly & Pfutze, 2009) and of trying to inspire “a race to the top” (Center for Global Development, 2010), in which aid agencies change their practices to improve their rankings.

What does this “name and shame” goal imply for methodologies? To assess how well aid agencies are delivering on their mandate, we believe it is important to control econometrically for factors that are outside the agencies’ control. For example, it is pointless to castigate the EBRD for not focusing

on the world's poorest countries, given that the institution is allowed to operate only in the largely middle-income Europe and Central Asia region. By adjusting for limited mandates, we are able to ask the more relevant question for aid agency management: given its mandate, is the agency reducing poverty as effectively as possible, for example by targeting based on policy and poverty within its assigned geographic area? For other indicators, we adjust for donors' total aid budgets; for example, larger donors will typically "proliferate" their aid across more countries and sectors, other things being equal, and should not be penalized for this. And in measuring use of country systems, we adjust for differences in risk among donors' country portfolios, to avoid unduly penalizing donors that provide a large share of their aid to recipients that have weaker public financial management systems. All of these adjustments enter into our calculation of the core ranking below. (In one of our alternative rankings, the "allocation index", we reverse some of the adjustments as appropriate for the different purpose: helping donor-country governments determine how best to allocate their marginal aid resources most effectively.)

### **3. DATA AND METHODOLOGY: CONSTRUCTING THE SUB-INDEXES**

As discussed above, one of the main contributions of this paper is to base donor rankings on a more comprehensive set of indicators of aid quality than have been used in the past. This section describes how we have interpreted, adjusted, and aggregated these indicators.

In constructing our index, we identified four distinct dimensions of aid quality: selectivity, alignment, harmonization, and specialization. These emerge from the aid effectiveness literature and from international agreements on aid, but we find that they also hold up empirically. We assigned indicators to the four sub-indexes based on the OECD-DAC's mappings (OECD, 2008) to a large degree, supplemented by theory and intuition, but we found in most cases that the intra- and



inter-sub-index correlations confirmed those assignments. In the Results section below, we discuss why these sub-indexes may be useful in their own right, and not just as building blocks for the overall index of aid quality.

#### (a) Aid selectivity

Aid is widely believed to have greater development impact where it is needed most – that is, where there are large numbers of poor people – and where the policy and institutional environment is favorable to growth and development. The intuition for this belief is difficult to dispute, even if the empirical results in Burnside and Dollar (2000) have not proven very robust. For this reason, both the CGD and Easterly and Pfutze rankings incorporate measures of policy and poverty selectivity in their rankings, and Dollar and Levin (2006) focus solely on these variables in assessing likely trends in aid effectiveness.

For our aid selectivity variables, we compute measures of *policy and poverty selectivity* using the method of Dollar and Levin (2006). Specifically, we regress the log of aid from donor  $i$  to recipient  $j$  on three variables for the recipient  $j$ : the log of its population, its GDP per capita (adjusted for purchasing power parity), and its overall score on the World Bank's annual "Country Policy and Institutional Assessment" (CPIA). The CPIA consists of 16 indicators “representing the different policy and institutional dimensions of an effective poverty reduction and growth strategy.”<sup>2</sup> Policy selectivity is measured simply by the partial regression coefficient on the CPIA score, while poverty selectivity is measured by the partial regression coefficient for per capita income (multiplied by -1 so that more positive values indicate better targeting of aid to low-income recipients).<sup>3</sup>

As Dollar and Levin (2006) note, the use of the World Bank-constructed CPIA index as the measure of policy quality could bias the selectivity rankings in favor of the World Bank's IDA. They therefore replicate their analysis substituting a combination of the International Country Risk Guide's (ICRG) "rule of law" indicator and the Freedom House (FH) democracy index for the CPIA. Using this variable, several donors move up or down quite a few places in the rankings, suggesting some sensitivity to the choice of policy variable. Nevertheless, rankings on policy selectivity and overall aid selectivity (respectively) constructed with the ICRG/FH policy variable are correlated with their original rankings at .65 and .77. Moreover, the alternative measures have serious shortcomings: most (like the ICRG) cover only a few of the many development-related policy areas measured in the CPIA, and the few with its breath of policy coverage (like the Economic Freedom of the World Index) do not match its coverage of aid recipient countries.

We can further test for a World Bank bias by using the CPIA ratings produced by the African and Asian Development Banks. Those ratings use the same scale and the same questionnaire as the World Bank's CPIA, but they reflect the judgments of African and Asian Development Bank staff rather than World Bank staff. We ran the selectivity regression for the World Bank's allocations to the 73 countries rated by either of those two regional development banks, first using the World Bank's own CPIA ratings, and second using the AfDB/AsDB ratings. The World Bank scores better on both policy and poverty selectivity using the other development bank's ratings than it does using its own ratings, suggesting that our use of the World Bank CPIA ratings does not bias our selectivity rankings in favor of the Bank.<sup>4</sup>

We follow Dollar and Levin (2006) in computing an Aid Selectivity sub-index by equally weighting the policy and poverty elasticity estimates for each country, after standardizing them to mean 0 and

standard deviation equal to 1. The correlation between policy and poverty selectivity is .53, indicating that donors that are selective on one dimension are also (*ceteris paribus*) selective on the other.

#### (b) Aid alignment

The Paris Declaration commits donors to "base their overall support on partner countries' national development strategies, institutions and procedures". Through the follow-up Accra Agenda, donors pledged to support country ownership of development programs "by respecting countries' priorities, investing in their human resources and institutions, making greater use of their systems to deliver aid, and increasing the predictability of aid flows" (OECD, 2009a). These statements reflect a consensus that donors have often delivered aid in ways that undermine country ownership and institutions.

The Paris Declaration specifies several indicators of the extent to which donors' aid is aligned with country policies and systems. These include: use of country public financial management systems, use of country procurement systems, avoiding parallel project implementation units (PIUs), aid predictability, untying aid, and coordinating technical assistance with national development strategies. Other than tied aid, these indicators have been measured only in the last few years through the DAC's Survey on Monitoring the Paris Declaration (SMPD). We use data from the 2008 SMPD, which reports data for the calendar year 2007 (OECD, 2008).

It is possible that some donors interpreted the SMPD definitions more liberally than others. The 2008 survey guarded against this by substantially strengthening the definitions, guidance, and survey process, based on experiences from the 2006 first-round survey, and by minimizing donor discretion

to the extent practicable. These changes substantially improved the comparability of data reported by donors and by recipients (OECD, 2008), but on some indicators donors are still able to exercise their own judgment, for example in defining whether their aid in particular countries constituted “support to a program-based approach.”

The SMPD excludes humanitarian aid, debt relief, and administrative costs. It covers primarily ODA, but non-concessionary loans from multilateral development banks are also included. The DAC survey includes only 54 aid recipients, but coverage on the donor side is fairly comprehensive. All DAC donors, bilateral and multilateral, are included, as are vertical funds (such as the Global Fund and the GAVI Alliance) and several non-DAC bilateral donors (such as Poland and Hungary). The various UN agencies are treated as a single donor in the survey.<sup>5</sup>

Eight of our aid quality indicators are taken from this survey. For comparability with the survey-derived indicators, the indicators we compute from other sources are based on 2007 aid data, with data aggregated to the UN level where data are available on multiple UN agencies.

The performance of donors on the alignment and harmonization indicators in the SMPD can be influenced systematically by characteristics of the countries they aid (Knack & Eubank, 2009). It is likely that all donors may rely less on country systems plagued by corruption or other weaknesses. For example, the SMPD records that in DR Congo, donors collectively channeled 0% of aid through the recipient’s country public financial management (PFM) systems, compared with 79% of aid in Morocco. Donor performance on the unadjusted “use of country systems” indicator could be driven substantially by differences in risk in their country portfolios, rather than differences in how they operate within any given recipient country. Penalizing donors for bypassing country systems

without adjusting for recipient country mix therefore penalizes them for operating in risky environments—which in effect would mean double-counting the policy selectivity indicator.

For this reason, to generate our measures of donor performance, we adjust the SMPD indicators for the characteristics of the countries in which donors are operating. The “use of country systems” and other indicators are measured at the donor-recipient level, so we can control for differences in their country portfolios using recipient fixed effects. Specifically, we regress use of PFM systems (and other SMPD indicators) on a full set of recipient and donor dummies. For these variables, our donor performance indicators are therefore the coefficient estimates on the donor dummies, which capture the donors’ underlying propensity to use country systems.

Using this adjustment procedure, we construct an “alignment with country systems” sub-index of aid quality from the SMPD indicators along five dimensions: (1) use of country public financial management (PFM) systems, (2) use of country procurement systems, (3) avoidance of parallel project implementation units (PIUs), (4) aid predictability, and (5) coordination of technical assistance with national development strategies. We also include: (6) the Paris indicator of untied aid. This indicator is computed (following standard practice) from the DAC’s Creditor Reporting System (OECD, 2009b).

*Use of country PFM systems* is measured as the average of three sub-indicators on the share of donors’ aid to the government that uses recipients’ budget execution, financial reporting, and auditing systems.<sup>6</sup> *Use of procurement systems* is similarly computed as a share of donors’ aid. *Coordinated technical assistance* is computed as a share of the total (coordinated plus uncoordinated) technical assistance provided by the donor. Donor performance indicators for use of PFM systems, procurement

systems, and coordinated technical assistance adjust for differences in recipient characteristics in fixed-effects regressions using the SMPD data on all donor-recipient pairs with positive values of aid. The *number of PIUs* adjusts similarly for recipient fixed effects, but also for donors' aid volumes in each country, as more aid not surprisingly is associated with more PIUs.<sup>7</sup> In constructing the alignment sub-index, all variables are standardized to have a mean of 0 and standard deviation of 1. For PIUs, the standardized value is multiplied by -1, so that larger values indicate better performance as in the case of all other variables in the sub-index. *Aid predictability* is calculated based on the absolute deviation between the aid a donor disburses in 2007 and the aid it actually reports disbursing. We follow World Bank (2009) in using that methodology, but then adjust this value for recipient fixed effects.<sup>8</sup>

*Untied aid* is measured as the share of aid commitments for 2007 reported to the CRS that is recorded as neither tied nor partially tied to purchases from the donor country (OECD, 2009b). Where tied status is unreported, we follow Easterly (2002) in treating such aid as tied. Non-reporting of tying status is likely motivated in part by the desire to avoid showing a high ratio of tied aid (OECD, 2009b); thus omitting unreported aid from both numerator and denominator would overstate the untied aid share for donors that do not report fully.

The mean inter-item correlation among the six standardized sub-index components is .27, producing an alpha coefficient of internal reliability for the sub-index of .68.<sup>9</sup>

### (c) Harmonization in country

The Paris Declaration commits donors to implement common arrangements and simplify procedures, with the goal of reducing transactions costs imposed by donors on recipient

governments. It includes three indicators of harmonization of donor activities around country-led programs, measured through the SMPD. The first indicator is the share of aid delivered through *program-based approaches (PBAs)*, including not only direct budget support but also project aid, if it is part of a government-led sector-wide approach (SWAp). This harmonization indicator obviously overlaps conceptually with the issue of alignment of aid under country-owned development programs, and all direct budget support qualifies as aid using PBAs and as aid using country PFM and procurement systems.

The two other harmonization indicators in the Paris Declaration and measured through the SMPD are the share of *missions* and *country analytic studies* that are coordinated with other donors. The mean inter-item correlation among the three standardized sub-index components is .30, producing an alpha coefficient of internal reliability for the sub-index of .56.

#### (d) Specialization

It is widely believed that most donors fragment their aid across too many countries, sectors, and projects (World Bank, 2003). A proliferation of donors and projects overstretches and undermines the capacity of recipient governments to manage aid and their relations with donors (Knack & Rahman, 2007). Donors' reluctance to specialize also reduces their average level of expertise in the countries and sectors in which they operate, which may reduce aid's effectiveness even in recipients that do not suffer themselves from a proliferation of donors and projects. Our specialization sub-index is thus conceptually distinct from our sub-index of in-country harmonization practices.

The Paris Declaration calls for a more effective division of labor among donors, declaring that “[e]xcessive fragmentation of aid at global, country or sector level impairs aid effectiveness.” No

indicators are specified in the declaration, but we construct several indicators for the year 2007 from the DAC's databases, following the methods of Acharya, Fuzzo de Lima, and Moore (2006), Knack and Rahman (2007), Easterly and Pfutze (2008), and Roodman (2006 and 2009).

First, we calculate the *geographic concentration of aid* for each donor's 2007 ODA disbursements after subtracting out debt relief, humanitarian aid, and administrative costs. This indicator is calculated as a Herfindahl index, equal to the sum of the squared shares of the donor's aid going to each of its recipients. Larger donors and those with more expansive geographic mandates tend to have less concentrated aid—probably for justifiable reasons as they are more likely to have sufficient expertise in many countries (and sectors)—and so we adjust for these factors. We similarly compute a Herfindahl-type measure of *aid concentration by sector* for each donor using commitments data for 2007 from AidData.<sup>10</sup> AidData incorporates the DAC's CRS database, used by Easterly and Pfutze in calculating sectoral fragmentation, but adds information from other donor sources (Tierney *et al.*, 2011). For our indicator of donor performance indicator we take the residuals from a regression of sectoral concentration on total aid commitments and a dummy for limited sectoral mandate (which applies to the global or “vertical” funds). The resulting indicator is positively but modestly correlated (at .23) with the performance indicator on geographic concentration.

These concentration indexes capture problems associated with fragmentation very imperfectly, so we also compute from the PLAID dataset a donor-level indicator of the *average number of sectors aided* per recipient receiving aid. We then took as a performance indicator the residuals from a regression of the log of this average on the log of total aid commitments by the donor and on a dummy for donors with a limited sectoral mandate. A similar indicator was generated based on the *number of recipients aided* by each donor in 2007 (using the DAC disbursements data), adjusting for donors' aid



volumes and geographic mandates. The number of sectors and countries aided are correlated at .48 before removing the common effect of aid volumes; even after adjusting for aid volumes and limited mandates, they are correlated at .37.

A fifth indicator on aid specialization is based on the *average size of projects* in AidData, using 2007 data on commitments.<sup>11</sup> Following Roodman (2006 and 2009) and Knack and Rahman (2007), the premise is that, in general, a proliferation of distinct aid projects imposes unnecessary transactions costs on recipients and unduly taxes their administrative capacity. We construct this measure by regressing the size of project  $i$  (in log of current US dollars) on a full set of donor, recipient, and sector dummies and on (the log of) total aid by the donor to the recipient for projects other than project  $i$ .<sup>12</sup> The donor dummies should pick up donor-specific effects not attributable to either the characteristics of the recipients or sectors in which they happen to be operating. Because this indicator turns out to be correlated with the donor's global aid budget (even after controlling for in-country aid), we also net out the portion of size explained by total aid commitments. Our resulting project size indicator is correlated with Roodman's "size weight" indicator for 2007 at .73.

The Paris Declaration calls for donors to delegate aid efforts to other donors in some countries and sectors more often. Neither the SMPD nor any other survey systematically collects data on delegation of this sort, but from a broader perspective, delegating aid delivery to multilateral donors can be viewed as consistent with this goal, as it can reduce aid fragmentation problems. As a sixth aid specialization indicator, we therefore take *contributions to multilateral donors* (other than the EC<sup>13</sup>) as a share of total ODA for each bilateral donor (coded as missing data for the multilateral donors themselves).

A final indicator of aid specialization is *administrative costs* as a share of aid, as reported by donors to the DAC. Donors that fragment their aid more excessively by recipient, sector, project and other dimensions are likely to incur higher administrative costs.<sup>14</sup>

We construct a fourth sub-index on Aid Specialization from these seven indicators, by standardizing them, reversing the signs where appropriate (for administrative costs, number of recipients aided, and average number of sectors aided), and taking the mean. The mean inter-item correlation among the seven standardized sub-index components is .27, producing an alpha coefficient of internal reliability for the sub-index of .72.

#### (e) Other indicators

We have chosen not to include among our aid quality indicators several measures proposed by other researchers. One is generosity of repayment terms for aid, with grants assumed to be the “best” form of aid. Mosley (1985) and White and Woestman (1994) use this indicator, and Bulow and Rogoff (2005) also urge development banks to give aid in the form of grants instead of loans. We agree, however, with Easterly (2007, p. 666) that grants “may have other problems such as not requiring the kind of long-run investment that would generate returns to repay loans,” and believe that the question of grants versus loans is therefore more correctly viewed as an aid *quantity* issue, as in Roodman (2006 and 2009).

Nor do we follow Easterly and Pfutze in including food aid and technical assistance as indicators of bad aid practices. They are concerned that those forms of aid tend to be tied to purchases from the donor country, but we (and they) already penalize donors for tied aid. Another of their concerns is that that technical assistance may reflect donor rather than recipient priorities, but that issue is

covered separately in our ranking by the SMPD indicator on alignment of technical assistance with recipients' programs. Also, technical assistance may bring benefits through knowledge transfer (as argued by Annen & Kosempel, 2009) and through strengthening recipients' statistical capacity and their public financial management, procurement, and information systems (a goal under the Paris Declaration and the Accra Agenda for Action).

#### **4. RESULTS: DONOR SCORES AND RANKS**

Table 1 summarizes the reliability properties of the sub-indexes. In developing multi-item scales, psychometricians generally aim for a reliability coefficient of .7 or higher (Spector, 1982). Three of our 4 sub-indexes have coefficients right around this value, while the coefficient for the harmonization sub-index is somewhat lower at .56.

TABLE 1 ABOUT HERE

Table 3 gives the scores and ranks on each of the sub-indexes, as well as the overall score and rank, for each donor.

TABLE 2 ABOUT HERE

TABLE 3 ABOUT HERE

(a) Ranks on sub-indexes

Before discussing the overall rankings, it is worth reviewing the sub-index rankings. By identifying where donors are performing relatively well or poorly, the sub-indexes may provide more “actionable” indexes of performance than the overall rankings, which are based on aggregates of behaviors in very different areas.

First, on our selectivity sub-index, the World Bank ranks first, followed by the Asian Development Bank (ADB), with the Netherlands third overall and top-ranked among bilaterals. Our donor rankings for 2007 aid disbursements are broadly consistent with the 2002 rankings given by Dollar and Levin (2006). Good performers in both years include the World Bank, IMF, Denmark, and the Netherlands, while France, the United States, Portugal, and Greece appear near the bottom of both rankings. Some of the regional development banks are notable exceptions: because of our adjustment procedure, which adjusts for their limited geographic mandates, the Asian and European Development Banks perform markedly better in our selectivity rankings than in those of Dollar and Levin (2006).

On alignment, Ireland is ranked first, followed by the Asian Development Bank, the GAVI Alliance, and Denmark. Japan ranks high (at #8) on this sub-index despite ranking in the lower half on the other three sub-indexes. The UN, US, Austria, Portugal, and Greece are ranked near the bottom, along with a couple of newer bilateral donors. These rankings depend somewhat on how we treat aid that is partially tied and aid whose tied status is not reported, but the differences between different approaches are not great (as shown in Knack, Rogers, & Eubank, 2010).

On the harmonization sub-index, Ireland is again top-ranked, followed by Denmark and the UK. The EC and (especially) the UN rank higher on this sub-index than on the other three. The ADB ranks only 18<sup>th</sup>, much lower than its 2<sup>nd</sup>-place ranking on the other three sub-indexes. The bottom nine spots are held by smaller bilaterals plus Japan (32).

On the specialization sub-index, six of the top eight donors are multilaterals, while the other two are new, small bilaterals (Poland and Hungary). Specialization is a relative weakness for three bilaterals that rank high on the other three sub-indexes: Denmark (12), the Netherlands (17), and Ireland (21). It is a relative strength for the IDB (7) and for several donors ranking poorly on all three of the other sub-indexes: Hungary (3), Poland (4), Portugal (10), and the U.S. (20). Several new, smaller bilaterals (Greece, Turkey, Korea, and the Czech Republic) rank at the bottom of this sub-index, along with the EBRD.

(b) Overall rankings and sensitivity to alternative weightings

The “overall” score in Table 3 is calculated as the unweighted average of the four standardized sub-indexes.<sup>15</sup> With this weighting, the top five donors in terms of overall rank are the Asian Development Bank (ADB), the World Bank, the IMF, Denmark, and Ireland, while the bottom five are Portugal, the Czech Republic, Korea, Greece, and Turkey. Large donors that earn relatively low overall scores include the United States (ranked 33) and the United Nations agencies (30).

Bilateral donors (including the European Commission) that are members of the OECD-DAC account for 22 of the 38 donors in our rankings. The mean overall index score for this group is -.05, significantly higher ( $p=.04$ ) than the mean of -.66 for the six non-DAC bilaterals (including Korea, a member only since January 1, 2010). The mean for the six multilateral development banks, including the IMF, is .70, significantly higher ( $p=.02$ ) than the mean for the DAC bilaterals. As a group, the four remaining donors (UN, IFAD, Global Fund, GAVI) do not differ significantly from the DAC bilaterals.<sup>16</sup>

The final column in Table 3 provides a summary indicator of the variability in each donor’s ranking across the four sub-indexes. Specifically, we take the difference (in absolute value) between a donor’s ranking on one sub-index and on each of the other three, and compute the mean of these rank differences over all six pairwise comparisons of sub-indexes. Cases of high variability across sub-index rankings are accounted for mostly by newer and smaller bilaterals such as Hungary and Poland, but also some multilaterals, including the AfDB, EBRD, and UN. The most obvious interpretation of this variability indicator is that some donor agencies indeed perform differently across four distinct aspects of aid quality. Alternatively, the indicator could be interpreted as a measure of imprecision: in this interpretation, there is more uncertainty regarding the “true” ranking of donors that have higher variability across sub-indexes.

In Table 4, we further investigate the sensitivity of the overall rankings to alternative assumptions about indicator weightings or regarding the purpose of an overall index. The first rankings column replicates the “Overall” rankings from Table 3, while the next three columns use other weighting schemes. Index\_18 and Index\_20 dispense with the sub-indexes altogether. Rather than averaging sub-index scores, they average the 18 individual indicators that we use, plus two more—the Transparency and Overhead indicators of Easterly and Pfütze (2008)—in the case of Index\_20. Relative to our Overall index, these alternatives give greater weight to dimensions for which we have more indicators, namely Specialization and Alignment. While these changes in methodology and content affect the rankings, the general contours remain the same: the top five donors were all previously in the top eight, while rankings for the bottom five are all unchanged. Hungary is the notable exception. It ranks 3<sup>rd</sup> on Specialization, and increasing the effective weight of the specialization indicators improves its overall ranking from 31 to 18.

TABLE 4 ABOUT HERE

The fourth column ranks donors on what we call the Allocation Index, which has a different goal: helping to guide allocations of aid resources by donor countries. In calculating it, we reverse several adjustments made in the first three indexes for factors that were beyond the control of the aid agencies themselves (most notably, geographic mandate). We also code untied aid at 100 percent for the multilateral donors, because the fact that none of their aid is tied is a relevant criterion for allocating resources between a bilateral agency, the EC, and a multilateral. Despite the difference in purpose, the Allocation Index rankings do not differ much from the Overall index rankings. The only donor that moves more than 5 spots in the rankings is the EBRD; it serves a middle-income region, so its poverty selectivity suffers when we do not adjust for geographical mandate.

Another variation would be to use factor analysis to construct the sub-indexes, rather than basing them on the OECD-DAC constructs (OECD, 2008) and on theory and our own intuition. This proved infeasible because nearly half of the donors in our sample are missing data on one or more of the 18 indicators, so they cannot be included in a factor analysis.

#### (c) Comparisons with other indexes of aid quality and quantity

Table 4 also compares our overall index rankings with two previous aid quality indexes, from Easterly and Pfitze (2008) and Roodman (2006 and 2009). As part of the Center for Global Development's annual "Commitment to Development Index" (CDI), Roodman constructs measures of quality-adjusted aid volumes, using plausible but strong assumptions concerning how aid selectivity, aid tying, and project proliferation reduce the effective value of aid.<sup>17</sup> Although the final product of this exercise used in the CDI is (quality-adjusted) aid quantities, Roodman produces an implicit aid quality index, equal to his quality-adjusted aid volumes as a fraction of his "net aid" or

pre-quality-adjusted aid volumes. The aid data used in the 2009 CDI are from the year 2007, so are comparable to ours.

In the Easterly and Pfutze (2008) index of “best practices in aid,” the sub-indexes on selectivity (based on poverty, corruption and democracy) and specialization (geographic and sectoral) are fairly similar to two of ours, although their specialization index is constructed to favor smaller donors. A third sub-index on “ineffective aid channels” penalizes donors for providing tied aid, food aid, and technical assistance; as noted above, this is in effect an aid-tying index. Their final two sub-indexes are based on newly collected data on overhead costs and on transparency, as measured by providing readily accessible information on operating costs and by full reporting of aid data to the OECD-DAC. While transparency and overhead costs are not unimportant issues, especially for aid research, they have not been central to the aid effectiveness debates, they are largely absent from the Paris Declaration, and they are hard to measure accurately (as Easterly and Pfutze acknowledge).

Our indexes differ considerably from those of Easterly-Pfutze and Roodman. Our main “Overall” index is correlated with Roodman’s at .59, and with Easterly-Pfutze’s at only .21.<sup>18</sup> Of the donors ranked in the top 5 by our Overall index, only the World Bank appears in the top five on both of their rankings, although the ADB nearly does. At the bottom of the rankings, the CGD rankings line up reasonably well with ours, but there are substantial discrepancies with Easterly-Pfutze: the US, Japan, and France all rank at least 15 slots better in their index than in ours, due to their performance on the Easterly-Pfutze transparency and overhead cost indexes.

The modest correlation of our index with Roodman’s, and the weaker correlation of ours with Easterly-Pfutze, does not by itself suggest that ours is more valid. It is notable, however, that



Roodman and Easterly-Pfutze are even more weakly correlated (at .19) with each other. In part, this low correlation may be attributable to the fact that Easterly and Pfutze are measuring aspects of donor performance that go beyond the usual aid-quality dimensions. However, there may also be substantial measurement error in their transparency and overhead measures, as they acknowledge. The rank correlation of their transparency sub-index with a new and more comprehensive aid transparency index, produced by the NGO Publish What You Fund (2010), which covers 30 donors, is only .42.<sup>19</sup>

In comparison with the alternative indexes, our index better meets the criterion of “content validity” (Carmines & Zeller, 1979). Namely, the content of our 18 indicators reflects a much more comprehensive and representative sample of “best” aid practices contained in the Paris Declaration and in the research literature on aid effectiveness.<sup>20</sup> The adjustments we make to control for factors unrelated to performance (for example, donor size in measuring geographic concentration of aid) also add to validity.

In addition, our index and sub-indexes have a much greater degree of internal reliability than those of Easterly-Pfutze. The mean inter-item correlation of our four sub-indexes is a modest .35, but the corresponding value for the five sub-indexes in Easterly-Pfutze is only .14.<sup>21</sup> The alpha coefficient of index reliability is .68 for our overall index and .44 for Easterly-Pfutze. The lowest among the mean inter-item correlations among our four sub-indexes is .27, while two of the five sub-indexes in Easterly-Pfutze have negative mean inter-item correlations.

One final question concerns how aid quality is correlated with quantity of aid delivered (relative to the donor country’s GNI, with both measured in 2007). Among the bilaterals, they have a strong

positive correlation, at 0.62. In other words, countries that show a strong commitment to aid quantitatively also deliver that aid in ways that is consistent with the quality standards agreed to by the international community.

## 5. CONCLUSION

We have presented a new index of the quality of aid provided by bilateral and multilateral donor agencies. The index is constructed from a more comprehensive set of indicators that cover the four major areas around which the greatest consensus has developed in the aid community: selectivity, alignment, harmonization, and specialization. It combines indicators that have been used in previous indexes with rich new data collected through the recent monitoring survey for the Paris Declaration of the OECD-DAC, as well as the new AidData projects database. Raw indicators were adjusted for the influence of exogenous factors where appropriate, but in fairly simple and intuitive ways that substantially enhance validity at a modest cost in transparency. We also construct sub-indexes for each of the four dimensions of quality, and show empirically that these sub-indexes are defensible constructs.

As we have argued above, it will often make more sense to use these sub-indexes to measure aid quality. Combining indicators inevitably raises the question of how to select the appropriate weights, and the rankings are somewhat sensitive to different weights. The individual indicators and sub-indexes are also likely to be more actionable than the overall index because of their greater specificity.<sup>22</sup> Moreover, individual indicators are necessary to track progress (in absolute terms) over time, as our aggregates are designed for comparing relative performance across donors.

At the same time, we believe that an overall index does have its place. Rankings along that single index can bring more pressure to bear on low-ranked donors to move towards “best practices” in delivering aid. In the absence of an overall index, such donors could simply stress the small number of indicators on which they score reasonably well. An overall index avoids this problem.

Although we have tried to be comprehensive in assembling indicators of aid quality as defined implicitly by the Paris Declaration, many aspects of donor agency performance were excluded from our index because no comparable measures exist for most donors. One example is delegation of aid from one donor to another, which promotes specialization; other examples include aid volatility and excessive use of conditionality. Other hard-to-quantify areas of donor performance go beyond the content of the Paris Declaration, including the knowledge dimension of aid. Ideally, we would have included measures of the quantity, quality, and transparency of each donor’s impact evaluations, its research, and its country analysis. A related dimension of aid quality, even harder to quantify, is the donor’s willingness to experiment: innovation is conducive to learning, and some donors may be more innovative than others. Including measures of such dimensions might well change our rankings, which offers another reason to refrain from over-interpreting small differences in rankings.

Our goal with this paper has been to help improve the measurement of aid quality and donor rankings, with the ultimate objective of helping improve donor performance. Our intent is not to supplant the other ranking and quality-measurement efforts, which are apparently intending to continue. The CGD/Roodman index serves as an input to the regularly updated CGD Commitment to Development Index, while the Easterly-Pftuze rankings are expected to be updated as well. In addition, a separate Brookings/CGD “Quality of Official Development Assistance”

measurement effort (Birdsall, *et al.*, 2010) is being developed.<sup>23</sup> While we plan to update our indexes and rankings when the next round of the Paris Monitoring data becomes available, over the longer term we recognize the value of having ranking exercises carried out by independent think tanks and researchers rather than by research staff at a donor agency. We hope that with this paper, we have added some data sources, methodological considerations, and cautions about interpretation that will influence other ranking exercises and—perhaps most importantly—will also inform consumers of the rankings.

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<sup>1</sup> This approach has also been tried at the country level; in Rwanda, for example, donors participate in a Donor Performance Assessment Framework that rates their progress toward certain targets (Rwanda Development Partners, 2009).

<sup>2</sup> See <http://siteresources.worldbank.org/IDA/Resources/73153-1181752621336/CPIA2008questionnaire.pdf>.

<sup>3</sup> “Poverty” selectivity is measured using GDP per capita as a proxy, because that indicator is available for most aid recipients on an annual basis. Actual poverty rates are estimated from surveys that are not conducted annually, if at all, in most aid recipients.

<sup>4</sup> In the case of the AfDB, policy selectivity improves marginally and poverty selectivity worsens marginally when we calculate them using the institution’s own ratings for 50 countries instead of the World Bank’s CPIA. The AfDB scores better on both poverty and (especially) policy selectivity using its own ratings in place of the World Bank’s.

<sup>5</sup> More detailed information on the survey can be found in Knack and Eubank (2009).

<sup>6</sup> One might think that aid effectiveness might be enhanced by bypassing the weakest PFM systems. In that case, it could be argued that donors should not be penalized for failing to use PFM systems where they are below a minimum threshold of quality. As it turns out, applying a rule like this does not affect donor scores in our data. Specifically, we replicated the use of country PFM systems indicator after dropping from the SMPD the 8 countries with the lowest-quality PFM systems, as measured by the Paris Declaration indicator on reliability of country systems (the CPIA indicator on PFM quality). The resulting indicator is correlated with the original at .99.

<sup>7</sup> Specifically, we regressed the log of (the number of PIUs + 1) on log of donor aid in the country, and on donor and recipient dummies. Donor aid volumes are highly significant (at .001 level), and the number of PIUs is estimated to increase by about 10% with a doubling of aid. Sinha (2010) does not adjust the number of PIUs for donor size in his index, nor does he adjust use of PFM systems or other indicators for recipient characteristics.

<sup>8</sup> Note that this indicator measures predictability only over the short term. Kharas (2008) addresses the important question of aid volatility over the medium term and the contribution of aid from some large donors to volatility of aid receipts, but most donors in our sample and the other donor rankings are not included in that study.

<sup>9</sup> Reliability coefficients for multi-item scales vary from 0 to 1, and increase with the number of items and the mean inter-tem correlation.

<sup>10</sup> Sectors are aggregated to the two-digit level for this purpose. For example, we treat “Health” as a single sector, rather than treating medical research, health education, health infrastructure etc. as separate sectors.

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<sup>11</sup> We treat Ireland as missing data on project size, because its records in CRS (which are incorporated in AidData) correspond to expenditure items rather than to projects or programs. There are undoubtedly other significant discrepancies in the way donors report their aid activities in the CRS, but this appears to be the most extreme case of non-comparability in data reporting. The average size of Ireland's "projects" in the CRS is smaller than for any other donor, so its score on the specialization sub-index (already its worst among the four sub-indexes) would decline if this indicator were not coded as missing data.

<sup>12</sup> Following Kilby (2010), we exclude project  $i$  to avoid endogeneity in testing for scale effects. Sector dummies are based on the more detailed 5-digit sector codes in AidData, so average differences between (say) health infrastructure and health education programs can be captured.

<sup>13</sup> The EC in important respects is more like a bilateral than a multilateral agency. For example, Martens, Mummert, Murrell, and Seabright (2002, p. 192) report that "national representatives in EC foreign aid decision-making committees spend a considerable part of their time exploring and pursuing contract opportunities for national suppliers."

<sup>14</sup> If fixed costs of establishing an aid program are large, administrative costs could be a higher share of ODA for smaller donors. No such relationship is found in the data, however, so we do not adjust the administrative costs indicator for donor size.

<sup>15</sup> We report results only for donors with data on at least 3 of the 4 sub-indexes. For the one donor that is missing data on one sub-index (the GAVI Alliance, which has no selectivity rating), the score is calculated as the unweighted average of the other three sub-indexes. Similarly, the sub-indexes equally weight the available indicators where data on some indicators are missing. The GAVI Alliance has data on only 9 of the 18 underlying indicators, but the majority of donors in our rankings have data on all 18.

<sup>16</sup> Some readers may be uncomfortable with comparing bilaterals and multilaterals (including vertical funds) on the same ranking, given the inherent differences in their structures and mandates; those readers can interpret the rankings accordingly, comparing donor agencies only with others of the same type.

<sup>17</sup> In addition to its aid component, the CGD index also ranks donor countries on trade, migration and other policies affecting developing countries that are not applicable to multilateral agencies. Nevertheless, Roodman constructs aid quality measures for the multilaterals, and credits their results to bilateral donors in proportion with the contributions received from each bilateral donor country.

<sup>18</sup> Remarkably, our overall index is correlated at .56 with Mosley's (1985) aid quality index for 14 bilateral donors using data from 1979 on poverty selectivity, untied aid, grant element, and share of aid going to agriculture and social

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infrastructure. Correlations of Mosley's index with our selectivity sub-index (.67) and our poverty selectivity indicator (.76) are particularly high.

<sup>19</sup> In contrast, the rank correlation of the Publish What You Fund index with ours is .79. The top 7 donors in the PWYF ranking are the World Bank, Netherlands, UK, EC, Ireland, the Asian Development Bank, and Sweden. Of those donors, all but the EC rank in the top 10 on our overall index.

<sup>20</sup> Roodman's ability to make use of many more aid quality indicators is constrained by the need in his approach to identify a plausible estimate of the degree to which a "bad" aid practice reduces the effective value of a dollar of aid.

<sup>21</sup> Roodman's method does not lend itself to computing measures of reliability.

<sup>22</sup> White and Woestman (1994) compare DAC bilateral donors on several aspects of aid quality (aid untying, poverty selectivity, and the concessionary element of aid), but do not combine them in a single index because it would obscure the "sources of discrepancy in donor performance."

<sup>23</sup> This Brookings/CGD project shares a similar motivation to ours. It emphasizes the importance of assessing donor performance along distinct and well-defined dimensions, and uses the Paris Monitoring Indicators as a major source of data. Two differences are that unlike ours, their approach does not appear to make adjustments for factors outside the donor agency's control, nor does it attempt to combine the scores along different dimensions into an overall score and ranking.

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Table 1

## Correlations among indicators and sub-indexes

	Mean inter-item correlation	No. of component items	Scale reliability coefficient
<b>Sub-indexes</b>			
Selectivity	0.53	2	0.70
Alignment	0.27	6	0.68
Harmonization	0.30	3	0.56
Specialization	0.27	7	0.72
<b>Overall index</b> (average of 4 sub-indexes)	0.35	4	0.68
<b>Index_18</b> (unweighted average of all 18 standardized indicators)	0.15	18	0.77
<b>Index_20</b> (unweighted average of 20 standardized indicators, including <i>Transparency</i> and <i>Overhead</i> from Easterly-Pfütze)	0.13	20	0.75

Table 2  
**Aid Quality Indicators: Data Sources and Mapping to Sub-indexes**

**Selectivity**

S1: policy (DAC tables and World Bank [CPIA])

S2: poverty (DAC tables and World Development Indicators [GDP per capita, PPP- adjusted])

**Alignment**

A1: untied tied (CRS)

A2: aid predictability (SMPD)

A3: use of PFM systems (SMPD\*)

A4: use of procurement systems (SMPD)

A5: use of PIUs (SMPD)

A6: technical cooperation coordinated with country programs (SMPD)

**Harmonization (in country)**

H1: use of program-based approaches (SMPD)

H2: coordinated missions as share of all missions (SMPD)

H3: coordinated country analytic reports as share of all reports (SMPD)

**Specialization**

Sp1: contributions to multilaterals (DAC tables)

Sp2: administrative costs (DAC tables)

Sp3: average project size (PLAID)

Sp4: geographic concentration (DAC tables)

Sp5: number of recipients (DAC tables)

Sp6: sectoral concentration (PLAID & CRS)

Sp7: average number of sectors per recipient (PLAID)

\*OECD-DAC Survey on Monitoring the Paris Declaration

Table 3  
Donor scores and rankings (by sub-index and overall, for 2007)

Donor name	Sub-indexes								Overall index		Avg rank difference of sub-indexes	No. of indicators with data
	Selectivity		Alignment		Harmonization		Specialization		Score	Rank		
	Score	Rank	Score	Rank	Score	Rank	Score	Rank				
Asian Dev.Bank	1.837	2	0.800	2	0.097	18	1.983	2	1.528	1	8.0	15
World Bank	2.301	1	0.600	7	0.497	9	0.600	6	1.251	2	4.2	15
IMF	1.161	4	0.099	18	-0.025	20	2.132	1	1.064	3	11.8	12
Denmark	1.158	5	0.711	4	1.210	2	0.093	12	1.042	4	5.2	18
Ireland	0.099	15	1.453	1	1.337	1	-0.164	21	0.993	5	12.3	17
IFAD	0.886	7	0.676	5	0.849	7	0.361	8	0.918	6	1.5	15
Netherlands	1.332	3	0.655	6	0.858	6	-0.026	17	0.909	7	7.0	18
GAVI Alliance	.	.	0.752	3	0.935	4	0.145	11	0.868	8	5.3	9
Sweden	0.691	8	0.356	13	0.240	15	0.084	13	0.431	9	3.5	18
United Kingdom	-0.143	20	0.421	10	0.993	3	-0.062	18	0.428	10	9.8	18
Finland	0.035	17	0.447	9	0.886	5	-0.356	28	0.354	11	12.8	18
Norway	0.380	12	0.387	12	0.439	12	-0.311	26	0.290	12	7.0	18
Australia	0.122	13	-0.042	22	0.448	11	0.303	9	0.256	13	6.8	18
IDB	0.007	18	0.044	20	0.123	17	0.439	7	0.191	14	6.7	15
African Dev.Bank	0.505	11	-0.359	28	-0.138	22	0.703	5	0.172	15	13.3	15
Germany	-0.452	24	0.407	11	0.379	13	-0.292	25	0.046	16	8.8	18
New Zealand	0.573	10	0.070	19	-0.230	26	-0.183	22	0.032	17	8.5	18
EBRD	0.960	6	-0.077	23	-0.034	21	-0.630	35	0.000	18	14.8	15
Luxembourg	0.675	9	-0.427	30	0.324	14	-0.406	30	-0.023	19	13.2	18
Global Fund	-0.652	27	0.213	14	0.166	16	-0.006	16	-0.065	20	6.5	15
Poland	-1.098	35	0.161	16	-1.070	35	1.676	4	-0.069	21	18.7	14
Belgium	0.104	14	0.161	17	-0.197	24	-0.385	29	-0.123	22	8.7	18
EC	-0.612	26	-0.466	31	0.472	10	0.045	14	-0.203	23	12.5	17
Switzerland	-0.063	19	-0.122	25	0.029	19	-0.480	32	-0.238	24	7.5	18
France	-0.908	33	0.180	15	-0.150	23	0.008	15	-0.255	25	10.3	18
Japan	-0.349	22	0.475	8	-0.619	32	-0.412	31	-0.281	26	13.5	18
Spain	0.086	16	-0.289	27	-0.412	29	-0.342	27	-0.367	27	6.5	18
Italy	-0.486	25	-0.403	29	-0.213	25	-0.098	19	-0.425	28	5.0	18
Canada	-0.357	23	-0.241	26	-0.481	30	-0.264	23	-0.471	29	4.0	18
United Nations	-0.833	32	-0.700	34	0.516	8	-0.617	34	-0.568	30	13.3	15
Hungary	-0.753	30	-1.623	38	-1.010	34	1.870	3	-0.597	31	18.2	17
Austria	-0.307	21	-0.654	33	-0.607	31	-0.271	24	-0.667	32	7.2	18
United States	-0.751	29	-0.731	35	-0.382	28	-0.140	20	-0.703	33	7.7	18
Turkey	-1.447	37	-0.101	24	-0.260	27	-0.801	38	-0.832	34	8.7	13
Greece	-0.828	31	-0.535	32	-0.743	33	-0.548	33	-0.909	35	1.2	18
Korea	-1.128	36	-0.035	21	-1.101	36	-0.760	36	-0.990	36	7.5	15
Czech Republic	-0.727	28	-0.754	36	-1.340	37	-0.768	37	-1.247	37	4.7	14
Portugal	-1.018	34	-1.562	37	-1.874	38	0.150	10	-1.526	38	14.5	17

Note: Sub-index scores are normalized in standard deviation units with a mean of 0.

"Overall" index is calculated as the mean of the four sub-indexes

Source: Authors' calculations, as described in the text.

Table 4  
**Donor ranks with different weightings (2007), compared with CGD and EP ranks**

Donor name	Code	Rank on overall index	Ranks on alternative summary indexes			Rank given by	
			Index_18	Index_20	Allocation index	CGD/ Roodman	Easterly & Pfutze
African Dev.Bank	AFDB	15	14	14	11	2	3
Asian Dev.Bank	ASDB	1	1	1	5	7	4
Australia	AUS	13	11	11	14	29	12
Austria	AUT	32	33	32	32	33	15
Belgium	BEL	22	23	23	21	19	13
Canada	CAN	29	30	28	29	16	19
Czech Republic	CZE	37	37	38	37	26	.
Denmark	DNK	4	6	5	3	6	19
EBRD	EBRD	18	22	27	24	15	26
EC	EC	23	24	25	22	10	25
Finland	FIN	11	13	16	12	14	21
France	FRA	25	21	19	25	18	9
GAVI Alliance	GAVI	8	3	3	7	.	.
Germany	DEU	16	17	20	17	34	24
Global Fund	GLF	20	19	18	16	8	.
Greece	GRC	35	35	35	35	25	27
Hungary	HUN	31	18	17	31	13	.
IDB	IADB	14	12	12	15	1	4
IFAD	IFAD	6	5	7	2	3	31
IMF	IMF	3	7	10	8	.	23
Ireland	IRL	5	4	4	4	5	15
Italy	ITY	28	28	24	28	35	14
Japan	JPN	26	25	21	26	36	8
Korea	KOR	36	36	36	36	31	.
Luxembourg	LUX	19	26	29	19	9	22
Netherlands	NLD	7	8	6	6	12	18
New Zealand	NZL	17	20	22	18	21	30
Norway	NOR	12	16	13	13	20	6
Poland	POL	21	15	15	20	32	.
Portugal	PRT	38	38	37	38	24	9
Spain	ESP	27	29	30	27	27	29
Sweden	SWE	9	9	9	9	11	7
Switzerland	CHE	24	27	26	23	22	9
Turkey	TUR	34	34	34	34	30	.
United Kingdom	GBR	10	10	8	10	17	2
United Nations	UNTOT	30	32	33	30	28	28
United States	USA	33	31	31	33	23	15
World Bank	WB	2	2	2	1	4	1
Notes:							
"overall index" is the core index, reproduced from Table 3							
"index_18" equally weights all 18 indicators included in any of the 4 sub-indexes							
"index_20" equally weights all 18 indicators included in equal_weight_18 index plus Easterly-Pfutze <i>Transparency &amp; Overhead</i> sub-indexes							
"allocation index" is derived from overall index, but does not adjust indicators for factors outside the donor's control							
Roodman index varies from 0-1, computed as quality-adjusted aid divided by net aid. Easterly-Pfutze varies from 0-100 (average percentile rank of 5 sub-indexes). Other indexes are in standard deviation units with a mean of 0.							

Source: Authors' calculations, as described in text; final two columns are taken from Roodman (2006 and 2009) and Easterly and Pfutze (2008)