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Index of Donor Performance (2006 Edition): Selectivity and Project Proliferation Reconsidered

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Abstract

In this paper, we take up the Index of Donor Performance (IDP) constructed by the Center for Global Development (CGD), especially, discussing issues of selectivity and project proliferation in the IDP index. We argue theoretical issues of the Index from the aspect of the aid data characteristics.

Keywords: Aid, the Index of Donor Performance, Selectivity, Governance, Proliferation

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1. Introduction

The Index of Donor Performance (IDP), an essential element in the Commitment to Development Index (CDI), is continuing to gain much attention for evaluating the degree of contribution by donor countries to development efforts in developing countries.

Since 2003, the Center for Global Development (CGD) and the journal *Foreign Policy* have been jointly engaged in the compilation of the CDI and have published it every year (e.g., *Foreign Policy*, Sep/Oct 2006).

The CDI rates 21 advanced countries on their degree of contribution to developing countries. Each country is assessed in seven areas: aid, trade, investment, migration, environment, security, and technology, and an average overall score is produced. (In 2003 technology was not included and there were six areas. Since 2004 there have been seven areas for assessment.)

Table 1 gives an overview of the CDI published in 2006. The 2006 edition of the index assesses performance in 2004. Japan's average score for the seven areas is 3.1, the lowest score among the 21 developed countries assessed. Japan is the lowest for two areas: trade and aid. It should be noted that since 2003 when the CDI was first published, Japan has consistently ranked bottom among the 21 countries.

Table 1: The Commitment to Development Index (CDI) (2006)

Country	Aid	Trade	Invest -ment	Migra -tion	Environ -ment	Securi -ty	Tech -nology	Overall (Average)
Netherlands	8.5	6.2	7.8	4.8	7.5	6.1	5.3	6.6
Denmark	10.0	5.9	5.3	5.0	6.1	6.9	5.5	6.4
Sweden	9.8	6.1	6.2	4.8	7.0	4.9	5.4	6.3
Norway	9.3	1.2	8.0	4.6	6.1	8.1	5.9	6.2
New Zealand	2.2	7.6	3.7	6.9	6.4	7.4	4.9	5.6
Australia	2.5	6.4	6.9	6.4	3.9	8.1	4.6	5.5
Austria	2.7	5.9	3.3	10.5	6.2	4.5	4.5	5.4
Finland	3.9	6.1	6.2	2.7	6.7	6.3	6.3	5.4
Germany	3.3	5.9	6.8	6.2	6.7	3.7	4.3	5.3
Canada	3.3	6.8	7.7	4.7	4.5	3.0	6.6	5.2
Switzerland	4.8	3.1	7.2	9.5	5.3	1.6	5.1	5.2
United Kingdom	4.6	5.9	8.6	2.6	7.8	1.6	4.5	5.1
Ireland	5.9	5.7	2.5	4.6	7.5	5.9	3.0	5.0
United States	2.2	7.4	6.9	4.6	3.2	5.9	5.0	5.0
Belgium	5.1	5.9	6.5	2.6	6.6	3.4	4.5	4.9
Portugal	2.3	6.1	6.2	1.4	6.4	6.2	5.1	4.8
Spain	2.5	6.0	6.7	5.2	3.8	3.5	6.1	4.8
France	4.1	6.0	5.9	2.6	6.1	0.5	6.9	4.6
Italy	1.6	6.1	5.5	3.2	4.8	3.9	5.1	4.3
Greece	2.7	5.9	4.0	1.7	5.2	5.6	3.0	4.0
Japan	1.1	-0.4	5.6	1.7	4.3	2.8	6.3	3.1

(Source) CGD homepage.
(http://www.cgdev.org/section/initiatives/_active/cdi/data_graphs ）

Ranking persistently bottom in the CDI despite being the world's second largest donor has prompted the Japanese government and Japan's aid agencies to voice their opinions concerning problems with the CDI[1]. There have also been critiques of the CDI from Japanese academia (Sawada, et al (2004); Kawai (2005)). For example, Kawai (2005) asserts that a CDI with a quantification process not based on positive analysis is arbitrary (p.242). Although the details of such critiques are omitted in this paper, we note that the majority of Japanese government officials and academics find the CDI unacceptable whatever its content, in part because Japan has been ranked the lowest.

Our position is different from the critical approach they adopt, as we first closely investigate the contents of the CDI, and then attempt to identify areas that require further debate. Categorical refusal of the CDI is tantamount to an attempt to turn away from international discussion on improvement of development aid. We would like to make it clear from the outset that the objective of this paper is to review the methodology of aid evaluation, not to present a counter-argument aimed at vindicating Japanese aid. Rather, we are appreciative of the CGD's efforts to incorporate an element of evaluation that views aid from a qualitative perspective.

Although there are many and varied complex discussions on the methods of calculation for each individual index, this paper aims to discuss in particular the calculation method for the Index of Donor Performance (IDP). Problems concerning the calculation method for the IDP have also been discussed by Sawada et al. (2004), but their work focused on the 2003 edition of the index, and as the IDP calculation method has undergone considerable change since then, this paper seeks to engage in a renewed discussion based on the 2006 edition of the index.

[1] Refer to The Record of the Special Committee on Official Development Assistance and Related Matters, No.6, House of Councilors, 164th Session of the Diet.

In the next section an overview of the calculation method of the IDP will be given in accordance with Roodman (2006), after which, in Section 3 and 4, a discussion will concentrate our discussion on "selectivity" and "project proliferation," which are considered the most important and relevant factors according to the on-going discussion around "Paris" declaration. The findings of the paper and suggestions to improve the index are then presented in a conclusion.

2. Overview of the Compilation Method of the Index of Donor Performance (IDP)

The IDP is compiled based on CRS (Creditor Reporting System) data published by the Development Assistance Committee (DAC) of the Organisation for Economic Co-operation and Development (OECD). This aid-related database combines figures on Official Development Assistance (ODA) and Official Aid (OA), which is concessional in character and disbursed to wealthier non-DAC members such as the states of the former Soviet Union, Israel, and Singapore. The actual disbursement of ODA and OA is continued to be evaluated through various procedures as follows:

Process of compiling the IDP

(a) Subtraction of debt forgiveness
(b) Discounting Tied aid
(c) Introducing the concept of selectivity
(d) Subtracting debt services
(e) Introducing the concept of project proliferation
(f) Adding the factor of contribution to international organization
(g) Considering policy effects on donations
(h) Finally, dividing by Gross National Income

The introduction of selectivity and project proliferation can be said to be unique aspects that characterize IDP. The introduction of selectivity is an assessment standard addressing the question of, "Are donor countries making appropriate selections?" and the introduction of the concept of project proliferation is an assessment standard that seeks to "penalize project proliferation that exceeds the beneficiary country's capacity to receive assistance."

With regard to all the aid donor countries subject to assessment as shown in Table 2, calculations are made from: ① Gross aid, ② Tying-discount gross transfer, ③ Gross quality adjusted aid for selectivity and proliferation, ④ Quality adjusted repayments, ⑤ Quality adjusted donations to international organizations, ⑥ Quality adjusted charitable giving, and ⑦ Gross National Income (GNI), and then a ratio is calculated in the following way: (③－④＋⑤＋⑥) ÷ ⑦. The score of IDP is calculated based on this ratio.

What we notice by looking at this table is that in the process of transfer from ② to ③, the absolute value of aid falls sharply. In other words, the quality adjustment effect due to the introduction of the concepts of selectivity and project proliferation is large.

Table 2: Summary of Donor Evaluation

	① Gross aid (according DAC)	② Tying-discount gross transfer	③ Gross quality adjusted aid	④ Quality adjusted repayments	⑤ Quality adjusted aid to international organizations	⑥ Quality adjusted charitable giving	⑦ GNI	⑧ Adjusted (aid + charitable giving)/ GNI
Australia	1,195	1,153	331	0	116	94	595,630	0.09%
Austria	514	315	98	2	176	7	290,943	0.10%
Belgium	972	762	353	33	310	25	357,207	0.18%
Canada	2,115	1,863	790	14	275	100	970,536	0.12%
Denmark	1,331	1,280	597	50	311	6	240,474	0.36%
Finland	407	401	160	0	100	1	185,126	0.14%
France	8,073	5,993	1,879	398	1,530	50	2,058,806	0.15%
Germany	5,531	4,841	1,644	576	1,950	207	2,729,147	0.12%
Greece	354	316	112	0	85	3	204,300	0.10%
Ireland	413	413	220	0	65	44	156,186	0.21%
Italy	1,005	888	237	102	822	5	1,669,301	0.06%
Japan	11,114	10,721	3,416	2,639	1,031	73	4,759,022	0.04%
Netherlands	3,266	2,944	1,257	263	683	73	573,127	0.31%
New Zealand	160	149	51	0	18	4	90,623	0.08%
Norway	1,587	1,587	592	3	211	47	251,528	0.34%
Portugal	878	173	53	3	86	0	164,404	0.08%
Spain	1,595	1,415	533	63	430	20	1,018,232	0.09%
Sweden	2,199	2,142	1,041	0	196	1	350,192	0.35%
Switzerland	1,286	1,269	428	4	177	54	376,621	0.17%
United Kingdom	5,684	4,928	2,405	125	1,247	55	2,179,558	0.16%
Unites States	18,812	16,576	6,146	501	1,726	1,909	11,656,110	0.08%

Source: Roodman (2006b)

Table 3 shows the selectivity weight, which is the selectivity index, and the size weight, which is the project proliferation index, for each country. The result of multiplying these two gives the size of the discount for quality adjustment, and it can be

seen that there is a large difference between discount values, from 0.51 for Ireland to 0.24 for Austria. In the next chapter and onwards we discuss in detail the problems with selectivity and size weight.

Table 3 : Selectivity and Size Weight of Donors

	A Selectivity weight	B Size weight	C=A*B
Ireland	0.65	0.78	0.51
United Kingdom	0.59	0.77	0.45
Denmark	0.63	0.71	0.45
Sweden	0.56	0.76	0.43
Belgium	0.55	0.76	0.42
Netherlands	0.59	0.67	0.40
Canada	0.57	0.67	0.38
Finland	0.54	0.66	0.36
Spain	0.48	0.73	0.35
Norway	0.56	0.59	0.33
Germany	0.51	0.64	0.33
Greece	0.41	0.79	0.32
Unites States	0.49	0.65	0.32
New Zealand	0.54	0.56	0.30
Japan	0.52	0.58	0.30
Portugal	0.59	0.48	0.28
France	0.43	0.64	0.28
Switzerland	0.54	0.50	0.27
Australia	0.54	0.48	0.26
Italy	0.49	0.50	0.25
Austria	0.46	0.53	0.24

Source: Roodman (2006b)

3. The issue of selectivity

3.1. Calculation method of selectivity

The concept of selectivity is grounded on the idea that the poorer a country is the more it requires aid, and the higher the quality of governance in the recipient country, the greater the effectiveness of aid that will be achieved. Based on this, CGD regards donors whose proportion of aid provided to countries that are deemed appropriate for such aid (better governance, lower income) is higher as donors whose actions are more optimal. CGD created an index to measure these optimal actions of donors, referred to as "Gross selectivity."

The calculation method for gross selectivity is as follows:

(a) Firstly a government selectivity multiplier [0,1] is derived from the composite governance index of Kaufmann, Kraay, and Mastruzzi (2005) (which is an average of six dimensional governance indices) (the greater the multiplier, the better the governance).

(b) Next a GDP selectivity multiplier [0,2] is derived from the logarithmic value of the 2003 GDP per capita in dollar terms, calculated using exchange rates (the greater the multiplier, the greater the degree of poverty).

(c) Multiplying the above two multipliers and making adjustment results in a selectivity multiplier for recipient countries. In 2004 Bhutan was the country with the highest value of 0.98 and Kuwait had the lowest value of 0.04. In other words, Bhutan has good governance but low income, whereas Kuwait is a country with poor governance and high income.

(d) Here "Gross selectivity" is computed by a division: the total amount of aid from a donor multiplied by the abovementioned selectivity multiplier (c) for each recipient is

divided by the total amount of aid by the donor.

(e) Then multiplying the gross selectivity value by the amount of aid gives a figure for aid depicting selectivity. There are two exceptions to the gross selectivity weighting method described above. The first is emergency assistance. Emergency assistance is not discounted, since it seems to be effective even in the poorest-governed countries. Another exception is "assistance that seeks to improve governance," which is given an across-the-board discount ratio of 50%.[2] For example, in the case of Afghanistan and similar countries this brings the discount rate to 75%, with a discount rate of 50% being applied to assistance that seeks to improve governance in countries with poor governance. Assistance that seeks to improve governance is that classed under the DAC CRS code in the 15000 range.

3.2. Appropriateness of a standard for governance

Of the two standards for selectivity, namely "poverty" and "good governance," it is thought that with regard to the latter, the assumption is made that "the better governance, then so too the greater the effect of assistance." This is thought to have been reflected in the insistence in development economics in recent years that "good governance is necessary for development," although a conclusion still has yet to be reached on a statistical causal linkage between good governance and aid effectiveness.

With regard to discussions on aid effectiveness, the conclusion of Burnside and Dollar (2000): "aid has a positive impact on growth in developing countries with good policies" is famous, but subsequently the robustness of their findings has been contradicted in a great deal of research (e.g. Easterly, Levine, and Roodman 2004;

[2] The concept of a discount rate for assistance that seeks to improve governance was adopted from 2006.

Roodman 2004; Rajan and Subramanian 2005). Originally Burnside and Dollar (2000) used trade liberalization, inflation and budget surplus as an index of good policy, and they did not use an index for good governance.

3.3. Appropriateness of using the KK index as an index of governance

However, although there is no statistical evidence, as mentioned above, the concept that the lower the governance capacity of a country, the less able it will be to use assistance effectively is a concept that has so much become a part of common sense in this area that it cannot be easily rejected. In this context a further issue is that of whether or not the use of the governance index of Kaufmann et al., so-called the KK index, as an index to measure governance capacity is truly appropriate.

The governance index of Kaufmann, Kraay & Mastruzzi (2005) as used in the IDP, is one that uses six-dimensional governance indices as identified by the authors (Voice and accountability, Political instability and violence, Government effectiveness, Regulatory burden, Rule of law, Control of corruption) and selects data arbitrarily from various data sources (e.g. Country Policy and Institutional Assessments of the World Bank; Global Competitiveness Report of the World Economic Forum, etc.), from which each governance index is calculated.

The problems with the KK index have been pointed out by researchers in recent years (e.g. Knack 2006). On January 11, 2007, the World Bank convened a Round Table Discussion on the merits and demerits of the KK index.[3] Below, we introduce the three major problems with the KK index as identified in Thomas (2006), a paper that was announced at the abovementioned meeting.

[3] The title of the meeting was: "On Measuring Governance: A Roundtable Discussion."

The first is that the margins of error in the KK index are non-trivial and that their sizes vary from country to country. Kaufmann has also acknowledged this point (Kaufmann et al. 2005, p.8). With margins of error that differ from country to country and using an index that contains such non-trivial values, it is dangerous to compare the status of governance of each country (Kaufmann et al. 2005, and refer to Figure 1).

The second problem is a more fundamental one. Namely, the problem is that the definition of "governance" as used by the KK index is vague. Originally, the concept of "governance" was thought to be the accumulation of various research in political and economic science, but in Kaufman et al.'s KK index the connectivity with this concept is not made clear. Kaufman et al. create a six-dimensional construct for governance (Voice and Accountability, Political stability and absence of violence, Government effectiveness, Regulatory quality, Rule of law, Control of corruption), but they do not state the reasoning behind the need for six dimensions. The tremendously high degree of correlation among these indices makes clear the problems inherent in establishing a six-dimensional construct. It is also clear that differences in regulatory quality and government effectiveness, and the difference between government effectiveness and control of corruption, would be difficult to explain objectively.

The third problem is inevitably the one concerning the arbitrary selection of data. Kaufman et al. calculate indices in six dimensions for the version IV KK index announced in 2005, using 37 data items from 31 different data sources. However, there are no objective criteria in existence by which to know what data is used to calculate which dimensional index. All selections are made arbitrarily by Kaufman.

That a meeting was held at the World Bank—the institution at which Kaufman was originally affiliated—demonstrates that the indices are themselves still in a state of

development. Currently at the World Bank, separate indices are being used that are known as CPIA (Country Policy and Institutional Assessment), by which financing decisions are made with regard to beneficiary countries. In the future, even if a governance index is incorporated to encourage "the provision of more assistance to countries practicing good governance," it is still too early to know whether the current KK index will be used to calculate the Commitment to Development Index (CDI).

One source that actually discusses the validity of the governance index of Kaufman et al. is an analysis by Quibria (2006), which highlights a number of very interesting points. Quibria grouped developing country members of the Asian Development Bank (ADB) into two categories: countries with a higher governance index than average and a group of countries with a lower index value than average (the impact on governance of fluctuations in income is omitted) and then compared growth rates. The results of this analysis showed that for Asian countries, countries with poor governance demonstrated high growth rates. Representative examples of such countries are China and Vietnam. Both of these countries have a poor state of governance when viewed from a Western perspective, but in both countries economic performance is robust. It is thought that from now on discussion should move to address what kind of "governance" index should be compiled—whether a "governance" index for economic development or a "governance" index for aid beneficiary countries—and how it should be used.

4. The issue of project proliferation

4.1. Method of calculation for size weight

It has been pointed out that in recent years, aid project proliferation, donor

fragmentation, and a lack of coordination have been factors adversely impacting aid efficiency. It is not difficult to imagine that if small countries in Africa were bombarded with multiple aid projects, the bureaucrats and officials of these recipient countries would be overloaded with the acceptance of missions from donor countries and the compilation of reports. These aid-related problems were identified as an issue of aid "harmonization" in order to improve aid effectiveness, and the "Paris Declaration on Aid Effectiveness" of March 2005 represents an international pledge on this issue, similar to the United Nations Millennium Development Goals (MDGs).[4]

Based on this, CDG has created a discount rate called "size weights" as a means of discounting aid amounts. This means that if a project strays from an optimal size, the amount of aid is accordingly discounted. This optimal size is calculated from the average value of projects implemented to date and standard deviation, in addition to which the "governance index" of Kaufmann, Kraay, and Mastruzzi (2005) mentioned above is used for its readjustment and calculation. This is based on the idea that countries with better governance are more likely to have larger optimal aid project size (details of the calculation will be described later). The feature of discounting for projects larger than their optimal size was newly deployed in the 2005 edition of the IDP.

The method of calculation is as follows (Roodman 2005c):

(i) Roodman considers that project size exhibits a lognormal distribution pattern. It is therefore assumed that size weights, which are the discount rate for a project, also exhibit a similar pattern.

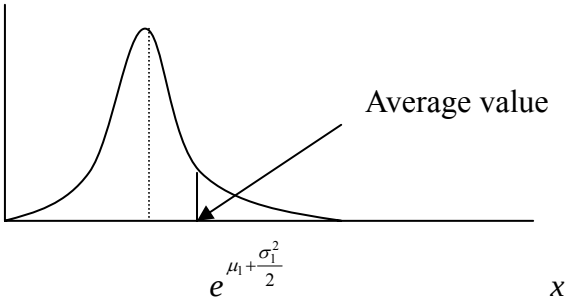
The relationship between project size distribution and size weight distribution are as shown below (Roodman 2005c, Figure 1). The horizontal axis shows the logarithmic

[4] Refer to the website of the Ministry of Foreign Affairs for information on the Paris Declaration: http://www.mofa.go.jp/mofaj/gaiko/oda/doukou/dac/hl_forum_gai.html

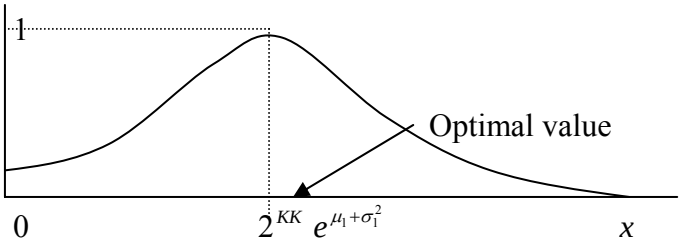
value of the project.

Graph 1: Project distribution and size weight which IDP assumes

(a) Project Distribution



(b) Size Weight Distribution



The average value of the lognormal distribution is $e^{\mu_1+\frac{\sigma_1^2}{2}}$. μ_1 and σ_1 are the average and variance of the project amount converted to logarithm.

(ii) It is assumed that the ideal value for a project should be greater than the average value because it is thought that there will be a large number of very small projects.

(iii) The weight function = 1 at the optimal value of project size. In other words, at the optimal value, the project cannot be discounted. The optimal value for project size is denoted by $2^{KK}\ e^{\mu_1+\sigma_1^2}$. The *KK* of 2^{KK} refers to the governance index of Kaufman et al. Multiplying 2^{KK} before $e^{\mu_1+\sigma_1^2}$ is based on the concept that that the higher the level of governance, the larger the optimal project size will be. KK takes a value of zero in the average, and therefore in countries with average governance, the optimal project size will be $e^{\mu_1+\sigma_1^2}$, because the optimal project size is slightly above the average value, as the

discussion above suggests. In other words, σ_1^2 is greater than $\frac{\sigma_1^2}{2}$. However, the grounds of σ_1^2 are not explained.

(iv) The spread of the weight function is set as double the project distribution ($2\sigma_1$). This reflects that the actual optimal size is uncertain. The grounds for doubling the project distribution are also not demonstrated.

(v) Size is not weighted by project but is weighted based on the calculation of the average of the aid activities and the standard deviation (logarithmic size) of each donor-recipient pair. Donor aid is assumed to have an accurate lognormal distribution, and size-weighted aid is calculated using the following formula.

(Size weighting formula)

Size weight is derived from the integral of the product of two lognormal curves. One curve represents the distribution of aid projects by size, and the other the weights corresponding to each size. In other words, through integrating the number of projects by size multiplied by the weight corresponding to each size, the size weight is calculated.

It is supposed that the following two functions exist (these are derived by multiplying the probability density function of the lognormal distribution by N_i). N_1 is the number of projects, N_2 is the parameters.

$$h_1(x)=\frac{N_1}{\sqrt{2\pi}\sigma_1}\frac{1}{x}e^{-\frac{1}{2}\left(\frac{\ln x-\mu_1}{\sigma_1}\right)^2} \quad \leftarrow \text{Describes distribution by project size}$$

$$h_2(x)=\frac{N_2}{\sqrt{2\pi}\sigma_2}\frac{1}{x}e^{-\frac{1}{2}\left(\frac{\ln x-\mu_2}{\sigma_2}\right)^2} \quad \leftarrow \text{Describes weight corresponding to size distribution}$$

Using $u=\ln x$, $x=e^u$, and $\frac{du}{dx}=\frac{1}{x}$, the integral of the product of the above two functions is calculated thus:

$$\int_0^\infty h_1(x)h_2(x)\,dx=\int_0^\infty \frac{N_1}{\sqrt{2\pi}\sigma_1}\frac{1}{x}e^{-\frac{1}{2}\left(\frac{\ln x-\mu_1}{\sigma_1}\right)^2}\frac{N_2}{\sqrt{2\pi}\sigma_2}\frac{1}{x}e^{-\frac{1}{2}\left(\frac{\ln x-\mu_2}{\sigma_2}\right)^2}dx$$

$$= \frac{N_1 N_2}{2\pi\sigma_1\sigma_2} \int_{-\infty}^{\infty} e^{-\frac{1}{2}\left(u^2\left(\frac{1}{\sigma_1^2}+\frac{1}{\sigma_2^2}\right)-2u\left(\frac{\mu_1}{\sigma_1^2}+\frac{\mu_2}{\sigma_2^2}-1\right)+\frac{\mu_1^2}{\sigma_1^2}+\frac{\mu_2^3}{\sigma_2^2}\right)} du$$

$$= \frac{N_1 N_2}{2\pi\sigma_1\sigma_2} e^{-\frac{1}{2}\left(\frac{\left(\frac{\mu_1}{\sigma_1^2}+\frac{\mu_2}{\sigma_2^2}\right)}{\frac{1}{\sigma_1^2}+\frac{1}{\sigma_2^2}}+\frac{\mu_1^2}{\sigma_1^2}+\frac{\mu_2^2}{\sigma_2^2}\right)} \int_{-\infty}^{\infty} e^{-\frac{1}{2}\left(u\sqrt{\frac{1}{\sigma_1^2}+\frac{1}{\sigma_2^2}}-\frac{\frac{\mu_1}{\sigma_1^2}+\frac{\mu_2}{\sigma_2^2}-1}{\sqrt{\frac{1}{\sigma_1^2}+\frac{1}{\sigma_2^2}}}\right)^2} du \qquad \text{(a)}$$

The integral part can be further transformed thus:

$$\frac{\sqrt{2\pi}}{\sqrt{\frac{1}{\sigma_1^2}+\frac{1}{\sigma_2^2}}}$$

Thereby, the above formula is transformed into the following:

$$\text{(a)} = \frac{N_1 N_2}{\sqrt{2\pi}\sqrt{\sigma_1^2+\sigma_2^2}} e^{-\frac{1}{2}\left(\frac{\left(\frac{\mu_1}{\sigma_1^2}+\frac{\mu_2}{\sigma_2^2}\right)}{\frac{1}{\sigma_1^2}+\frac{1}{\sigma_2^2}}+\frac{\mu_1^2}{\sigma_1^2}+\frac{\mu_2^2}{\sigma_2^2}\right)}$$

Letting $\eta_1 = \frac{\mu_1}{\sigma_1}$, $\eta_2 = \frac{\mu_2}{\sigma_2}$, and $\hat{\sigma} = \sqrt{\sigma_1^2+\sigma_2^2}$, this can be rewritten as:

$$\int_0^{\infty} h_1(x)\,h_2(x)\,dx = \frac{N_1 N_2}{\sqrt{2\pi}\hat{\sigma}} e^{-\frac{1}{2}\left(\eta_1^2+\eta_2^2-\frac{\sigma_1^2\sigma_2^2}{\hat{\sigma}^2}\left(\frac{\eta_1}{\sigma_1}+\frac{\eta_2}{\sigma_2}-1\right)^2\right)} \qquad (1)$$

N_1 is the number of projects, and μ_1 and σ_1 can be estimated from the data (average and sample variance are calculated by logarithmic conversion of raw data).

In order to determine the three parameters (N_2, μ_2, σ_2) pertaining to h_2, the following three constraints are set. Firstly the peak value of the weight function is conditioned to be 1. The mode of h_2 is $e^{\mu_2-\sigma_2^2}$. Accordingly

$$h_2(e^{\mu_2-\sigma_2^2}) = \frac{N_2}{\sqrt{2\pi}\sigma_2} \frac{1}{e^{\mu_2-\sigma_2^2}} e^{-\frac{1}{2\sigma_2^2}\left(\mu_2-\sigma_2^2-\mu_2\right)^2} = \frac{N_2}{\sqrt{2\pi}\sigma_2} \frac{1}{e^{\mu_2-\frac{\sigma_2^2}{2}}} = 1$$

Therefore,

$$N_2 = \sqrt{2\pi}\sigma_2 \, e^{\mu_2 - \frac{\sigma_2^2}{2}} \qquad (2)$$

In addition, h_2 is conditioned to peak at $2^{KK} \, e^{\mu_1+\sigma_1^2}$.[5]

i.e., $2^{KK} \, e^{\mu_1+\sigma_1^2} = e^{\mu_2-\sigma_2^2}$

As the value of σ_2 is defined as below, it is possible to arrange the above formula with regard to μ_2 in

$$\sigma_2 = 2\,\sigma_1 \qquad (3)$$

$$\mu_2 = \ln(2^{KK} \, e^{\mu_1+\sigma_1^2}) + \sigma_2^2 = \mu_1 + 5\,\sigma_1^2 + KK \ln 2 \qquad (4)$$

Assigning the six computed parameters (N_1, N_2, μ_1, μ_2, σ_1, and σ_2) to formula (1), the size weight between each donor-recipient is calculated and the size weight for each donor is calculated.[6]

4.2. Problems with calculation of size weight

Problems arising in calculating the size weight are envisaged thus:

(i) Only three parameters (N_1, μ_1, and σ_1) are really used. According to formula (1), the larger N_1 becomes, size weight is expected to increase.

(ii) It is hypothesized that the distribution of aid projects is lognormal, but it is actually not the case. (This will be discussed later).

(iii) The values for μ_1 and σ_1 between donor-recipient, and the values for μ_1 and σ_1 for individual recipients should be different. This signifies that the

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[5] Roodman (2006) states that "h_2 is conditioned to peak at $2^{KK} \, e^{\mu_1+\frac{\sigma_1^2}{2}}$," but as this must be a typographic error for $2^{KK} \, e^{\mu_1+\sigma_1^2}$, in this paper we therefore calculate $2^{KK} \, e^{\mu_1+\sigma_1^2}$.

[6] Roodman (2006) does not detail how the size weight for each donor country is obtained after calculating the size weight between each donor and recipient.

optimal project size for recipient countries cannot be uniquely defined.

(iv) In addition, the optimal size for a project should be determined depending on the project type (e.g. infrastructure or education).

(v) $2^{KK}\ e^{\mu_1+\sigma_1^2}$ is the formula for determining optimal project size, with this formula, the larger the *KK* governance index becomes (higher governance capacity), the larger the optimal project size will be. However, higher governance capacity should mean that governments are capable of managing and operating large numbers of projects, and it was not hypothesized that the management and operation of large projects would be possible.

(vi) For countries with a good KK governance index and many small projects, the computed size weight becomes smaller. In other words, if many projects in the education sector are implemented for countries with good governance, the size weight is smaller. In contrast, for countries with poor governance, even with the provision of infrastructure projects size weight decreases.

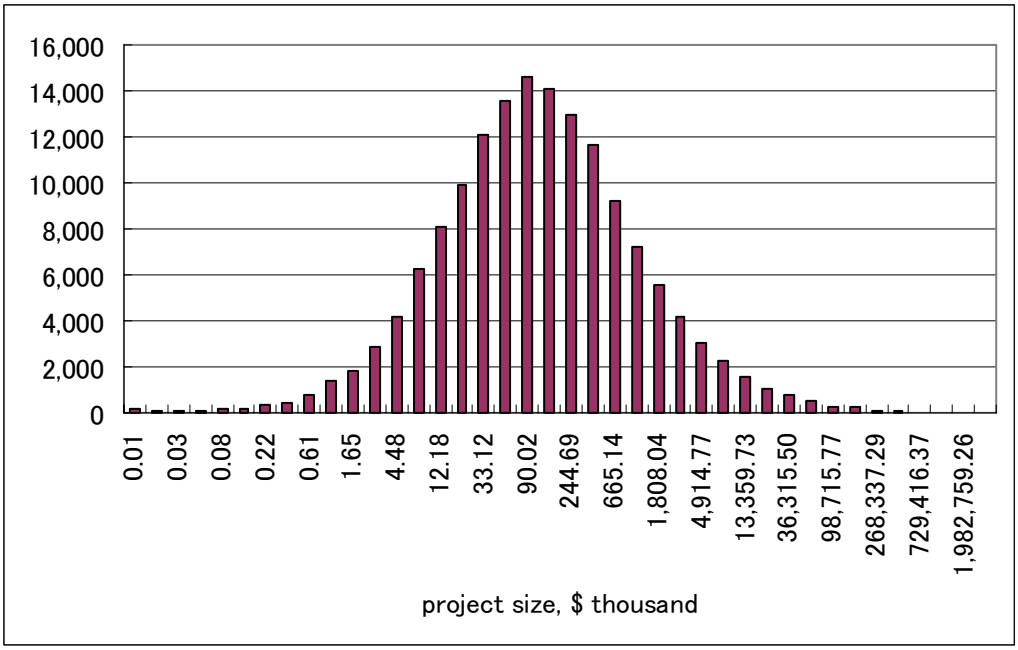
(vii) In addition, since the peak value (optimal size) of the weight function is $2^{KK}\ e^{\mu_1+\sigma_1^2}$ and the average value of the aid activities distribution function is $e^{\mu_1+\frac{\sigma_1^2}{2}}$, a loss function $f(\mu_1,\sigma_1)=2^{KK}\ e^{\mu_1+\sigma_1^2}-e^{\mu_1+\frac{\sigma_1^2}{2}}$ (distance between optimal size and average size) can be established. $f(\mu_1,\sigma_1)=2^{KK}\ e^{\mu_1+\sigma_1^2}-e^{\mu_1+\frac{\sigma_1^2}{2}}=0$ is established where $KK=0$ and the variance is zero. This is in the case that one project was provided to one country, and that if there were many of such projects, the size weight would increase (in other words, the amount of aid would not be discounted).

Thus there are various problems that arise in the method of calculation of size weight. However, it is thought that the hypothesis of lognormal project distribution as pointed out in (ii) above is a significant issue.

4.3. The issue of log-normality of aid projects distribution

It is certainly true that if you make the global distribution of projects by size as a whole from 2001 to 2003, as depicted in Graph 2, it assumes a shape close to a lognormal distribution[7]. However, as is clear from Table 4, which shows the average values for projects vary by sector. Put simply, optimal size calculated collectively for projects as a whole is unsubstantial and size weight grounded on this value is an inappropriate indicator.

Graph 2: Distribution of Projects by Size (Commitment base) 2001 - 2003



Source: DAC, CRS statistics

Table 4: Project Area and Average Value, 2001-2003 units: US$1000

Purpose Code	Project area	average	N
	Unclassifiable	203	15
x ＜12000	Education	609	17,383
12000≦ x ＜13000	Health	617	10,389
13000≦ x ＜14000	Population policies	348	13,880
14000≦ x ＜15000	Water supply and sanitation	1,483	4,606

[7] This is based on CRS commitment data. Duplication of Roodman (2005c), and Figure 1. This is the basis for the hypothesis that project distribution is lognormal.

15000≦ x ＜16000	Government and civil society	707	20,581
16000≦ x ＜17000	Other social infrastructure	738	13,902
21000≦ x ＜22000	Transport and storage	7,866	2,243
22000≦ x ＜23000	Communications	603	1,935
23000≦ x ＜24000	Energy generation and supply	5,752	1,761
24000≦ x ＜25000	Banking and financial services	5,001	1,381
25000≦ x ＜26000	Business and other services	1,213	2,186
31000≦ x ＜32000	Agriculture, forestry, fishing	898	10,149
32000≦ x ＜33000	Industry, mineral resources and mining, construction	730	3,489
33000≦ x ＜34000	Trade policy and regulations, tourism	927	1,910
40000≦ x ＜50000	Multi-sector	847	15,742
50000≦ x ＜60000	Commodity aid and general program assistance	3,027	5,957
60000≦ x ＜70000	Actions relating to debt	10,571	1,082
70000≦ x ＜80000	Emergency assistance and reconstruction	863	12,525
90000≦ x ＜100000	Support to NGOs, etc.	931	10,924
	Total	1,113	152,040

Source: DAC, CRS statistics

In addition, the results showing whether the amount for aid projects in the world as a whole and on a by-country basis follow a lognormal distribution can be seen in Table 5, in the form of a statistical test using the Shapiro-Francia normality test.[8] Those for which it is not possible to reject the lognormal distribution hypothesis are the calculations for the world as a whole and also for Luxembourg and the United States. It has been confirmed that it is possible to reject the lognormal distribution hypothesis for all other countries.

[8] Due to problems of sample size in the statistical proof, only 2003 was subject to calculation.

Table 5: Shapiro-Francia test for log normality of project size, 2003

country	Obs	W'	V'	z	Prob>z
Australia	1,580	0.99404	5.599	3.767	0.0001
Austria	838	0.96061	22.573	6.503	0.0000
Belgium	3,334	0.99313	8.242	3.777	0.0001
Canada	2,064	0.99619	4.102	3.116	0.0009
Denmark	365	0.89705	27.887	6.901	0.0000
Finland	604	0.98922	4.596	3.342	0.0004
France	3,443	0.98958	12.503	4.179	0.0000
Germany	2,763	0.9911	10.447	4.378	0.0000
Greece	728	0.98131	9.44	4.836	0.0000
Ireland	1,808	0.99563	4.428	3.294	0.0005
Italy	1,583	0.99416	5.487	3.728	0.0001
Japan	6,064	0.96515	39.068	3.014	0.0013
Luxembourg	115	0.98144	1.881	1.284	0.0995
Netherlands	1,865	0.99124	9.018	4.558	0.0000
New Zealand	757	0.99044	5.001	3.541	0.0002
Norway	3,646	0.99659	4.094	2.715	0.0033
Portugal	625	0.99355	2.837	2.318	0.0102
Spain	4,839	0.99098	10.565	3.184	0.0007
Sweden	1,730	0.99404	5.903	3.845	0.0001
Switzerland	1,998	0.99807	2.054	1.707	0.0439
United Kingdom	1,474	0.99408	5.317	3.678	0.0001
United States	8,319	0.9986	1.45	0.491	0.3118
World	59,018	0.99551	3.621	0.003	0.4988

Source: DAC, CRS statistics

Next, with regard to the United States, for which it is thought that all projects follow a lognormal distribution, we proved whether or not aid projects to representative beneficiary countries in Africa are lognormal. (Refer to Table 6.) The results show that it is not possible to reject log normality for projects targeting Uganda, but for projects for Tanzania and Malawi log normality was rejected. Graph 4 compares ordered values of aid projects with quantiles of the normal distribution. Here, we can recognize that aid

projects by the U.S.A. to Tanzania and Malawi have a wider range of outliers (Figure 4).

Table 6: Shapiro-Francia W' test for log normality of projects by the U.S.A., 2003

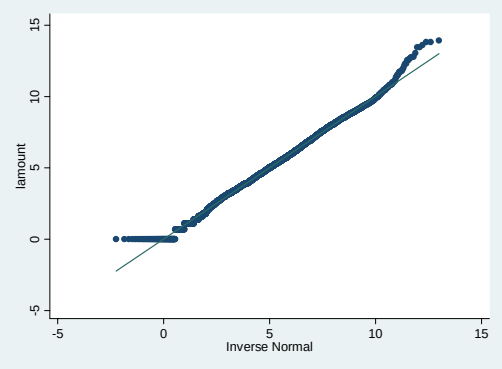
	Obs	W'	V'	z	Prob>z
United States	8,319	0.9986	1.45	0.491	0.31179
United States-Tanzania	80	0.93284	5.062	3.122	0.00090
United States-Malawi	46	0.91063	4.343	2.727	0.00319
United States-Uganda	155	0.99166	1.083	0.168	0.43311

Source: DAC, CRS statistics

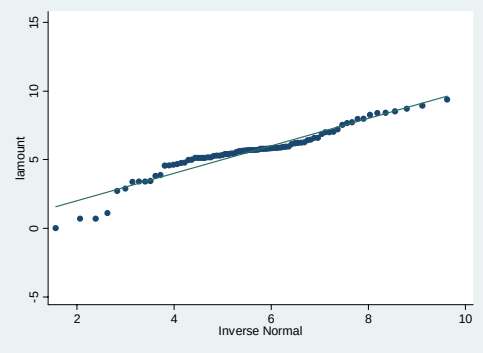
In other words, what can be confirmed through statistical proofs is that even aid projects that seem to have a log normal distribution when classified as the world as a whole, the log normality is rejected on a by-country basis, and also the countries which were not possible to reject log normality, log normality was rejected when examining projects in terms of their relationship with individual beneficiary countries.

Graph 4: Normal Q-Q plots of aid projects by the U.S.A., 2003

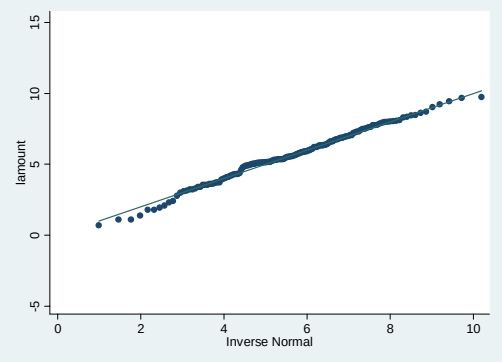
(a) The U.S.A.



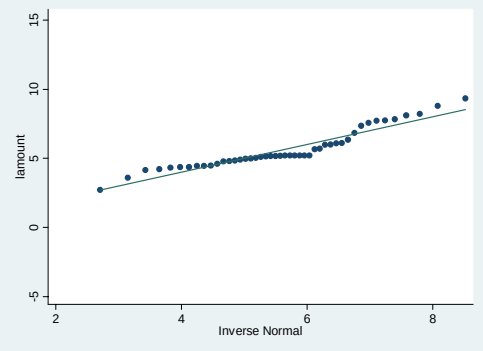
(b) From the U.S.A. to Tanzania



(c) From the U.S.A. to Uganda



(d) From the U.S.A. to Malawi



Source: DAC, CRS statistics

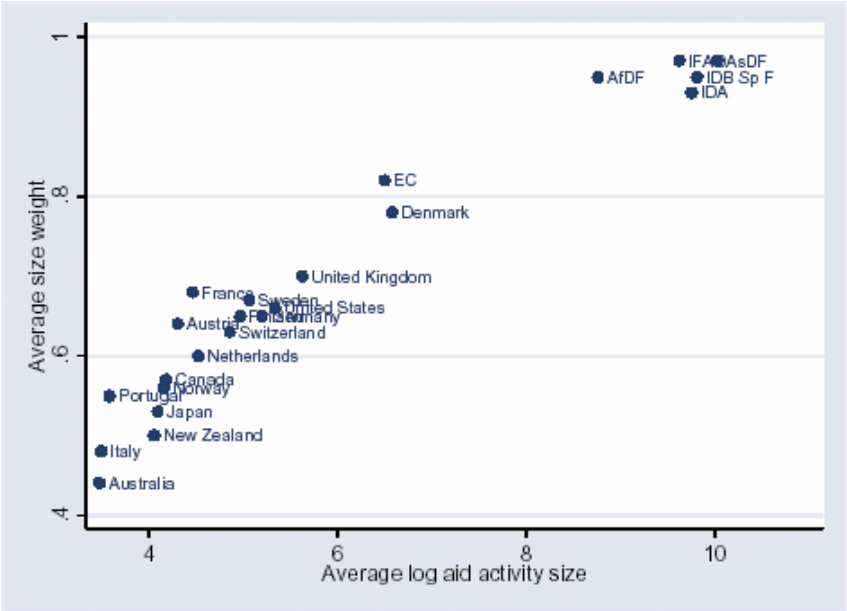
In other words, what can be confirmed through statistical proofs is that even aid projects that seem to have a log normal distribution when classified as the world as a whole, the log normality is rejected on a by-country basis, and also the countries which were not possible to reject log normality, log normality was rejected when examining projects in terms of their relationship with individual beneficiary countries.

4.4. Reporting bias problem of CRS data

As can be seen from Graph 5, there is a strong positive correlation between average size weight in IDP and average log aid activity. In other words, from the perspective of optimal aid project size, it is certain that the quality, good or bad, of aid is

determined by this average log value. That is to say, countries providing large-scale projects tend to be assessed as providing appropriate projects.

Graph 5: Average size weight in IDP versus average log aid activity commitment, 2003



Roodman (2006), Figure 2.

In Graph 5, the average log aid activity value for first-placed Denmark is high, and the same value for bottom-placed Japan is low. Intuitively this differs from our recognition. This is because of the recognition that Japan's aid features many large-scale projects in monetary terms, represented primarily by infrastructure projects. In order to ensure consistency with Figure 5, we conduct analysis using 2003 commitment data.

The actual amount of project aid provided by Denmark and Japan in 2003 (amountus000 in CRS data) and the natural log conversion are shown as descriptive statistics in Table 7. As you can see from the table, although in terms of actual aid value Japan has the higher average value, this average dwindles as a result of the natural

log conversions.[9]

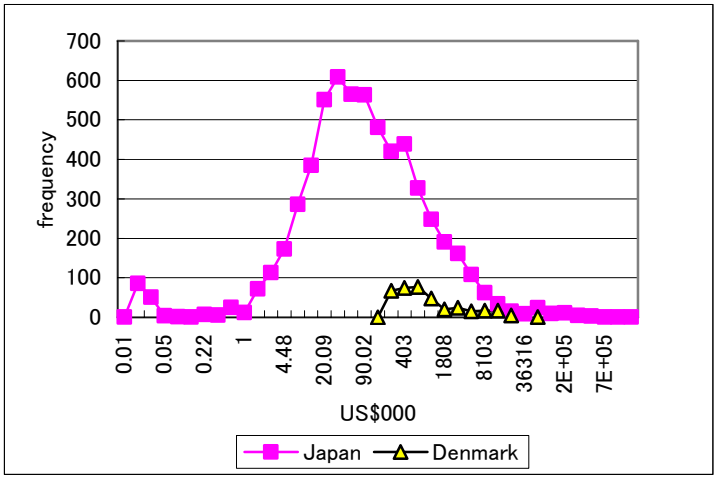
Table 7: Project Amounts for Japan and Denmark in 2003

		N	mean	Sd	Min	max
Denmark	amountus000	365	1,855.74	3,965.17	151.88	49,740.29
	Ln (amountus000)	365	6.58	1.21	5.02	10.81
Japan	amountus000	6,064	2,404.72	58,819.74	0.01	4,087,360.00
	Ln (amountus000)	6,064	4.14	2.41	-4.61	15.22

Source: DAC, CRS statistics.

Next take a look at project distribution. As can be seen from Graph 6, there are a total of 138 small Japanese projects with a value of less than US$30, and the greatest number of projects, 609, are concentrated in the bracket between US$20,090 and US$33,120. On the other hand, the highest frequency of Denmark is 74 in the bracket between US$403,000 and US$665,000. It shows that the highest frequency of Japan is lower than that of Denmark.

Graph 6: Project Distribution for Japan and Denmark, 2003



Source: DAC, CRS statistics

[9] However, in the CRS statistics, as the amount of aid is shown in US$1,000 units, if this were converted into US$1 units, the average natural log values would be 11.65 for Japan and 13.48 for Denmark, thus reducing the gap between the two.

What are these less-than-US$30 aid projects being implemented by Japan? Appendix Table 1 shows a list of projects with a value of less than US$30. The donor agency in all cases is Japan International Cooperation Agency (JICA) and the category of aid is ODA grant. The numerical codes under “purpose” are CRS purpose codes. This list reveals the very interesting fact that Japan has implemented broad spectrum of projects with such small amounts of money.

Next let us examine the content of projects that have a value between US$20,090 and US$33,120, the bracket with the highest frequency of projects. These are projects that in Japanese yen have values of between 2 million and just under 4 million yen. The top-ranked purposes have been compiled in Table 8. The code that appears most frequently is 15140, or Aid for Government Administration. There are also many projects for the purposes of Policy and Administration Management and also Training that appear. These seem to be mainly training projects targeting bureaucrats in developing countries, etc. The number of projects displayed in the table is 207, accounting for more than one-third of the 609 projects in this bracket.

Denmark has the most aid projects in the bracket between US$403,000 and US$665,000, or between 40 million and 70 million Japanese yen. What kinds of projects are being implemented in this bracket? In the same way as for Japan above, a table 9 has been prepared incorporating the top-ranked purposes of projects. The total number of projects is only 77 to begin with, of which the highest frequency, 9 projects, are for the purpose of assistance for human rights. In addition, it shows that many projects are related to human rights or health and medical, including social/welfare service and sexually transmitted disease (STD) control. Our conjecture that such types

of projects do not appear as large sum of money turns out to be wrong.

Table 8: Breakdown of Japan's Projects by Purpose between US$20,090 and US$33,120

Purpose	Purpose Name	Total	(JICA)	(MOFA)	(MISC.)	(PC)	(PRF)
15140	GOVERNMENT ADMINISTRATION	25	10	0	10	0	5
99810	SECTORS NOT SPECIFIED	25	3	14	6	1	1
33110	TRADE POLICY AND ADMIN. MANAGEMENT	23	6	0	16	0	1
16010	SOCIAL/WELFARE SERVICES	20	13	4	1	0	2
11110	EDUCATION POLICY & ADMIN. MANAGEMENT	19	5	2	6	4	2
24010	FINANCIAL POLICY & ADMIN. MANAGEMENT	17	9	0	7	0	1
12181	MEDICAL EDUCATION/TRAINING	16	0	6	10	0	0
12220	BASIC HEALTH CARE	16	9	4	0	0	3
32110	INDUSTRIAL POLICY & ADMIN. MGMT	16	4	0	8	0	4
11130	TEACHER TRAINING	15	0	2	0	13	0
41010	ENVIRONMENTAL POLICY AND ADMIN. MGMT	15	13	0	2	0	0

Source: CRS.

Table 9: Breakdown of Denmark's Projects by Top-ranked Purpose between US$403,000 and US$665,000

Purpose	Purpose Name	Total
15162	HUMAN RIGHTS	9
32130	SME DEVELOPMENT	7
15140	GOVERNMENT ADMINISTRATION	5
16010	SOCIAL/WELFARE SERVICES	5
13040	STD CONTROL INCLUDING HIV/AIDS	4
99810	SECTORS NOT SPECIFIED	4

Source: DAC、CRS.

Note: SME：Small and Medium-sized Enterprises.

STD: Sexually Transmitted Diseases.

In fact, using the average log converted value for project size, the value for Japan started falling below that of Denmark in 2003, and in 2002 it can be seen that Japan had a larger average value than Denmark (Table 10). The reason behind this seems to be due to the fact that from 2003 onwards the number of small-size projects with a value of less than US$30 suddenly increases, for whatever reason. In 2002, the lowest project size for Japanese aid projects was US$2,470.

Table 10: Project Amounts for Japan and Denmark in 2002

	Variable	N	mean	Sd	Min	max
Denmark	amountus000	380	2,293.87	8,302.08	101.47	120,492.60
	Ln (amountus000)	380	6.54	1.26	4.62	11.70
Japan	amountus000	524	12,775.16	37,135.02	11.80	402,705.50
	Ln (amountus000)	524	7.62	1.93	2.47	12.91

Source: DAC, CRS.

What can be inferred from the above is the fact that in Japan aid projects are registered with the DAC on a per capita training basis, whereas in Denmark the larger training framework is registered with the DAC. Given the differences among countries concerning the reporting methods for projects in CRS data, there is, at the current point in time, mere comparison the average aid project scale among countries is immature. In this sense, fragmentation is not evident by project itself rather by the reporting the projects. It is necessary for donor countries to make the method in which they register aid projects with the DAC consistent.

5. Conclusion

That the IDP, which to date has merely assessed assistance by developed countries

to developing countries in terms of financial amounts, has attempted to consider aid quality and incorporate this in assessment by introducing two concepts of selectivity and project proliferation has made a significant contribution to improving aid assessment.

However, as we have argued in this paper, the inclusion of the concept of "governance" as one of the indices for selectivity and the use of the KK index as that index are points around which there is still room for further discussion. In addition, size weights have been introduced as an index to adjust project proliferation, but given the fact that a) aid projects are hypothesized under this index to have a lognormal distribution (though they generally do not), and b) that the reporting methods for CRS data that are used in calculating the index differ from country to country, it can be seen that the index, as it presently stands, is incomplete in terms of its validity.

When it is considered that selectivity and size weight have had a significant impact on the compilation of the IDP, it can be seen that there is a necessity to improve the IDP in the future.

As an alternative proposal, perhaps it would be advisable to consider an assessment method that would link beneficiary country needs with the type of aid. For example, with regard to countries with a high degree of poverty, donor countries that provide efficient aid focused on the poverty-stricken sector would receive a high assessment. Already, "direct assistance to poor people" and "good governance" markers exist within CRS data. In actual fact, in the calculation of selectivity, an across-the-board discount rate of 50% has already been set for countries with poor governance with regard to aid that is marked under "good governance." (Refer to p.9 of this paper.) There is no option not to use these sorts of markers. However, it also goes

without saying that there is a necessity among donor countries to ensure that marker registration for the CRS is conducted in a consistent manner.

With regard to project proliferation, the IDP establishes a unique benchmark as optimal project size and discounts projects that diverge from that benchmark, which in itself is not appropriate or optimal. It has always been the case that in developing countries there have been a variety of assistance needs, including education and infrastructure, and the optimal project size for such needs will naturally differ. Accordingly, is it not therefore the case that aid required by developing countries includes projects of varying sizes and is close to a lognormal distribution? In that sense, it can be thought to be a problem when the distribution starts to move away from one that is lognormal. It is thus thought appropriate to elicit a method whereby donor countries that are diverging from a lognormal distribution—in other words, donor countries that are providing many small-scale projects—could be penalized in some way.

Appendix Table 1: List of Japanese Aid Projects Less than US$30 (2003)

Agency	Trans. No.	Recipient Name	Purpose	Purpose Name	Amount (US$ 000)
JICA	030406T	HUNGARY	32110	INDUSTRIAL POLICY & ADMIN. MGMT	0.01
JICA	033085T	COOK ISLANDS	11330	VOCATIONAL TRAINING	0.02
JICA	032091T	BRAZIL	14010	WATER RESOURCES POLICY/ADMIN. MGMT	0.02
JICA	033836T	THAILAND	14040	RIVER DEVELOPMENT	0.02
JICA	030240T	MALTA	14050	WASTE MANAGEMENT/DISPOSAL	0.02
JICA	030513T	LATVIA	14050	WASTE MANAGEMENT/DISPOSAL	0.02
JICA	030759T	CAPE VERDE	15110	ECONOMIC AND DEVELOPMENT POLICY/PLANNING	0.02
JICA	030908T	MALI	15110	ECONOMIC AND DEVELOPMENT POLICY/PLANNING	0.02
JICA	030939T	CONGO, DEM.REP.	15110	ECONOMIC AND DEVELOPMENT POLICY/PLANNING	0.02
JICA	030944T	BENIN	15110	ECONOMIC AND DEVELOPMENT POLICY/PLANNING	0.02
JICA	031000T	GUINEA-BISSAU	15110	ECONOMIC AND DEVELOPMENT POLICY/PLANNING	0.02
JICA	032033T	ST. KITTS-NEVIS	15140	GOVERNMENT ADMINISTRATION	0.02
JICA	032586T	SURINAME	15140	GOVERNMENT ADMINISTRATION	0.02
JICA	030538T	ARMENIA	16010	SOCIAL/WELFARE SERVICES	0.02
JICA	031917T	PANAMA	16010	SOCIAL/WELFARE SERVICES	0.02
JICA	033233T	MALDIVES	16010	SOCIAL/WELFARE SERVICES	0.02
JICA	030276T	CZECH REPUBLIC	16020	EMPLOYMENT POLICY AND ADMIN. MGMT.	0.02
JICA	030565T	MOROCCO	16020	EMPLOYMENT POLICY AND ADMIN. MGMT.	0.02
JICA	032510T	NEPAL	16020	EMPLOYMENT POLICY AND ADMIN. MGMT.	0.02
JICA	032810T	PALESTINIAN ADMIN. AREAS	16020	EMPLOYMENT POLICY AND ADMIN. MGMT.	0.02
JICA	032850T	SYRIA	16020	EMPLOYMENT POLICY AND ADMIN. MGMT.	0.02
JICA	033093T	FIJI	16020	EMPLOYMENT POLICY AND ADMIN. MGMT.	0.02
JICA	030751T	CAMEROON	16030	HOUSING POLICY AND ADMIN. MANAGEMENT	0.02
JICA	032495T	MALDIVES	16030	HOUSING POLICY AND ADMIN.	0.02

				MANAGEMENT	
JICA	030500T	ROMANIA	21010	TRANSPORT POLICY & ADMIN. MANAGEMENT	0.02
JICA	030673T	TUNISIA	21010	TRANSPORT POLICY & ADMIN. MANAGEMENT	0.02
JICA	031063T	RWANDA	21010	TRANSPORT POLICY & ADMIN. MANAGEMENT	0.02
JICA	031276T	ZAMBIA	21010	TRANSPORT POLICY & ADMIN. MANAGEMENT	0.02
JICA	031347T	SENEGAL	21010	TRANSPORT POLICY & ADMIN. MANAGEMENT	0.02
JICA	031636T	NICARAGUA	21010	TRANSPORT POLICY & ADMIN. MANAGEMENT	0.02
JICA	032224T	IRAN	21010	TRANSPORT POLICY & ADMIN. MANAGEMENT	0.02
JICA	032690T	CHINA	21010	TRANSPORT POLICY & ADMIN. MANAGEMENT	0.02
JICA	032799T	JORDAN	21010	TRANSPORT POLICY & ADMIN. MANAGEMENT	0.02
JICA	030428T	LATVIA	21040	WATER TRANSPORT	0.02
JICA	032480T	PERU	21040	WATER TRANSPORT	0.02
JICA	031960T	COLOMBIA	21050	AIR TRANSPORT	0.02
JICA	033264T	PAKISTAN	21050	AIR TRANSPORT	0.02
JICA	030463T	ALBANIA	23010	ENERGY POLICY AND ADMIN. MANAGEMENT	0.02
JICA	030931T	CENTRAL AFRICAN REP.	24010	FINANCIAL POLICY & ADMIN. MANAGEMENT	0.02
JICA	034289T	FIJI	24010	FINANCIAL POLICY & ADMIN. MANAGEMENT	0.02
JICA	034314T	NIUE	24010	FINANCIAL POLICY & ADMIN. MANAGEMENT	0.02
JICA	030754T	CAMEROON	31120	AGRICULTURAL DEVELOPMENT	0.02
JICA	030802T	GABON	31120	AGRICULTURAL DEVELOPMENT	0.02
JICA	030841T	EQUATORIAL GUINEA	31120	AGRICULTURAL DEVELOPMENT	0.02
JICA	031773T	ST. LUCIA	31120	AGRICULTURAL DEVELOPMENT	0.02

JICA	030368T	SLOVAK REPUBLIC	31130	AGRICULTURAL LAND RESOURCES	0.02
JICA	030588T	TUNISIA	31130	AGRICULTURAL LAND RESOURCES	0.02
JICA	030792T	ETHIOPIA	31130	AGRICULTURAL LAND RESOURCES	0.02
JICA	031337T	RWANDA	31130	AGRICULTURAL LAND RESOURCES	0.02
JICA	031672T	CUBA	31130	AGRICULTURAL LAND RESOURCES	0.02
JICA	032484T	PERU	31130	AGRICULTURAL LAND RESOURCES	0.02
JICA	033068T	VIET NAM	31130	AGRICULTURAL LAND RESOURCES	0.02
JICA	033670T	LAOS	31150	AGRICULTURAL INPUTS	0.02
JICA	030371T	CZECH REPUBLIC	31220	FORESTRY DEVELOPMENT	0.02
JICA	030556T	ALGERIA	31220	FORESTRY DEVELOPMENT	0.02
JICA	030755T	CAMEROON	31220	FORESTRY DEVELOPMENT	0.02
JICA	031388T	BARBADOS	31320	FISHERY DEVELOPMENT	0.02
JICA	031591T	BELIZE	31320	FISHERY DEVELOPMENT	0.02
JICA	031766T	ST. KITTS-NEVIS	31320	FISHERY DEVELOPMENT	0.02
JICA	031987T	GUYANA	31320	FISHERY DEVELOPMENT	0.02
JICA	032031T	GRENADA	31320	FISHERY DEVELOPMENT	0.02
JICA	032589T	SURINAME	31320	FISHERY DEVELOPMENT	0.02
JICA	033193T	SOLOMON ISLANDS	31320	FISHERY DEVELOPMENT	0.02
JICA	031795T	ARGENTINA	31391	FISHERY SERVICES	0.02
JICA	031353T	SENEGAL	32110	INDUSTRIAL POLICY & ADMIN. MGMT	0.02
JICA	032490T	INDIA	32110	INDUSTRIAL POLICY & ADMIN. MGMT	0.02
JICA	032118T	PERU	32161	AGRO-INDUSTRIES	0.02
JICA	032361T	MYANMAR	32161	AGRO-INDUSTRIES	0.02
JICA	030989T	GHANA	32169	BASIC METAL INDUSTRIES	0.02
JICA	033598T	CAMBODIA	32220	MINERAL PROSPECTION AND EXPLORATION	0.02
JICA	031869T	JAMAICA	33210	TOURISM POLICY AND ADMIN. MANAGEMENT	0.02
JICA	033114T	NAURU	33210	TOURISM POLICY AND ADMIN. MANAGEMENT	0.02
JICA	033128T	NIUE	33210	TOURISM POLICY AND ADMIN. MANAGEMENT	0.02
JICA	033210T	TUVALU	33210	TOURISM POLICY AND ADMIN.	0.02

				MANAGEMENT	
JICA	034303T	KIRIBATI	33210	TOURISM POLICY AND ADMIN. MANAGEMENT	0.02
JICA	034387T	TONGA	33210	TOURISM POLICY AND ADMIN. MANAGEMENT	0.02
JICA	030318T	MALTA	41010	ENVIRONMENTAL POLICY AND ADMIN. MGMT	0.02
JICA	030437T	UKRAINE	41010	ENVIRONMENTAL POLICY AND ADMIN. MGMT	0.02
JICA	031741T	HAITI	41010	ENVIRONMENTAL POLICY AND ADMIN. MGMT	0.02
JICA	030378T	SLOVAK REPUBLIC	43040	RURAL DEVELOPMENT	0.02
JICA	030485T	HUNGARY	43040	RURAL DEVELOPMENT	0.02
JICA	030798T	ETHIOPIA	43040	RURAL DEVELOPMENT	0.02
JICA	031258T	UGANDA	43040	RURAL DEVELOPMENT	0.02
JICA	031334T	ZIMBABWE	43040	RURAL DEVELOPMENT	0.02
JICA	031777T	ST. LUCIA	43040	RURAL DEVELOPMENT	0.02
JICA	032790T	IRAN	43040	RURAL DEVELOPMENT	0.02
JICA	033018T	SRI LANKA	43082	RESEARCH/SCIENTIFIC INSTITUTIONS	0.02
JICA	033169T	PAPUA NEW GUINEA	11230	BASIC LIFE SKILLS FOR YOUTH & ADULTS	0.03
JICA	030407T	POLAND	11330	VOCATIONAL TRAINING	0.03
JICA	031202T	NAMIBIA	11330	VOCATIONAL TRAINING	0.03
JICA	032265T	LEBANON	11330	VOCATIONAL TRAINING	0.03
JICA	030320T	TURKEY	11420	HIGHER EDUCATION	0.03
JICA	030531T	STS EX-YUGOSLAV IA UNSP.	12220	BASIC HEALTH CARE	0.03
JICA	030243T	TURKEY	14010	WATER RESOURCES POLICY/ADMIN. MGMT	0.03
JICA	031028T	NIGER	14010	WATER RESOURCES POLICY/ADMIN. MGMT	0.03
JICA	032280T	SAUDI ARABIA	14010	WATER RESOURCES POLICY/ADMIN. MGMT	0.03
JICA	031187T	MAURITIUS	14020	WATER SUPPLY & SANIT. – LARGE SYST.	0.03
JICA	030359T	CZECH REPUBLIC	14050	WASTE MANAGEMENT/DISPOSAL	0.03
JICA	030374T	SLOVAK	14050	WASTE MANAGEMENT/DISPOSAL	0.03

		REPUBLIC			
JICA	030891T	MALAWI	14050	WASTE MANAGEMENT/DISPOSAL	0.03
JICA	031006T	COTE D'IVOIRE	14050	WASTE MANAGEMENT/DISPOSAL	0.03
JICA	032686T	CHINA	14050	WASTE MANAGEMENT/DISPOSAL	0.03
JICA	031370T	DJIBOUTI	15110	ECONOMIC AND DEVELOPMENT POLICY/PLANNING	0.03
JICA	032454T	PARAGUAY	16020	EMPLOYMENT POLICY AND ADMIN. MGMT.	0.03
JICA	031359T	ERITREA	16061	CULTURE AND RECREATION	0.03
JICA	031051T	ZIMBABWE	21010	TRANSPORT POLICY & ADMIN. MANAGEMENT	0.03
JICA	033019T	SRI LANKA	21010	TRANSPORT POLICY & ADMIN. MANAGEMENT	0.03
JICA	031879T	MEXICO	21020	ROAD TRANSPORT	0.03
JICA	032135T	URUGUAY	21040	WATER TRANSPORT	0.03
JICA	032814T	PALESTINIAN ADMIN. AREAS	21040	WATER TRANSPORT	0.03
JICA	033201T	TONGA	22020	TELECOMMUNICATIONS	0.03
JICA	030570T	MOROCCO	22030	RADIO/TELEVISION/PRINT MEDIA	0.03
JICA	030954T	ETHIOPIA	22030	RADIO/TELEVISION/PRINT MEDIA	0.03
JICA	030366T	SLOVAK REPUBLIC	23010	ENERGY POLICY AND ADMIN. MANAGEMENT	0.03
JICA	031467T	GUATEMALA	23010	ENERGY POLICY AND ADMIN. MANAGEMENT	0.03
JICA	032419T	COLOMBIA	23010	ENERGY POLICY AND ADMIN. MANAGEMENT	0.03
JICA	030490T	POLAND	24010	FINANCIAL POLICY & ADMIN. MANAGEMENT	0.03
JICA	030542T	ARMENIA	25010	BUSINESS SUPPORT SERVICES & INSTITUTIONS	0.03
JICA	032210T	TAJIKISTAN	25010	BUSINESS SUPPORT SERVICES & INSTITUTIONS	0.03
JICA	033203T	TONGA	25010	BUSINESS SUPPORT SERVICES & INSTITUTIONS	0.03
JICA	030527T	UKRAINE	31120	AGRICULTURAL DEVELOPMENT	0.03
JICA	031350T	SENEGAL	31130	AGRICULTURAL LAND RESOURCES	0.03
JICA	030883T	MADAGASCAR	31150	AGRICULTURAL INPUTS	0.03

JICA	030275T	FYROM-MACEDONIA	31163	LIVESTOCK	0.03
JICA	031012T	COTE D'IVOIRE	31182	AGRICULTURAL RESEARCH	0.03
JICA	033292T	BANGLADESH	31182	AGRICULTURAL RESEARCH	0.03
JICA	032893T	MONGOLIA	31220	FORESTRY DEVELOPMENT	0.03
JICA	033183T	PAPUA NEW GUINEA	31220	FORESTRY DEVELOPMENT	0.03
JICA	033826T	PHILIPPINES	31391	FISHERY SERVICES	0.03
JICA	031967T	COLOMBIA	32164	CHEMICALS	0.03
JICA	032230T	IRAN	32164	CHEMICALS	0.03
JICA	031014T	MAURITIUS	33210	TOURISM POLICY AND ADMIN. MANAGEMENT	0.03
JICA	031644T	NICARAGUA	33210	TOURISM POLICY AND ADMIN. MANAGEMENT	0.03
JICA	031850T	HONDURAS	41010	ENVIRONMENTAL POLICY AND ADMIN. MGMT	0.03
JICA	030797T	ETHIOPIA	43030	URBAN DEVELOPMENT AND MANAGEMENT	0.03
JICA	032289T	SAUDI ARABIA	43030	URBAN DEVELOPMENT AND MANAGEMENT	0.03
JICA	030926T	CAMEROON	43040	RURAL DEVELOPMENT	0.03
JICA	032124T	PERU	43040	RURAL DEVELOPMENT	0.03

Source: DAC, CRS

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