

Final Report

Methodology to measure progress towards in-country division of labor

November 14, 2010

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Acknowledgements

We are grateful to the three members of the DAC secretariat, Fredrik Ericsson, Hubert de Milly, and Suzanne Steensen, who constantly supported us with data and statistics, and with their useful comments on different versions of this study.

Moreover, we are very grateful to Marina Mdaihli (GTZ Ouagadougou) for arranging the interviews with local partners of the German development cooperation, to Paul Diabouga (Ministry of Basic Education and Alphabetization, Ouagadougou) for arranging the contacts in his ministry, and to Birgit Erbel (KfW Hanoi) for arranging the interviews in Vietnam.

Last but not least, we are indebted to all those who were willing to spend their scarce time with us to the benefit to this study.

1. Introduction

In the Paris Declaration (PD) and the Accra Agenda for Action (AAA) donors and recipients of aid have committed to reducing the fragmentation of aid. According to §17 of the AAA,

“[t]he effectiveness of aid is reduced when there are too many duplicating initiatives, especially at country and sector levels. We will reduce the fragmentation of aid by improving the complementarity of donors’ efforts and the division of labour among donors, including through improved allocation of resources within sectors, within countries, and across countries.”

The Task Team ‘Division of Labour & Complementarity’ under Cluster C ‘Transparent & Responsible Aid’ of the ‘Working Party on Aid Effectiveness’ (WP-EFF) has included the monitoring and evaluation of in-country Division of Labor (DoL) as a core area in its work program. Our study will suggest concepts and methodologies for monitoring the DoL. The results of the study will provide inputs for the Task Team and are also intended to serve as an input to the 4th High Level Forum on Aid Effectiveness (Busan, 2011). The results are meant to inform the conduct of a round of DoL monitoring for donors and recipients, which is intended to become part of the third round of PD Monitoring in 2011.

This report has three objectives. First, it reviews and discusses the existing literature on DoL with a particular focus on its costs and benefits. This review will clarify that we cannot expect a clear and positive monotonous relationship between aid effectiveness and aid fragmentation. Fragmentation may be a problem only up to a certain point.

Second, we discuss different possible indicators of aid fragmentation and proliferation in the light of the conclusions of the first part. If our indicator is to be proportionate to some real problem of aid ineffectiveness, then it should not give high weight to additional donors in a context where their presence is actually beneficial. In fact, the ideal indicator appears to be an indicator of “detrimental fragmentation and proliferation” rather than an indicator of fragmentation and proliferation per se (albeit the terms are chosen with a negative connotation anyway).

Third, the theoretical analysis is complemented by an empirical assessment based on case studies for Vietnam and Burkina Faso. In this context, we carried out interviews with local government officials and aid agency staff.

Finally, we link the theoretical and the empirical analysis, discuss the resulting choice of indicators, point to remaining problems related to their validity and reliability and conclude.

2. Fragmentations vs. Concentration – Benefits and Drawbacks: A literature review

This section discusses the literature on the benefits and drawbacks of DoL in providing development aid. In this context we consider that, even if there are obvious market deficiencies, we can still define a market for development assistance, with the donor governments (or agencies) on the supply, and the recipient country governments on the demand side. The price on that market is more difficult to define, but can be proxied by the cost a recipient faces when working with a specific donor, including co-funding requirements, transaction costs, and political costs (arising, e.g., through conditionality) (see, e.g., Vaubel 1991, p. 234). Just as in any more typical market, a very small number of suppliers tends to limit the freedom of choice for the demand side and decreases its power, while it increases the power of the supply side. The problems which may be caused by this should not be fully

neglected when we consider the advantages of reduced aid fragmentation. In fact they may imply that an index of fragmentation meant to reflect fragmentation as a *problem* for aid effectiveness (or efficiency) should not be monotonously decreasing with fragmentation (see also Kimura et al. 2007, Knack et al. 2010). With this background, we try to shed some light on how the literature views the relative benefits of concentration and specialization – potentially leading to donor monopolies (or similar forms of concentrated market power) in certain sectors and countries – as compared to the potential benefits arising from donor competition, but resulting in fragmented aid.

Attempts to divide labor in aid efforts go back to the late 1940s. More recently, the Rome Declaration on Harmonization asked to “harmonise the operational policies, procedures, and practices of institutions to improve the effectiveness of development assistance” (OECD 2003, p. 10). The Paris Declaration on Aid Effectiveness further detailed partnership commitments with regard to harmonization, alignment, ownership, and mutual accountability (OECD 2005). The Accra Agenda for Action in 2008 reaffirmed the goal of “more effective division of labour.” In spite of these efforts, however, actual coordination and division of labor is rather limited (Mascarenhas and Sandler 2006, Thiele et al. 2007, Frot and Santiso 2009). According to Easterly (2003), the lack of DoL does not, however, imply that aid agencies compete to provide the most effective services. Rather, they seem to act like cartels. Given such environment, would all aid be optimally channeled via one international organization? The degree of transaction costs would then depend on the operational procedures of this organization.¹ On the other extreme, can aid delivery without any DoL be optimal, either with competition among donors or without? Or in between these two extremes, what is the optimal number of donors in a particular sector or country?

Aid recipients have to deal with hundreds of donor missions every year, requiring substantial time and effort by local high level staff. They have to prepare an amazing number of reports and letters of intent for each individual donor.² Evidently, the number of staff contacts and amount of paper to be produced are likely to rise with the number of donors. Fewer donors might thus reduce the transaction costs for the recipients. This has to be contrasted with transaction costs among donors. These would increase depending on the form DoL would take. If some countries, e.g., channeled their aid through other donors, coordination costs among these countries would increase. In addition to affecting transaction costs, the presence of multiple donors arguably affects the incentives of governments and bureaucracies in the recipient countries in the longer run. Finally, incentives of donors to provide effective aid might also be affected by the degree of DoL. We deal with these aspects in turn.

¹ Generally, transaction costs comprise costs arising from preparation, negotiation, monitoring, and enforcement of aid contracts (Brown et al. 2000). Lawson (2009, p. 8) defines them as “the costs necessary for an aid transaction to take place but which add nothing to the actual value of the transaction.”

² See van de Walle and Johnston (1996), Easterly (2003) or Acharya et al. (2006) for illustrative examples.

2.1. Transaction costs

The absence of DoL in providing aid increases transaction costs for the recipient country, arguably making aid less effective.³ A plethora of donors with their own, in part contradicting, conditionalities, procedures, different languages, reporting guidelines, and fiscal years will clearly put an enormous effort on recipient country's weak bureaucracies. Duplication of work prevails, as is nicely illustrated in Knack and Rahman (2007).⁴ According to Easterly (2003), authors of studies financed by a particular donor are frequently not aware of studies produced on the same topic by another donor. Without coordination, tied aid might lead to incompatible equipment supplied by different donors (Bigsten 2006).⁵ Consequently, Bauer (1971, pp. 99-100) argued that "it is by no means unusual for projects to absorb domestic inputs of greater value than net output, especially when the cost of administering the projects and the explicit and implicit obligation to maintain and replace fixed assets originally donated is also considered. Large losses in activities and projects financed by aid have been reported in many poor countries." According to Kanbur (2003, p. 18), "aid flows, and the mechanisms donors adopt to track and monitor them, are very intensive in terms of recipient capacity. Each donor agency has its own reporting system. [...] The hard-pressed civil servants spend much of their time managing the paper flow. At the political level, ministers have to spend a considerable amount of time in turn meeting with donor delegations."⁶ Lack of coordination sometimes seems to imply unrealistically high estimates of future overall aid flows, illustrated by roads built but not maintained or schools built but not staffed (Easterly 2003, Bigsten 2006).⁷ As Bräutigam (2000) notes, the individual donor treats the budget for future maintenance as expenditures from a common-pool resource, producing a tragedy of the commons.

While a major objective of DoL is the reduction of transaction costs, DoL might also increase transaction costs for the recipient. Channeling part (or all) of aid through multilateral organizations, e.g., might increase rather than decrease transaction costs. Today, for example, European countries channel part of their aid through the European Union. However, the bulk of aid continues to be bilateral. Channeling aid via multilateral actors does thus not necessarily reduce transaction costs, as the number of donors increases. The benefits would also depend on the specific transaction costs with the particular donors involved. As one example, consider Switzerland would cede its place as a donor to the World Bank. While the number of players involved would then be equal or even decrease (depending on whether the Bank was in the country before or not), the recipient's transaction costs to deal with a donor like Switzerland are certainly lower than those to deal with the Bank. Thus transaction costs would actually increase.

In this context it is important to keep in mind that transaction costs not only depend on the number of donors but also on the number of projects.⁸ If some donors grant aid in the form of budget support, or few but big projects, replacing them by one single donor granting aid in the form of more specific, smaller projects could substantially increase costs. Simply counting donors present in a particular country or sector might thus provide a misleading picture.

³ See Lawson (2009) for a detailed evaluation of the transaction costs of implementing the Paris Declaration.

⁴ Examples are poverty assessments, public expenditure reviews, and governance and investment climate assessments.

⁵ According to Jepma (1991), tying aid to employing contractors from the donor country reduces the value of aid to the recipient by about 15-30 percent. Arguably, donor coordination – like sector wide approaches – might mitigate such inefficiencies.

⁶ As quoted in Bigsten (2006, p. 13).

⁷ Arimoto and Kono (2007) show that the presence of multiple donors increases the tendency to disburse insufficient recurrent costs. They also show that aid effectiveness is hampered by this tendency.

⁸ See Roodman (2006) for a detailed account of project proliferation and its consequences for aid effectiveness.

Whether and to what extent differences between donors or rather the number of donors dominates actual transaction costs will be clarified when we discuss the results from our interviews in Burkina Faso and Vietnam below.

2.2. Incentive effects

A second main problem relevant to the optimal degree of DoL concerns its effects on incentives for the donor and the recipient country. With many donors present, responsibilities become blurred. No single donor can be held responsible for particular outcomes, reducing the stakes for individual donors (Bigsten 2006). Each donor pursues its own commercial or geo-strategic goal (e.g., Kuziemko and Werker 2006, Dreher et al. 2009), a behaviour which is likely to reduce the effectiveness of aid in terms of economic growth since growth (or also: poverty reduction) is not the central objective in the first place (Kilby and Dreher 2010). With aid being highly fragmented, each donor investing effort in improving the administrative capacity in the recipient country only gains a small share of the benefits, but has to bear the full costs. This gives rise to a tragedy of the commons, moral hazard, and free rider problems (Knack and Rahman 2007).

From a different perspective, however, one could also argue that donor division of labor and specialization reduces donor accountability. Since the early times of development cooperation, individual donors have been critically monitored by NGOs, researchers, and in the context of DAC peer reviews, for their regional and sectoral aid allocation and for the poverty orientation of their aid portfolio. With a full fledged DoL, this would no longer be possible, and only the donor community as a whole could be held responsible.⁹ From a theoretical perspective, the issue is thus less obvious than it may appear at first glance.

According to the empirical investigation by Djankov et al. (2009), fragmentation of aid reduces its effectiveness in terms of economic growth (in a panel of 112 countries over the 1960-1999 period). This corroborates the findings in Kimura et al. (2007) who also find that fragmentation deteriorates the effect of aid on growth. Interestingly, Kimura et al. find an inverted-U effect of fragmentation on the effectiveness of aid, implying that the optimal amount of fragmentation occurs with the employed Herfindahl Index (HI) at 0.5. According to Kimura et al. (2007, p. 16) the “result suggests that aid proliferation indicated by a low HI hinders growth possibly due to high transaction costs while aid concentration indicated by an excessively high HI also hinders growth possibly due to less competition among donors.”

The empirical literature also provides some evidence of the effects of fragmented aid on variables like institutional quality or government policies. Fragmented aid has been shown to deteriorate governance (Knack and Rahman 2007). Djankov et al. (2009) run cross-section regressions investigating the effect of fragmentation on corruption. According to their results, corruption in the recipient countries significantly increases with fragmentation. The authors attribute this to an increase in the recipient governments' negotiation power with the presence of multiple donors. Donors become less selective, making it easier for the recipients to appropriate resources. In a similar vein, Knack and Rahman (2007) illustrate their results employing a model where each donor wants to maximize the impact of its own projects on poverty reduction. The success of each project depends on local staff time, at a decreasing rate. Compared to maximization of overall donor success, uncoordinated maximization leads to excess recruitment of local staff. According to the model, less donor fragmentation leads to less excess recruitment. Arguably, uncoordinated donors treat the availability of recipient country staff as a common pool resource, leading to excess demand. Staff time is treated as a

⁹ This is, of course, not to deny the role of the recipient country in achieving favorable outcomes.

free good, ignoring congestion externalities (Easterly 2003). Given that the donors pay substantial wage surcharges, they easily extract the most talented staff from local bureaucracies. Donors also frequently pay wage supplements to government bureaucrats (e.g., Arndt 2000). This creates incentives for the bureaucrats to pay less than sufficient attention to their other tasks, and to keep the projects running out of pure self-interest, independent of any developmental impacts.¹⁰ According to Berg (1997), the dual wage structure among staff involved vs. not involved in aid projects creates discontent and undermines the morale in the public sector, contributing to the withering of government capacity.

Fragmentation might also affect the incentives of the recipient government. Arguably, when stakes are high, recipients will find it easier to comply with donor conditionality (Öhler et al. 2010). With less fragmentation, then, conditionality might become an effective means to changing policies in the recipient countries. Whether such development would indeed be desirable depends on many things, among others, the quality of donor conditions as compared to that of independent policies.¹¹ From the recipient governments' perspective, such development would certainly be unwelcome. It would also be rather unwelcome from a perspective of effective recipient country ownership.

2.3. Coordination vs. Competition

If aid is more fragmented, competition among donors might be more intense, potentially benefitting the recipient. While the degree of DoL seems limited, some argue that the same holds for competition between donors. Easterly (2003), in particular, stresses the cartel-like behavior of donors. According to Easterly, avoiding competition enables donors to escape individual responsibility. It also allows them to escape pressures to reduce high costs in the delivery of aid and to present recipients a take-it or leave-it offer. Economies of scale in campaigning for aid revenues facilitate a non-competitive structure, as aid agencies can attract more funds by acting collectively. He also notes that demand for aid is rather inelastic, increasing the agencies' market power. The small number of major donors – all active in the bulk of recipient countries – facilitates cooperation and prevents competition, and even with the presence of many small donors, one or two large donors usually dominate.¹² Indeed, rather than competing, e.g., the IMF and the World Bank try to reduce overlap by enhancing their collaboration (IMF and World Bank 2001). The IMF also sometimes takes the lead when bilateral aid is involved. Specifically, there are agreements that the IMF takes the lead when it comes to macroeconomic policies, while the World Bank does the same when it comes to sectoral and microeconomic reforms (Bigsten 2006). Rather than competing for the best concepts, such cartels suppress innovation and might arguably lead to inferior outcomes as compared to less coordination (Kanbur 2003). While there is thus some evidence that competition is limited, others stress the negative effects of existing degrees of competition among donors on aid delivery, as outlined above. It is thus hard to judge what the actual degree of competition/coordination is as compared to the optimal degree.¹³

¹⁰ This might explain resistance of recipient country bureaucrats against more donor coordination (Archarya et al. 2006). "But perhaps as important as the sheer time use is that these senior technocrats and politicians become oriented towards convincing the aid agencies to keep the aid flow going, rather than towards listening to the domestic population and the local development agenda." Kanbur (2003, p. 18).

¹¹ As another example, to the extent that donor fragmentation makes effective conditionality impossible, fragmentation might increase uncertainty about government policies, potentially reducing investment (Bigsten 2006).

¹² Easterly attributes to the World Bank in the aid business the role of Saudi Arabia in the OPEC cartel.

¹³ Not even theory provides a clear-cut answer as to whether more or less fragmentation/competition would be beneficial. Torsvik (2005), for example, focuses on the incentive effects of donor coordination. In his model, the

More players are likely to be welcome to the recipient governments. There is a trade-off between policy autonomy under a regime with fragmented aid, and effective donor conditionality when faced with increasingly monopolistic donors. Increased DoL might reduce competition among donors, increasing the "price" of aid and leading to inferior outcomes. To the extent that DoL makes it easier to impose unwelcome conditions, coordination could reduce ownership, in particular when the recipient government has its own development plan (Bigsten 2006). Platteau (2004) describes the importance of DoL at the community level. With competing donors, conditionality is hard to enforce, involving substantial risk of elite capture and implying that the intended beneficiaries hardly get substantial shares of the aid flows. According to Platteau (2004), donor coordination can mitigate this problem.

In summary, if few donors have a sectoral monopoly in a country, aid might not be disbursed in the most efficient way (Frot and Santiso 2009) and more competition might be needed. To the contrary, even if there are few donors, the aid market might be contestable, preventing the monopolistic donors from exploiting their position. However, even the presence of many donors does not necessarily prevent them to form a cartel, thus essentially acting as monopolists. Thus, the theoretical literature is far from conclusive about the level of DoL that would be optimal. Nevertheless, from the above theoretical discussion and some of the empirical results (notably, Kimura et al. 2007) it appears plausible to assume that the optimum lies somewhere in between total coordination (one donor per sector and country) and extreme fragmentation. In most cases, the optimum probably lies around a small number of donors, just enough to ensure a minimum of competition, but small enough to keep coordination and aid management costs low for the recipient. However, the optimum may vary depending on the modalities of aid disbursement, the particular sector concerned, and specific country characteristics. If transaction costs arising to the recipient are the major concern, we need to consider that they rise with the number of donors, but also with the number of requirements (conditions) to fulfill – which tend to be stricter and more strongly enforced with a small number of donors. However, if the major concern is about recipients playing out donors against each other, the freedom of choice between donors offered in the context of donor competition might, of course, be less desirable. Eventually, this boils down to the question of how much accountability towards donors is required versus to what extent we would like the recipient government to actually take up full responsibility and the "driver's seat" in the development process. It is obvious that the optimum must depend on governance, including, e.g., recipient government accountability towards its own citizens. There is some evidence that donors tend to lean towards higher fractionalization (and, in particular, less budget support) where they do not trust recipient government policies (either because of an apparent mismatch of objectives or due to perceived problems of governance) (Knack and Eubank 2010, Kyle and Sperber 2010).

In the following, we will assume that our index should refer to recipient countries with at least a minimum level of good governance which makes their own freedom of decision a valuable objective. This implies that some minimal competition among donors needs to be ensured along with reduced fractionalization. What exactly this implies for the optimal level of donors in different countries and sectors is something we come back to below.

overall effects of DoL depend on the assumptions of the model on whether donors' interests differ from those of the recipients and conditionality does work. Specifically, coordination does improve outcomes when conditionality works or recipients share the donors' poverty orientation. The literature is clearly not in favor of this assumption, however (see Dreher 2009 for an overview).

3. Measuring in-country aid fragmentation and proliferation: Deriving appropriate indicators based on theoretical considerations

In this section, we attempt to derive indicators for aid fragmentation and proliferation which are both theoretically adequate and practically useful, notably for developing country governments in their own assessment of donor performance.

Before getting into any detail, let us clarify the differences between “fragmentation” and “proliferation” and the use of both terms in the context of our study on in-country DoL. Following Acharya et al. (2006) and the conventional use of terminology at the DAC, we define *in-country aid fragmentation* as the dispersion of aid between numerous donors and / or projects within any given developing country. In-country aid fragmentation therefore describes the situation of aid dispersion from the perspective of an individual aid recipient. Conversely, aid dispersion from the perspective of any individual donor, who spreads his aid over sectors (or projects) within a given country, is defined as *in-country aid proliferation*.¹⁴ In the following, we will discuss the choices to make in order to derive appropriate indicators for aid dispersion assessed from both of these perspectives. We start with an in-depth discussion of fragmentation, and limit the analysis of proliferation to the discussion of certain differences between the two concepts and their implications for appropriate indicators of proliferation.

3.1. Fragmentation

In order to derive an indicator for aid fragmentation, we need to decide about the aid data to be used as the basis of our analysis, the computational formula (i.e., the indicator in a narrower sense), the level of measurement (sector or country-wide coverage), and possible adjustment requirements to take into account national or sectoral specificities.

3.1.1. The base data

As illustrated by Mürle (2007, pp. 9ff.), the selection of base data can considerably change the results of any indicator of aid fragmentation. He argues that fragmentation is relevant only for activities actually taking place in developing countries and therefore subtracts debt relief, financial support for students and refugees in donor countries, as well as administrative cost from the original ODA figures. The DAC definition of “Country programmable aid” (CPA) goes one step further by also excluding all aid whose allocation is not directly under the responsibility of the donors’ relevant government agencies (i.e., core funding to NGOs, and aid from other than the main agencies for some donors) (see, e.g., OECD 2009, pp. 37f.). In addition, both definitions exclude humanitarian (and food) aid because, as a reaction to crises, it is “unpredictable by nature” (OECD 2009, p. 38) and “not part of longer-term strategic aid activities” (Mürle 2007, p. 10).

Generally, Mürle underscores the strategic aspects of aid programming in the DoL context. Consequently, he suggests the use of commitments rather than disbursements. However, when the purpose is to assess the current situation rather than to plan future activities, using disbursements appears more appropriate. This may explain why available DAC statistics on aid fragmentation tend to favor disbursements over commitments.

¹⁴ Apart from sectors and projects the focus of fragmentation and proliferation could also be on implementing agencies. Kilby (2010) shows that aid fragmentation across agencies may be driven by similar dynamics than aid fragmentation across projects, and may complement the consideration of fragmentation across donor countries in important ways. However, such degree of detail might be overly ambitious for our study. We expand on the issue in the interviews in Burkina Faso and Vietnam below.

In the context of the present study, the primary purpose of our indicator is to provide an assessment tool of donor performance, rather than a planning tool for future activities. Moreover, recipients should be able to assess the usefulness of the indicator on the basis of their current experience with donors in their country. The choice of disbursements, rather than commitments, appears to be appropriate in this context.

As far as the exclusion of certain aspects of ODA is concerned, there appears to be a dilemma between the ideal of general coverage and practical feasibility concerns. The case for excluding debt relief and administrative cost of the donor agencies appears to be rather obvious as they do not lead to coordination problems in the developing country. While O'Connell and Soludo (1998, p. 13) demonstrate that even for debt relief, transaction costs can vary considerably depending on the mode of delivery (e.g., straightforward cancellation versus continuous rescheduling and partial relief), donor action is usually well coordinated in this area. For this reason, transaction costs related to aid fragmentation should be of minor importance, at least for the debtor country. However, data availability will currently not allow pursuing this.

Fully uncoordinated aid by NGOs and smaller government agencies (such as, e.g., aid offices of donors' regional governments) can be as problematic as uncoordinated aid by other donors, and much of the anecdotal evidence illustrating the harmfulness of fragmentation actually refers to aid involving NGOs (Acharya et al. 2006, p. 2, Knack and Rahman 2007, p. 177, Van de Walle 2001, p. 58). In addition, even if disbursed in response to crises, the efficiency of delivery in the case of humanitarian aid could certainly be strongly enhanced through coordinated donor activities, too. Again, anecdotal evidence supports this point (Djankov et al. 2009, p. 217).

In principle, one could very well imagine a regional lead donor coordinating humanitarian assistance, just as one might imagine the situation for general development assistance. And in principle, at least in the long-run, donor governments could set incentives for national NGOs to adjust their country focus or condition funding on regional or sectoral priorities.

Nevertheless, it seems wise to follow the DAC in excluding these aspects of aid¹⁵ from this initial discussion of DoL: Humanitarian aid because it may be worthwhile to consider it separately, and support via NGOs and smaller public donor agencies because this requires a more long-term oriented strategy, and prior analysis of the pros and cons of within-donor country competition in the aid sector for which a greater freedom of NGOs may be essential. However, it would be interesting to calculate fragmentation indices based on NGO aid in addition to ODA.

Yet another discussion in the literature evolves around the relevance of very small contributions. Acharya et al. (2006, pp. 8f.) consider that small projects do not generate relevant transaction and coordination cost and can therefore be neglected. However, given that there is no theoretical argument for any particular threshold, they eventually refrain from excluding such projects from their analysis. The DAC's CPA, however, excludes donors with an overall aid volume below 250 000 USD (OECD 2009, p. 37). At the same time, relatively small contributions above this level seem to be considered as important.

If it is true that even small donors contribute significantly to the fragmentation problem, much progress towards DoL could be made if donors decided to reallocate resources from where they are insignificant anyway (Steensen 2009; see also Frot and Santiso 2010, p. 6). However, so far, there is no theoretical basis to assess whether this would indeed mitigate the fragmentation problem, or whether the elimination of such "insignificant" contributions would only lead to a significant decrease in the donor count without any meaningful implication for the developing country government concerned. Our interviews with

¹⁵ The CPA does include NGO aid that is channeled through NGOs but excludes NGO core funding.

government officials in these countries will shed some light on these issues. For the time being, the DAC's measure of CPA appears to be a good basis to start with.

One further issue remains to be discussed, however. Previous country-case studies revealed that, to many developing country governments, the mode of delivery matters more than the aid volume or the number of donors (Grimm and Schulz 2009). In particular, budget aid is high on the priority list of developing country governments, and the number of donors does not seem to matter much if aid is delivered in this form. This is true despite the fact that budget aid is frequently conditional on reform of policies and reporting systems, in which case transaction costs are not negligible either (OECD 2003, p. 122).¹⁶

While the preference of developing country governments for coordinated donor activities reaches beyond budget support to also cover other types of program aid or general donor support of partner country strategies, budget support remains the most obvious case, most clearly articulated in the existing country-case studies (Grimm and Schulz 2009).

It may therefore be useful to consider an alternative aid measure excluding all budget aid, so that the fragmentation index would only be computed on the basis of the remaining aid volumes. However, in practice, there might be considerable difficulties to distinguish between budget support, program support and individual projects in a meaningful way. "Is an organized effort to build ten schools ten projects or one? Where does one draw the line between large road-building projects and "programs" of support to the transportation sector?" (Roodman 2006, p. 5).

To reflect the case study results on the relevance of aid delivery modalities more fully, one might also consider basing all calculations directly on individual projects (see also Frot and Santiso 2010). However, the feasibility of such a procedure suffers from the same problems as mentioned above: It may be just as difficult to distinguish between truly distinct projects, than between coordinated versus fully independent donor interventions, or between program and budget support.¹⁷ Moreover, in terms of the policy relevance of outcomes from this type of analysis, it may not be useful to have a project-based rather than donor-based indicator of fragmentation. With a project-based indicator, we might obtain an interesting picture of recipient countries with a dominance of large interventions, versus other countries with a high number of small aid activities. But in itself, this might be of little practical relevance since the demonstrated link to individual donors is important to induce change.

We could, however, attempt a combination of both perspectives, by weighing each donor's contribution to the fragmentation index by his contribution to total aid activities. How this could work will be discussed below, once the concrete choice of indicators has been examined.

3.1.2. The choice of the indicator

Several indicators have been used in the literature to assess the level of aid fragmentation. The easiest and most straightforward measure is a simple count of donors in a given developing country. This measure has been widely used by the DAC.

The most frequently used indicator in the academic literature is based on the Herfindahl index (see, e.g., Knack and Rahman 2007, Easterly 2007, Djankov et al. 2009), an index which belongs to a larger group of concentration indices. More easily computable options within the

¹⁶ The issue might be a different one when it comes to sector rather than general budget support. However, while more donors sitting around the table are likely to ask for the inclusion of some additional conditions as compared to a single donor, the increase in transaction costs might still be negligible.

¹⁷ However, the DAC's extended Creditor Reporting System (CRS++) tries to include information on aid modalities. To the extent that enough information is being provided, it will be interesting to directly focus on the transactions costs associated with the different modes.

group of concentration measures are the so-called concentration ratios. In the aid fragmentation literature we find such ratios based on the size of the largest donor (aid of the largest donor as a percentage of total aid, see, e.g., Djankov et al. 2009, p. 227).

As yet another option, Acharya et al. (2006) use the Theil index which belongs to the group of inequality measures.

To be appropriate for the assessment of in-country aid fragmentation, the index should ideally fulfill all of the following requirements. It should (1) reflect fragmentation in a *theoretically correct* way, (2) be *easily understandable and computable*, and (3) use a functional form appropriate to reflect the *problems* involved with in-country aid fragmentation.

The latter is based on the idea that within different measures of fragmentation, the addition of a donor or the change in donor shares will obtain different weights. Now if, for instance, the presence of very small additional donors does not lead to a relevant increase in transaction costs, an indicator will be preferable which does not give too much weight to this addition. Conversely, if this considerably increases transaction costs, the weights should be high.

Let us start with the discussion of the Theil index and other inequality measures. The general idea is that high inequality in the distribution of donor funding or projects is equivalent to donor concentration and thus to little fragmentation. The Theil index, applied to our aid data, represents a weighted average of donor contributions relative to the mean over all donors, whereby the weights are given by the share of each donor in overall aid. Other well known inequality measures are, e.g., the coefficient of variation (the standard deviation divided by the mean), or the Gini coefficient (the ratio of the area between the Lorenz curve and the full equality line, multiplied by 2). For a comprehensive discussion of these and other measures of inequality, see, e.g., Ray (1998, pp. 184-192).

Ray (1998, pp. 174ff.) also discusses the general criteria characterizing all of these inequality indicators. One of the central rules for any inequality indicator is that a change in population size (here the number of donors) does not alter its values as long as all proportions remain the same. A cake divided in four equal parts in a family of four is as equally shared as a cake divided in six equal parts in a family of six.

This is a central characteristic that distinguishes inequality measures from proper measures of concentration. The latter do not only yield different result when there is a change in relative shares, but also, when there is a change in population numbers. Aid fragmentation is driven by both the number of donors and their relative size. For our index to measure fragmentation in a theoretically appropriate way, this needs to be considered. The index should therefore have a higher value if either (a) the number of donors increases, or (b) some aid from a relatively larger donor is replaced by aid from a relatively smaller donor. In both cases, we observe a decrease in concentration.

Specific concentration indices such as the Herfindahl index therefore provide the appropriate basis to compute our fragmentation indicator. The Herfindahl index measures the probability that, in two random draws of 1 USD from overall aid finance in a country or sector, one would draw these two dollars from the same donor. More formally, the Herfindahl index (*HI*) can be expressed as:

$$HI = \sum_{i=1}^N \pi_i^2 , \quad (1)$$

where $i=1, \dots, N$ indicates the different donors, and π_i indicates the share of donor i in overall aid finance. As already mentioned above, an alternative could be simple concentration ratios (*CR*). For these measures, it suffices to add up the shares of a predefined number of largest donors, say $N1$.

$$CR_{N1} = \sum_{i=1}^{N1} \pi_i . \quad (2)$$

In this case, any shift in proportions among the preselected large donors does not alter the result, while any change from other donors towards these large donors, or any additional projects from new donors will do so. The first few big donors will just be considered as if they were one. This index may therefore be useful if we consider that up to a small number of donors (say two or three) additional donors are no problem, but maybe even an advantage (in terms of competition and diversity of approaches, cf. Section 2). We would then simply start counting fragmentation only after the number of donors exceeds this predefined threshold.

Let us finally consider simple donor counting. Just as inequality measures neglect the number of donors, this measure neglects their relative shares. Thus, again, one of the two central requirements of theoretical correctness is not fulfilled. However, the simple count can be supplemented by a second measure related to the donor's share. This combination of measures is reflected in the DAC's counting of donors with "insignificant" aid portfolios. Insignificant is thereby related to an (ad hoc) definition of a minimum share of aid, both within each recipient country, and within the aid budget of any individual donor.

While the significance for a specific donor country is certainly relevant from the perspective of political feasibility and protection of small donors, it is not relevant from an in-country DoL perspective. Significance within the recipient country, however, is relevant. A simple donor count together with a definition of "insignificant" shares within the national or sectoral aid budget of the recipient country may, therefore, be a convincing alternative to more complex indicators of concentration.¹⁸ Indeed, if the increase in transaction costs is proportionate to the number of donors, this slightly refined donor count might best reflect the problem of fractionalization.

Apart from the ease of computation, the different measures of concentration differ primarily in the weight they give to additional donors, in particular at the high end and the low end of the distribution. The current DAC fragmentation indices based on the count of donors with little aid input give weight only to those donors at the low end of the distribution. As opposed to that, the Herfindahl index and the different concentration indices value the existence of a few dominant donors and only marginally consider the addition of small donors at the tail of the distribution. Obviously, these two types of indices will lead to substantially different results when used to rank donor performance.

We visualize the differences in the functional relationship between donor contributions and the resulting fragmentation indices in Figures 1-5. While there are a variety of additional concentration indices available, we restrict the discussion here to the most important ones presented above. As we will see, they already provide us with a large number of parameters which we need to determine in order to adjust the functional fit of the indicator to the experiences in-country.

Before we can compare the different indicators, we first need to transform all of them into a format in which they actually represent fragmentation, rather than its opposite, concentration. In the case of standard concentration indices such as *HI* and *CR* we can do so by subtracting the concentration index from 1.

¹⁸ The DAC calculates this measure per sector, specifically, the number of donors in the least 10% in the sector.

The fragmentation index based on the Herfindahl index can thus be written as:

$$F_{HI} = 1 - HI, \quad (3)$$

Since HI represents the probability to randomly draw two aid dollars from the same donor, F_{HI} represents the probability of drawing two aid dollars from different donors. It therefore has a straightforward interpretation.

The fragmentation index based on the concentration ratio for the $N1$ largest donors is:

$$F_{CR(N1)} = 1 - CR_{N1}, \quad (4)$$

This also has a straightforward interpretation as it reflects the share of aid funds from the $N - N1$ small donors.

The number of donors (DN) is not expressed in terms of concentration in the first place and therefore does not require the same type of adjustment. However, in order to clarify the combination of this count variable with aid proportions, we denote

$$F_{DN(s)} = \sum_{i=1}^N 1(i), \text{ where } 1(i) = 1 \text{ if } 0 < \pi_i < s, \text{ and } 0 \text{ otherwise,} \quad (5)$$

with s indicating a donor's minimum aid share deemed acceptable in any given developing country or sector. Any donor with an aid share exceeding s will not be counted as contributing to fractionalization.

Finally, DN can also be computed in relation to the total number of donors ("fragmentation ratio"). We then obtain:

$$F_{DN(s)/N} = \frac{\sum_{i=1}^N 1(i)}{N}, \text{ where } 1(i) = 1 \text{ if } 0 < \pi_i < s, \text{ and } 0 \text{ otherwise,} \quad (6)$$

To compare the results of different indicators, we will now present some scenarios, each with up to 20 active donors. For Scenario 1, we assume that all 20 donors contribute 10 units of aid, in the second scenario, they all contribute 20 units. In Scenario 3, 10 donors contribute 20 units, too, but the remainder of potential donors does not contribute anything.

The following scenarios show differences between the aid volumes of the different contributors. After several scenarios in which the aid volumes only vary between the largest two or three donors (while all others still remain at contributions of 10 units), we then get to distributions in which the funding declines more or less steadily from the largest to the smallest donor. These scenarios are presented in Table 1.

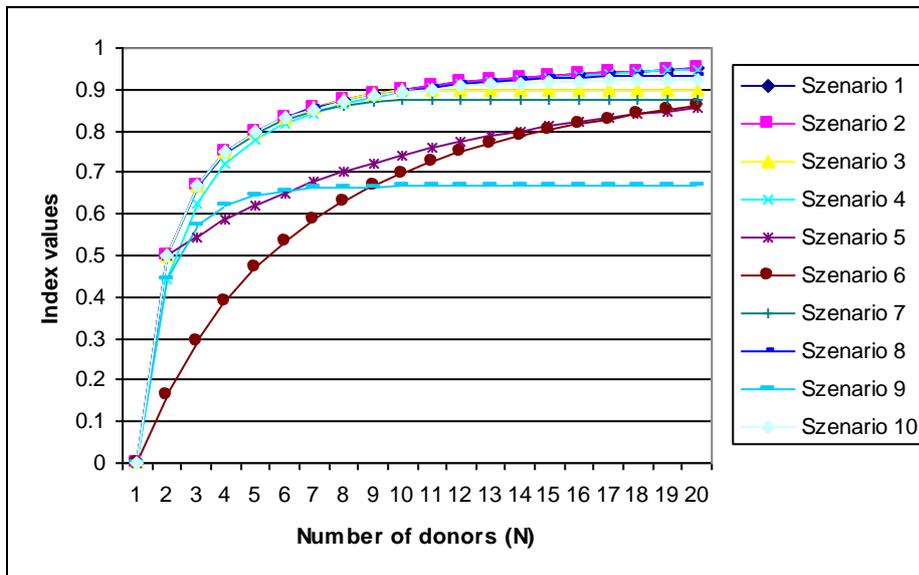
Table 1: Scenarios for the illustration of different measures of concentration

Donor number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Scenario 1	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
Scenario 2	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20
Scenario 3	20	20	20	20	20	20	20	20	20	20	0	0	0	0	0	0	0	0	0	0
Scenario 4	20	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
Scenario 5	100	90	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
Scenario 6	100	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
Scenario 7	100	90	80	70	60	50	40	30	20	10	0	0	0	0	0	0	0	0	0	0
Scenario 8	100	95	90	85	80	75	70	65	60	55	50	45	40	35	30	25	20	15	10	5
Scenario 9 ¹	100	50	25	12.25	6.1	3.1	1.6	0.8	0.4	0.2	0.1	0.05	0.02	0.01	0.01	0.00	0.00	0.00	0.00	0.00
Scenario 10	100	100	100	80	80	80	60	60	60	40	40	40	20	20	20	10	10	10	0	0

¹ Series created by dividing the preceding number by half, starting with 100 for donor 1. All numbers are strictly positive but rounded to zero after donor 15.

In Figure 1, the vertical axis shows the value of the respective fragmentation indicators, while the horizontal axis shows the cumulative number of donors considered. The data point for 2 donors on the line for Scenario 4, for instance, would therefore provide the fragmentation index for a situation with only two donors, the larger of which contributes two thirds of the overall aid budget (20+10). Figure 1 presents the results for the fragmentation index based on the Herfindahl concentration index.

Figure 1: Fractionalization based on F_{HI} under different scenarios



For most scenarios, the index climbs very fast to relatively high values. From a fragmentation of zero with a single donor, it climbs to around 50% as soon as only one additional donor is added, except for cases in which this second donor is extremely small in relative size (such as in Scenario 6 where he contributes only 10% of the aid volume of donor 1). In most scenarios, with only four donors, the index is already at around 75%. It reaches the 80% mark with five donors and the 90% mark with about 10 donors. Further donors are only marginally relevant to the values of the index, even if they contribute the same amounts as donors already considered before.

Notable exceptions are Scenarios 5, 6 and 9. As explained before, the curve representing Scenario 6 is driven by the large difference between the aid volumes of the first and the second (and all other) donors. Scenario 5 differs from Scenario 6 only in that the second donor is still almost as important as the first. Finally, in Scenario 9, the aid volume of each additional donor declines very rapidly, so that already after five donors, hardly any change in the index is visible for any further donor and the index remains almost fully stable at a relatively low level of about 67%.

The question arises whether these exceptions are relevant in the context of aid dispersion. Our intuition is that we often face situations with a few key donors whose relative aid volume is not so extremely different. In these cases, the rapid rise of the Herfindahl based fragmentation index may appear exaggerated. Clearly, when the original Herfindahl index is used to measure market power, the situation is somewhat different. Even if there is only one additional firm with half-way relevant sales, we can assume that there is some competition and that concentration is significantly reduced. However, the analogy to the aid fragmentation context might be less convincing. In a situation with only two donors, one of which might even have a relatively clear lead (such as with aid proportions of 2:1), we might not be willing to define this as a lot of fragmentation.

An option could be to start the count of F_{HI} only after the first two or three donors. Or to use a different fragmentation index, e.g., an index based on concentration ratios. This is what we consider in Annex I. The Annex provides corresponding figures for the concentration ratio based on the one largest donor ($NI=1$, what we label $F_{CR(1)}$), the three largest donors ($NI=3$, $F_{CR(3)}$), and the simple donor count for donors whose contribution remains under a certain aid share s (with $s = 10\%$).

When comparing the results to those shown in figure 1, the pattern based on $F_{CR(1)}$ looks strikingly similar. Only towards the right hand side with many donors, the different curves are slightly further away from each other. With $F_{CR(1)}$, not all indices reach values as high as with F_{HI} . We get a significantly different picture, however, if we consider the fragmentation index based on a concentration ratio for the three largest donors $F_{CR(3)}$. This index captures the situation much better, if we can assume that in a country with up to three donors, fragmentation is no problem. This assumption is reasonable if, up to this level, the advantages of minimum competition outweigh the additional cost for aid management and coordination. The picture corresponding to the donor count is pretty different and quite rough. For various scenarios, we observe noticeable jumps in the measure ($F_{DN(0.1)}$) when the addition of one more donor leads the contribution of several other donors to fall under the 10% threshold (especially Scenarios 2 and 4). Scenarios 6, 5 and 9 which showed relatively low fragmentation according to all other indicators considered so far, now appear to go along with relatively high fragmentation, particularly when the overall number of donors is rather small. This is because they all come along with one to three dominant donors whose dominance (and hence the implied concentration) are not considered in the simple count index. At the same time, precisely due to this dominance of a few donors, most other donors fall below the required minimum share and therefore contribute to the rise of the fragmentation indicator. These features let the fractionalization measure based on donor counts appear rather unattractive. While it is easy to interpret and easy to compute, taking into account proportions only in terms of a single cut-off point constitutes a non-negligible disadvantage.

Relating the simple count of donors with insignificant relationships to the overall number of donors does not solve the above mentioned problems. As can be seen in Annex I, we still observe the same implausible discontinuities for a number of relevant scenarios. Whenever all

donors in a country provide the same amount of financial support, augmenting the number of donors from 10 to 11 leads to a jump of the index from its minimum 0 (no fragmentation) to its maximum 1 (scenario 1 and 2).¹⁹

Based on the above discussion, the fractionalization index based on the concentration ratio for three major donors $F_{CR(3)}$ appears to come closest to the criteria set out at the outset of this analysis. It reflects fragmentation in a theoretically correct way, it is relatively easy to understand and easily computable, and it uses a functional form that appears to adequately reflect the problems involved with in-country aid fragmentation.

However, neither our theoretical discussion nor the existing literature allows us to draw any firm conclusion about the appropriate functional form to choose. To do so, we need to build on the practical experience of developing country officials and local aid agency staff, and on their assessment of the actual problems faced when adding smaller or larger donors. This will be discussed in Sections 4 and 5.

Let us now return to the question of project or activity based measures. In the previous section, it has been suggested that any indicator selected could be further refined by an inclusion of weights to represent the contribution of individual donors to the number of aid activities. While being a relatively large donor in terms of aid volume contributes to concentration and therefore reduces fragmentation, having a relatively large number of projects does contribute to fragmentation. Typically, large donors will also have more projects, but this does not need to be the case. Generally, if a donor has an over-proportionate number of individual aid activities relative to the funding he provides, this should increase his contribution to the fragmentation index. Conversely, if a donor follows an under-proportionate number of activities, this should reduce his weight in the fragmentation index.²⁰

Formally, introducing these weights into the formula for F_{HI} and $F_{CR(N1)}$ leads to the following expressions for the adjusted indicators:

$$\tilde{F}_{HI} = \sum_{i=1}^N \left(\frac{1}{N} - \pi_i^2 \right) \cdot w_i \quad , \text{ and} \quad (7)$$

$$\tilde{F}_{CR(N1)} = \sum_{i=1}^{N1} \left(\frac{1}{N1} - \pi_i \right) \cdot w_i \quad , \quad (8)$$

where the weights w_i correspond to donor i 's total number of aid activities over his total aid funds, divided by the average number of aid activities divided by average aid funds.

¹⁹ Also note that *very* small donors (“micro-donors”) might not generate significant additional transaction costs because they will only intervene punctually without (much) need for government action and strategic management. This leads to the suggestion to fully exclude micro-donors from the above calculations. This, however, will lead to yet another implausible discontinuity. Let the threshold be at 500 000 USD as suggested by Acharya et al. (2006). Then any donor with small activities just above the threshold will be considered most strongly detrimental to fragmentation, while with just a few dollars less, this donor’s activities would be considered as fully irrelevant in this respect.

²⁰ See Roodman (2006) for an in-depth discussion of donor versus project fragmentation. As an additional problem, different donors will likely differ in what is being reported as one bigger as compared to many smaller projects, making project-based comparisons rather difficult. In particular, we assume that reporting practices have substantially changed over time. We intend to clarify the issue in our interviews.

Note that this correction factor renders the calculation considerably more complex and increases the data requirements. Moreover, the interpretation of any given value of the index becomes much less straightforward. In addition, the adjustment suggested here does not allow project-based comparisons across sectors or countries since weights are computed relative to average values. And finally, one might wonder whether an indicator which sets incentives for bigger as compared to smaller projects is really warranted. In fact, for reasons of administrative facility and budgetary pressures, there is a general understanding in the traditional aid literature that incentives for big projects are too high anyway (see, e.g., Knack and Rahman 2007).²¹ One might not really want to aggravate this problem.

In fact, what we are really after here may not be project size, but the mode of aid delivery in a much more generic way. Whether or not this is possible depends on the degree of information provided in the DAC's extended Creditor Reporting System (CRS++).

3.1.3. The appropriate level of measurement

While we have now discussed the indicators in general, it remains open whether they should be calculated at the sectoral or the national level.²² In order to gain a quick overview over the state of the fractionalization problem in different countries, national level analysis is certainly helpful.

However, a differentiated observation at the sector level appears relevant for several reasons. First, there may be important differences in the characteristics of the different sectors which could even lead to the necessity to adjust the measurement tool (see Section 3.1.4). Second, the problem may be much stronger in some sectors than in others, and only a differentiated analysis will allow the partners involved in the development process to determine those areas where reform is most strongly required. Third, generating an overall country index may overestimate fragmentation if donors specialize in different sectors (Frot and Santiso 2010).

Ideally, it should be possible to aggregate sectoral indices to build a national indicator. If the sector level is the actually relevant level of analysis, and if the same indicators can be sensibly used across different sectors, one possibility is to take a simple average of sector values. If relevant differences between sectors exist, but can be captured by sector weights, the appropriate alternative would be a weighted average.

However, it may also be that in addition to the sectoral index, a national index has a relevant meaning of its own right. This is the case if most of the transaction costs arise at the national level, e.g., if general bilateral negotiations and country dialogues are relatively more time consuming than sectoral and project level negotiations. We tend to assume that this is not the case, but this will be verified in the country visits documented in Section 4. If fragmentation at the country level is relevant in its own right, any fragmentation indicators based on the Herfindahl index or the concentration ratios have to be constructed once more for the national level. The simple average of sectoral indicators will not provide an adequate measure of country level fragmentation, but only an aggregated measure of sector level fragmentation.

²¹ The usual argument used to be that through big projects, large financial flows can be absorbed with relatively little administrative effort from the part of the donor country officials (for an early discussion see Chambers 1978, pp. 211-212).

²² One might also think about the regional distribution within a country. However, even the DAC's expanded Creditor Reporting System (CRS++) does not provide the information required to calculate such regional indices of fragmentation.

3.1.4. Adjustments to country or sector characteristics

In some sectors, five donors may appear to be many, in others, 15 donors may be a number dealt with easily. In some sectors, e.g., health and education, it may be typical to see a lot of small projects, in other areas, such as industrial infrastructure or electricity generation, aid interventions are traditionally much larger. It may be that this does indeed indicate a strong need to reduce fragmentation in social sectors, but it could also be that these sectors have developed certain ways to deal with the multiplicity of small interventions so that they translate into transaction costs in a much different way than they would in other sectors.

Moreover, coordination of small projects or their insertion into a national sector level plan may be easier in some sectors than in others. Difficulties for donor coordination can be expected primarily where national interests such as trade or investment opportunities are concerned, i.e., notably in fields such as industry, infrastructure, or resource extraction.

Similar differences may arise between different countries. Some countries, especially those with relatively well educated administrative staff, low aid dependency, and generally high governance quality, might be able to deal with a higher number of donors without a problem. Moreover, when weighting the objectives of lower fragmentation and donor competition, certain countries of high economic attractiveness (due to their large and growing markets or their wealth of natural resources) may give a much higher weight to donor competition than other countries.

It is obvious that these differences have important implications for the ability of a given indicator of fragmentation to reflect the actual problems arising through fragmentation. If the objective is to derive a measure which does not just technically reflect fragmentation, but also adjusts to the problems related to it, i.e., if it is meant to reflect the degree of *problematic* fragmentation (as assumed so far), then the indicator itself may have to be adapted to country or sectoral circumstances.

Little is known about the relevance of the different country and sector characteristics in this respect, and our study, too, will only be able to provide some initial indications derived from the case study evidence documented in Section 4.

3.2. Proliferation

The discussion on indicators for fractionalization also applies to indicators for proliferation. The indicators based on concentration indices can be computed for proliferation, just as explained in Section 3.1., whereby now, the sums would have to be calculated for each individual donor over his different activities. The index i then represents the different sectors over which the respective donor spreads his funding in any given country.

Instead of summing over sectors, one might also consider summing over individual aid activities, both within and across sectors. This would be a more straightforward possibility to include the project level perspective than by the far less intuitive weighting procedure discussed in the context of our fragmentation index. It might indeed provide a useful complement to the other measures discussed above. However, the other caveats mentioned in Section 3.1. in the context of a project-based DoL assessment apply here as well. In particular, one might unduly create additional incentives for large projects and the differences in aid delivery modes may not be captured in an appropriate way via projects either.

Whether the indicator is based on funding of sectors or of individual aid activities, again, the functional form of our indicator should somehow reflect the consideration of when aid dispersion by any individual donor actually becomes problematic. In fact, this implies that the

specific choice of the indicator within the different measures suggested above depends on an assessment of the (transaction) costs of proliferation.

Academic literature on aid proliferation (as defined here, i.e., in accordance with the definitions of the DAC) is rare and leaves us with even less information on this point than the literature on aid fragmentation. Knack and Rahman (2007) suggest that the problem of proliferation might generally be of only secondary relevance. In particular when in-country proliferation is understood as a measure of the spread of a given donor's activities over different sectors, we also cannot see why this should be particularly harmful in itself. The most equal spread might be no problem as long as, in each area, the resources of this donor are high enough to have an impact, or small enough so that it can not easily be integrated into a national or another donor's program. If a donor specializes in certain regions and thus focuses on specific countries, would we want him to withdraw from some sectors within these countries, simply because he is present in many sectors there? If this eventually leads to a greater cross-country spread of his aid resources, transaction costs may actually be higher, because relevant economies of scale may be lost. This problem would be particularly strong, if, against our expectations (see 3.1.3.), the bulk of transaction costs arose at the national rather than at the sector level.

More generally speaking, this shows that measuring in-country proliferation separately from cross-country proliferation may be misleading and creates aid reallocation incentives which are undesirable from the perspective of overall efficiency.

Obviously, if we are in a country with a strong problem of aid fragmentation, we might want to know which donor could reallocate its resources to different sectors or countries. But even then, is it really optimal for those donors to reallocate, who serve most sectors? While this would increase concentration of aid funds, does it imply an improvement if a donor with an ex ante equal spread of aid across sectors, then reduces aid in one sector to put it into another? Section 4 will shed some more light on these issues by presenting the experience in Vietnam and Burkina Faso.

4. Country-case studies

To compare in-country experience with our theoretical deliberations, we selected Vietnam and Burkina Faso as two countries which are very different with respect to their size, their income level, their educational indicators, and aid dependence. According to World Bank data for 2007, Vietnam's population is almost six times as large as the population of Burkina Faso (85 versus 15 million). While both are low-income countries, Vietnam's GNI per capita is 2530 \$ (PPP) while it is only 1120 \$ (PPP) in Burkina Faso. Vietnam has reached more or less universal primary education and a gross secondary enrolment of 65%, whereas in Burkina Faso, the primary completion rate is 33% and gross secondary enrolment 16%. Aid dependence is much higher in Burkina Faso where total aid in percent of GNI is 13.8 as compared to 3.7 in Vietnam.

At the same time, both countries are very similar in terms of various World Bank CPIA governance indices (both with relatively positive ratings for, e.g., macroeconomic management, fiscal policy, or property rights and rule based governance) (World Bank 2009). Moreover, both countries are confronted with a high number of donors and have already gathered considerable experience with DoL management processes.

All in all, we are thus able to compare two countries with relatively strongly committed governments, but very different levels of own resources and shares of foreign development assistance.

Annex II shows a number of fragmentation measures for Burkina Faso and Vietnam as discussed above, based on average commitments in deflated 2008 USD million for the 2006-2008 period. As can be seen, the sector-specific results vary widely across indicators. According to the CR₁, for example, fragmentation ranges from 0.27 (Population Policies and Reproductive Health) to 0.80 (Other Production Sectors). According to CR₃, fragmentation ranges between 0.12 and 0.49, while the HH-1 index shows a range of 0.46-0.89. While the indices show the highest and lowest fragmentation in the same two sectors over these indices, the tables also show that the rankings in between these extremes do change depending on the choice of indicator.

In both countries, the in-country analysis was based on semi-structured interviews with government and donor officials involved in (local) day-to-day aid administration and management. These officials were selected so as to obtain a variety of perspectives on local aid processes, including respondents involved in the overall coordination of aid as well as in specific sector work. Among donors, we attempted to balance the sample between big and small donors. To obtain insights into differences between sectors, we selected our interview partners from those sectors which we expected to differ in terms of the characteristics discussed in Section 3.1.4.

The following sub-sections provide a summary of the evidence collected during the country visits.

4.1. Summary of the results of the case study in Burkina Faso

The case study in Burkina Faso was carried out from June 21-25, 2010. Based on over twenty interviews with ministry officials and donors (see list of interview partners in Annex III) the theoretically plausible indicators were checked for their appropriateness in the local context. In the following, we will present different parts of the discussion which were covered in all interviews, namely: (4.1.1.) The multi-dimensionality of fragmentation and proliferation problems, (4.1.2.) the “ideal” number of donors and transaction costs, (4.1.3.) the type of funding, government capacity, and transaction costs, (4.1.4.) ranking sectors with respect to transaction costs, (4.1.5.) reasons for small donors’ sector choices, and (4.1.6.) problems with existing DAC data.

4.1.1. The multi-dimensionality of fragmentation and proliferation problems

As suggested in earlier studies (Grimm and Schulz 2009) as well as in Section 3.1.1. above, transaction costs arising in the context of aid fragmentation and proliferation are seen as a function of both donor numbers and the type of funding concerned. In addition, government capacity to deal with the different actors is frequently mentioned as an intervening factor. There are divergent views on which of these dimensions is more important. In any case, most interview partners agree that all of these need to be considered simultaneously, and that considering a single dimension alone would be problematic.

The relevance of the type of funding (e.g., project versus program or budget support; aid with prior donor consultations or not; aid with donors trying to enforce different priorities or sharing similar views and trying to follow government procedures, etc.) is emphasized in particular by government officials. For them, the burden is considerably reduced when donors coordinate to form joint baskets, contribute to the sector budget or agree to general budget support. This holds not only for officials in the capital, but even at the regional level, at least

in sectors with a multitude of donors and aid activities. Many government officials suggest that the number of donors is a problem only if there is no joint financing arrangement. For donors, the issue is less obvious because prior consultations among donors leading to such joint financing arrangements imply considerable transaction costs for them.

4.1.2. The “ideal” number of donors and transaction costs

4.1.2.1. Is there an “ideal” number of donors?

To distinguish between the issues of different types of aid on the one hand, and donor numbers on the other hand, we asked interview partners to assume, for a moment, that aid was provided as project aid only. On this basis, all interview partners agree that the number of donors does matter, and that, generally, a smaller number of donors would reduce transaction costs.

However, in all but one interview, respondents clearly indicate that only one or two donors would be too little. With the experience of the World Bank and the European Commission as two major donors with a high level of conditionality, they feel that at least three to five donors should be active in a sector, and that ten would also be a number one could still deal with. In various sectors, there are also clear fears that reducing the number of donors would reduce funding. It is frequently argued that sectors which require a lot of resources will also need more donors, because a small number of donors, even if they are large individually, will not be able to provide the required amount of resources. Sectors mentioned in this context are, e.g., education, health and agriculture. The government’s own sector specific budget allocations were suggested as a possible proxy of the relative funding requirements.

Clearly, no government official would opt for a lower number of donors if this implied reduced financial support.

4.1.2.2. Which donors create the highest relative cost?

Considering which donors create more transaction costs relative to the volume of aid they provide, the answers are not clear. Large donors tend to create considerably more transaction costs at the level of project acquisition and when negotiating the conditions and the monitoring and evaluation procedures. Small donors tend to align themselves with existing procedures, and sometimes they also use delegated cooperation. Once it comes to the actual monitoring and evaluation, however, smaller donors sometimes create relatively higher cost. While big donors might just evaluate a sample of their projects, small donors might want to send a mission to each individual project they support. In addition, there are certain sectors like water and sanitation or rural infrastructure (e.g., road construction) in which the typical (regional) activity units are big, so that they can be handled appropriately only by relatively large donors.

At the same time, donors are often valued for expertise rather than simply financial input. As an example, certain bilateral aid agencies do not provide much funding, but highly appreciated technical assistance and experience in the sector, while the EU as a big donor has only very limited specialized staff in the country. Similarly, some international agencies like UNICEF, FAO or WHO provide very limited funding but are equally appreciated for their sectoral knowhow. It is notable that the mapping study carried out in Burkina Faso points out that the volume of aid is considered the least important criterion when it comes to the choice of a lead donor in any given sector (Schumacher and Sawadogo 2010). In contrast, technical knowhow and sector experience are highlighted as the most central characteristics.

Finally, some government respondents point to the flexibility of some smaller donors which let them appear as ideal complements to other, larger donors with more inflexible procedures. This implies that funding which cannot be obtained by a large donor, or at least cannot be

obtained as fast as required by the government, can often quickly be obtained from a small donor. Depending on whether the rules and conditions of the large donor are considered sensible or perhaps even essential from a development perspective this may be an argument for or against small donors. If the conditions are primarily bureaucratic in nature, it is an argument in favor of small donors.

4.1.3. The type of funding, government capacity, and transaction costs

Government capacity and the type of funding are also considered as mutually dependent categories. Many respondents argue that government capacity is much more relevant when donors do not agree on joint financing and coordinated procedures. Others suggest that government capacity may in fact be endogenous to donor behavior.

Government capacity appears to vary substantially, not only from country to country, but also across sectors. While the low average level of income and education suggests that Burkina Faso might be among the countries with relatively limited capacities, all interview partners agree that there are certain sectors in which government capacity to lead the coordination process between the different actors is actually quite satisfactory.

As mentioned already, joint financing is generally considered as less transaction cost-intensive than individual project financing, at least for the government. However, this reflects only the very broad picture. Different relevant funding sub-types have been mentioned. Apart from general budget support, there is targeted and untargeted sector budget support, and a variety of joint baskets with different procedures. Typically, general budget support is considered to be the easiest procedure generating the least transaction costs, followed by sector budget support, and, finally, by the different joint baskets, whose transaction costs may vary considerably depending on the specific procedural arrangements. While this assessment of transaction costs is unanimous, at least among interview partners from the different ministries, this does not imply that general budget support is generally preferred. It is clearly preferred by the ministry of finance, but less so by sector ministries which do not want to lose those resources which are currently targeted to the sector.

Donors additionally consider their part of transaction costs when trying to agree among each other. This adds costs for joint financing instruments. Nevertheless, there seems to be a consensus that, at least for general budget support, the related international negotiations of general government policies generate an added value over and above the value related to the transfer of financial resources. There is unanimity in the assessment that as many donors as possible should be part of these negotiations, and that for this reason, considering budget aid just as any other sector for an indicator of aid fragmentation and proliferation does not make sense.

As a consequence, in an aid proliferation index based on the number of sectors a given donor is active in, funding of budget aid should not be included. Similarly, budget aid should not be included as a sector when fragmentation is assessed at the country-level. However, budget aid needs to be included in the overall aid volume of a given donor when such indices are computed at the national level (because otherwise a donor might appear as a small donor while it is not).

The same arguments hold, albeit to a lesser extent, when it comes to sector budget and basket financing. Individual respondents suggested that instead of counting each donor within such joint financing agreements, one should count the different baskets which sometimes coexist in a given sector (and then add the donors outside the baskets). However, there are divergent views within interview partners among donors whether the added value of sector policy discussions among donors and between donors and sector ministries is important enough to

justify the transaction costs for the donors in the same way as they do at the level of budget support.

If the index to be derived is to reflect transaction costs for the government side alone (and not for the donor side), the interviews clearly indicate that a treatment in analogy to the above mentioned computation procedure for budget aid would be appropriate. However, this might represent an insurmountable challenge for data collection at the international level.

4.1.4. Ranking sectors with respect to transaction costs

All interview partners expected to have an overview over different sectors were asked to provide their impression of transaction costs in a comparative way. The idea was that this should enable us to distinguish between the different versions of theoretically valid indicators derived in the theoretical part of our study.

Unfortunately, this turned out to be a very difficult task, for different reasons:

First, there is the above-mentioned multi-dimensionality of the transaction costs problem, so that respondents tried to simultaneously consider:

- the number of donors,
- the number of projects,
- government management and coordination capacity,
- the existence of joint funding (and monitoring) mechanisms,
- the strength of the lead donor,
- agreement or divergent views among donors,
- the activities of additional actors such as NGOs.

Second, several respondents considered that in certain sectors there may be high transaction costs, but these costs are directly related to an additional outcome such as learning and generally better results. As mentioned above, this issue came up frequently in the context of consultations on general budget support and partly in the context of sector budget support. It also came up in the context of the reform of public finances.

And finally, the sector cut used in the DAC statistics did not always allow respondents to picture “their” sectors which they considered either as sub-sectors or as sectors cutting across different sectors mentioned in the DAC statistics.

Among those who did respond to the question, despite some conflicting views, overall, the views tend to converge to the following picture (from 1 – highest transaction costs – to 4 – lowest transaction costs):

1. decentralization
2. agriculture (although some individual sub-sectors are largely unproblematic)
3. basic education (health probably at a similar level, but covered only by a single interview)
4. water and sanitation

Decentralization includes many donors with a variety of views. While one interview partner considers this diversity to be useful rather than disturbing, and yet another respondent states that the lack of coordination in the sector actually reduces the number of meetings and thus transaction costs, the majority of the respondents suggest that there are high transaction costs implied by contradictory donor positions, and by the lack of a strong lead both among donors and within government. The situation is aggravated by the fact that different ministries are involved.

As a whole, agriculture also has many donors, but it may be sensible to consider sub-sectors here. It seems that, in this case, the situation would vary strongly among sub-sectors.

In basic education, there is also a high number of donors, but traditional DAC donors and most multilateral agencies active in the sector have recently found a strongly cost reducing

joint arrangement. Even a monitoring-by-objectives (rather than by individual activities and resources allocated) was derived, but was eventually not accepted by the World Bank (which is a highly relevant donor in the education sector of Burkina Faso). Nevertheless, Burkinabe officials in the ministry as well as at the regional level state that the recent agreement has significantly reduced transaction costs. They now start considering how to coordinate NGO financing, which, according to one interview, amounts to about 15% of aid resources in basic education and considerably lacks transparency.

Water and sanitation includes a few major donors which have recently come to an agreement on coordinated interventions and monitoring procedures. Ministry officials are confident that this will considerably reduce transaction costs in the future.

Budget aid is not considered on the list for the reasons given above (see Section 4.1.3.). Other areas were not covered by the interviews.

Comparing this ranking to the sector ranking implied by the different indicators proposed in the theoretical section is a difficult task. Among the above mentioned sectors, only “water and sanitation” fully corresponds to the broad DAC sector classification. For this sector, the simple fragmentation ratio (proportion of donors in the least 10% of aid) appears to capture most appropriately that transaction costs due to aid fragmentation are relatively limited as compared to other sectors. The sectors education (which includes basic education), agriculture and multi-sector (which includes decentralization), however, do not show the ranking corresponding to the interview-based evidence. This may be due to the different sector cuts, or due to the fact that the index does not take into account the more qualitative dimensions considered in the interviews.

4.1.5. Reasons for small donors’ sector choices

When asked about their choice to fund sectors in which they contribute only a small share of overall development assistance, only few donors indicate the existence of niches. One example, in the case of Austria, is professional training considered as funding to the education sector.

The example also witnesses another issue which is mentioned far more often: This is again the problem of sector definitions. Professional training may be considered as education, but also as part of rural development or support to the development of small rural enterprises. In the above mentioned example, this is what the interventions are linked with and where Austria concentrates its development assistance.

Most donors are rather surprised when told about areas where the DAC statistics identify them as insignificant. Generally, they cannot even think of activities in these areas, and make the link only after a while through connections with other sectors as in the above example. The problem is even more acute if a donor actually specializes in cross-cutting activities (e.g., gender, poverty...).

In yet other cases, the only reason respondents can think of for the aid volumes mentioned in the DAC statistics were attributions through donor country NGOs or multilateral organizations. When told that these indirect contributions should no more be included in country programmable aid (CPA) used to compute the data they were confronted with, they simply did not believe that CPA had been correctly calculated.

Finally, some donors indicate that insignificant interventions in some areas may be due to changes of priorities. Phasing out of certain areas always leaves some remaining funding in the sector for a certain interim period.

All in all, the above evidence suggests that current DAC computations of insignificant aid contributions may be cut off at too low a level to be actually meaningful. Moreover, to

capture phasing out, one would need to consider the development over time. And finally, for the many cases in which unclear sector definitions drive the current picture, a fragmentation indicator with implied incentives to reduce the number of sectors can be expected to simply change donor reporting without any change in substance.

4.1.6. Limitations of existing data

As has already become apparent in the above discussion, certain problems which came up, over and over again, in the discussions with the different interview partners are related to the available DAC data base. These problems will be discussed in some more detail in the following.

4.1.6.1. Sector definitions

The discussion of sector definitions has been quite intensive in Burkina Faso. The recent mapping study uses sector classifications which are quite different from those used by the DAC. At the same time, even these locally derived sector classifications are far from being the result of any kind of local consensus. Given the prior discussions, donors are quite aware, however, that these sector definitions have an important impact on how they will be ranked in terms of aid proliferation. Several donors stated that depending on the definitions chosen, their presence may easily vary, e.g., between three and ten sectors, which obviously makes a considerable difference when the objective is (as stated in the mapping study and confirmed by one key respondent in the ministry of finance) that there should be no more than five sectors covered by any individual donor. As already stated above, it is also unclear how to deal with cross-cutting areas on which some donors focus their activities.

4.1.6.2. Problematic concepts and coverage of the DAC data

One central issue here is the interpretation of commitment data. While, in principle, all respondents are aware of the meaning of commitments, many of them cannot make sense of the actual data. The unsystematic time lags and the lack of correspondence between commitments and regular disbursements actually led several donor representatives to believe that the values presented for their activities in Burkina were simply wrong.

As mentioned above, many interview partners had great difficulties imagining that they should be doing something in those sectors in which DAC commitment statistics indicate they are active, but insignificant. To a large extent, this seems to be due to the difficulty to interpret commitment data.

However, this problem is easily solved: Disbursement data are much closer to the activities local donor and government officials actually experience in their daily work. This strongly supports the argument of Section 3.1.1. for the use of disbursements, rather than commitments for the computation of meaningful fragmentation and or proliferation indices.

In terms of coverage, there is the problem that certain donors are not included in the DAC statistics in the first place. Apart from NGOs, there are the new donors (such as the Arab Funds, relevant in Burkina Faso in particular for rural infrastructure). This may distort the overall picture of aid fragmentation based on DAC data. At the same time, if the objective is not so much to draw a precise picture of aid fragmentation, but rather to set better incentives for donor agencies to coordinate their efforts, one may well start with traditional DAC donors, and possibly integrate other donors later.

4.1.6.3. The dimension of the type of support

DAC statistics do not control for the type of support. As mentioned above, most respondents feel that general budget support and delegated aid, or even sector budget support and basket financing, should not be included in the standard computations. When reflecting on a potential revision of the CPA in this context, one should consider whether the aim is to reflect transaction costs from the government or from the donor perspective. As discussed above, this is not identical.

4.1.7. Conclusions

Clearly, transaction costs related to the (in-country) fragmentation and proliferation of aid is seen as a serious problem by all actors. However, it is much less straightforward to capture the problem in a quantitative indicator. While some of the problems discussed above can be handled by appropriate adjustments of data and computation procedures, a number of serious problems remain which will be difficult to solve. We will get back to the details after considering the complementary perspective on these issues from Vietnam.

4.2. Summary of the results of the case study in Vietnam

The case study of Vietnam was carried out from 25-28 May 2010. As opposed to Burkina Faso, in Vietnam, it turned out to be difficult to capture an about equal number of donor and local ministry officials' position. In part, this was due to a meeting by the Consultative Group (CG) for Vietnam on June 9, involving important discussions between the Vietnamese government and bilateral and multilateral donor agencies. Moreover, the reaction of local government officials to requests for interviews also conveyed an impression of a strong sense of priorities which discussions with consultants most apparently did not belong to. While, in a way, we tend to interpret this as a rather positive sign of self-confidence, it considerably reduced the number of interviews with local government officials. Eventually, we carried out a total of nine interviews, two with ministry officials, and seven with donor representatives (see list of interview partners in Annex III). Given the low number of interviews conducted with ministry officials, most of the points raised below are derived from interviews with donors.

In the following, we will again distinguish between different parts of the discussion which were covered in all interviews (and reflect, as far as possible, those reported for Burkina Faso), namely: (4.2.1.) The multi-dimensionality of fragmentation and proliferation problems, (4.2.2.) the "ideal" number of donors and transaction costs, (4.2.3.) reasons for donors' sector choices, and (4.2.4.) problems with existing DAC sector definitions.

4.2.1. The multi-dimensionality of fragmentation and proliferation problems

As in the case of the Burkina Faso country study, transaction costs arising in the context of aid fragmentation and proliferation are seen as a function of both donor numbers and the type of funding concerned. Contrary to Burkina Faso, government capacity to deal with the different actors is, however, not seen as a problem in Vietnam.

The relevance of the type of funding and whether the government's own systems are used in providing money is frequently mentioned. For the government, the burden is reduced when donors coordinate to form joint baskets, contribute to the sector budget or agree to general budget support. Just as in the case of Burkina Faso, some donors mention that joint financing

arrangements imply considerable transaction costs for them, however. From the donor perspective, the resources required for budget support are rather intense either. This stresses the need to look at separate fragmentation indices from the donor or recipient perspective.

One donor underlines that the transactions costs primarily depend on the *quality* of local systems. Within a three years from now, local systems are expected to have improved in a way to substantially reduce transactions costs. Another factor mentioned to be important for the degree of transactions costs is whether and to what extent donors have similar concepts and preferences about development strategies. The health sector is mentioned as an example, where there are many donors with different views on how to best develop the sector. The debate between donors might have slowed reforms, it is argued. In other sectors, however, the same donor mentions that donors work well together.

One donor mentions that, from its own perspective, fewer donors would be better as it could then better deal with the government. Overall, however, the donor expects Vietnam to, benefit from a variety of donors. The multiplicity of donors can help forming the debate about how best to develop Vietnam and can thus be seen as an indirect form of technical assistance and capacity building for government staff that have otherwise rare contact with foreign officials.

Two donors mentioned that transactions costs would not at all pose a problem given that the Vietnamese officials can decide on whether or not to meet certain donors or delegations. They can thus clearly decide to not meet with certain consultants if they do not expect to benefit from the meeting, or the costs of the meeting exceed the benefits. In other words, a country with the institutional capacity of Vietnam can be expected to decide on its own what the optimal number of donors should be. If, for example, establishing foreign relations is valuable for the government, the benefits of having an additional donor might well exceed the additional costs arising from more transactions. And, as in the above example, these additional benefits may not even become apparent in terms of aid effectiveness, but in a totally different area. The same might also hold for costs of coordination among donors. One donor argues that 90 percent of requests for meetings etc. get declined, even when meetings would be sensible. (Note that this implies that the donor himself considers that not all meetings requested are effectively required.)

4.2.2. The “ideal” number of donors and transaction costs

4.2.2.1. Is there an “ideal” number of donors?

The interview partners are not able to identify any “ideal” number of donors. In fact, they agree that the number of donors per se is largely irrelevant to the problem. More relevant is whether or not (recipient) country systems are used. One donor stresses that one international financial institution, e.g., manages many different funds, all with different rules and procedures and thereby creates higher transaction costs as other donors. The World Bank’s Poverty Reduction and Strategy Credit (PRSC) is mentioned as an effective tool to reduce transactions costs; efforts to develop PRSPs in the first place are substantial, but then only minor efforts are needed to make changes over time. When many donors participate, this can be rather efficient.

One donor stresses that coordination is crucial, not the number of donors. It is mentioned that not even in the EU group there is central coordination. Even among a given donor’s different aid agencies, coordination is sometimes difficult. Another donor argues that the donors’ strategic interests are responsible for the lack of coordination, as Vietnam becomes an

important buyer of donor country imports. Donors' economic interests are seen as one reason for establishing the aid relationship.

4.2.2.2. Which donors create the highest relative cost?

With respect to a differentiation between donors in terms of the transaction costs they create, information was difficult to come by. In fact, there was a general reluctance to openly answer this question. But as shown by the above example of the World Bank, sometimes big donors are considered to generate such large transaction costs that they become less attractive partners than certain smaller donors. In addition, in several interviews respondents suggest that smaller donors sometimes come up with interesting ideas and innovations and may thus be of particular value (thereby compensating potentially higher relative transaction costs). This confirms certain views expressed in Burkina Faso and corroborates our corresponding theoretical discussion in Section 2.1.

4.2.3. Reasons for donors' sector choices

One donor reacts to the fragmentation debate. Rather than spreading aid thinly across sectors, the donor focuses on three pillars which are the result of negotiations and are identified by the Vietnamese government. As a reaction to the fragmentation debate, amounts of aid have been increased, but more narrowly focused.

Another donor points at the country's long aid relationship with Vietnam. Sector allocation is mainly determined by history, tradition, specific Vietnamese requests, negotiations, and attempts to find out where value can be added.

When asked about their choice to fund sectors in which they contribute only a small share of overall development assistance, some donors indicate the existence of niches. One example, in the case of Sweden, is the fight against corruption, a sector in which Sweden has particular expertise. Finland, as another donor with a small volume of aid to Vietnam, focuses on the forestry sector which, is a big traditional economic sector in Finland itself. Finland also remains in the water supply and sanitation sector. While many other (and larger) donors are in that sector, Finland has a long tradition there, and a trustful relationship with the government. It invested in making the donor-recipient-relationship work.

One of the big donors stresses the effective use of aid funds in Vietnam and its desire to have its money used effectively as reason for its involvement. According to the donor, the first stage when deciding where to give aid is alignment and ownership. Aid is given in line with Vietnam's five-year development plan and the donor thinks about what can be contributed to the plan. The second step is discussions with Vietnam and cross-checks with other donors to avoid Vietnam from shopping around for the best offer.

Another donor points out that aid is given to three main sectors (according to the donor's definition) which have been negotiated with the Vietnamese government. The donor currently provides no budget support, as Vietnam is considered to be too corrupt and undemocratic.

A government representative stresses that development aid is seen as part of foreign relations by the Vietnamese. They have been isolated until recently and want to have good relations with as many countries as possible. The government wants to have different donor experiments on similar projects to be able to compare outcomes and identify the best strategy for development. This highlights the perceived relevance of competition.

4.2.4. Problems with existing DAC sector definitions

A number of donors mention that their sector definitions do not match those of the DAC. It would make little sense to them if their allocation of aid was judged by the DAC statistics. For example, a country that feels it allocates aid to four sectors only according to its own definition might actually be counted to be in a substantially larger number of sectors according to the DAC's definition. This fully reflects the concerns we also encounter in Burkina Faso (see Section 4.1.6.1.).

4.2.5. Conclusion

In summary, while aid fragmentation and proliferation is seen as creating costs by the majority of interview partners, the respondents do not feel that the costs of fragmentation can be reflected by a quantitative indicator. A minority even stress that fragmentation poses no problem at all for a country with the institutional capacity of Vietnam. By some interview partners, many donors are even seen as advantageous. They argue that the benefits of dealing with more donors outweigh the costs as otherwise Vietnam would not accept to meet those donors in the first place.

5. Overall conclusions and policy recommendations

In this study, we set out to define indicators for in-country aid fragmentation and proliferation which should be theoretically appropriate, easily understandable and computable, and reflect the actual problems involved. The most serious problem generated by aid fragmentation and proliferation are the transaction costs. This is also recognized by all respondents to the interviews carried out for our two country-case studies in Burkina Faso and Vietnam. However, these transaction costs are not linearly and not even always monotonously related to the number of donors within any given country or sector. Moreover, they may be over-compensated by effects on incentives and on donor competition.

The resulting account of the problems involved with in-country aid fragmentation and proliferation thereby also depends on whether we adopt a recipient- or a donor-country perspective. Recipients of aid tend to prefer a certain competition among donors, and are not really concerned with problems of enforcing conditionality. They are often grateful for the existence of some small and flexible donors which they can ask for funding when they feel that bigger donors' processes and conditions are too heavy and burdensome. Moreover, for recipient country governments, certain joint financing agreements, notably general budget support and sector budget support imply considerably reduced transaction costs, while this is usually not the case for donors who then have higher coordination costs beforehand.

A number of other difficulties arise when we try to compute an appropriate indicator. Most of them have been pointed out in the theoretical part of this study and were confirmed or further specified in the empirical part. Based on this, we first conclude on the recommended indicators, with their benefits and drawbacks. Second, we discuss the problems we see in using these indicators and potential solutions. Third, we discuss which qualitative information we deem necessary to complement the quantitative indicators. The last section concludes with a brief recommendation on further steps.

5.1. Choice of Indicator(s)

Differences in sector definitions and the difficulty to capture the different dimensions of aid fragmentation and proliferation make it very difficult to discriminate between the different types of suggested fragmentation and proliferation indicators, based on evidence from our interviews. However, the interviews confirm that, at least from the recipient government perspective, less than three to five donors are usually seen as problematic. Thus, indices focusing on the relevance of a few large donors do not seem to be appropriate. This excludes the indicators based on the traditional Herfindahl index as well as on CR₁ or CR₂ (see Section 3.1.2.).²³ More appropriate indicators would be CR₅ (CR₄ or CR₃), the fragmentation index based on the ratio of “insignificant” donors, or the donor count index. We discuss these indices in turn.

a.) CR₅ (CR₄ or CR₃)

These measures add up the shares of 3-5 donors, so that any shift in proportions among these large donors or among the group of remaining donors does not alter the result, while any change from other donors towards these large donors, or any additional projects from new donors will do so. The biggest 3-5 donors are considered as if they were one. This implies that 3-5 donors are not seen as a problem, but each additional donor contributes to the fragmentation problem as far as it reduces the share of the largest donors. This has the obvious disadvantage that the concentration of aid among the group of remaining donors, as well as their number is not taken account of. 20 small donors will be treated equally as 10, as long as the share of the biggest donors remains unchanged.

b.) The fragmentation index based on the ratio of “insignificant” donors

The fragmentation index based on the ratio of “insignificant” donors could also be used (i.e., a simple count of donors with an aid share below a certain threshold divided by all donors). While the CR indicators do not consider the distribution among the 3-5 largest donors, but changes between these donors and other donors or the entry of new donors would affect the index, the latter does not consider the dominance of a number of larger donors.

Our interviews do not allow us to clearly differentiate among these indices. Recalling the different patterns of fragmentation ratios according to the various scenarios discussed above highlights that quantitative indicators can only give a very rough indication of the fragmentation problem. One index can be considered as meaningful as another, and the results might substantially differ. We suggest calculating all four suggested indicators. The indicators per se should, however, not be used to decide on whether donors should withdraw from sectors or countries. They can only be the basis for a qualitative discussion of the benefits and costs of a particular donors’ presence in this sector or country. Only a detailed analysis of the specific costs and benefits, taking all donor-, sector-, and recipient-specific circumstances into account can be the basis for such decisions.

For the donor count index, “insignificant” in the context of in-country DoL, should be derived in terms of the donors’ contribution to sector (or country) aid, independently of the donor’s overall aid budget (see Section 3.1.2.). In other words, it should not matter how much of its budget a donor allocates to a particular country or donor, but how important that contribution can be considered from the recipient country’s perspective. However, the above-suggested cut-off point (donors in the least 10% of the corresponding aid budget) is so low that some

²³ Indicators based on inequality measures (such as the Theil index) were shown to have general characteristics which let them appear less appropriate for the purpose of measuring aid fragmentation and proliferation.

donors are not even aware of the activities accounted for here. We thus suggest increasing the cut-off point to at least 20%.

As discussed above, commitment data do not reflect the experience of governments and donor officials. For any indicator intended to be meaningful for these officials, disbursement rather than commitment data should be used.

On the issue of a financial threshold from below for any aid activity to be considered (see fn. 19), the interviews do not provide any clear indication. In fact, there does not seem to be any obvious threshold below which we never have to do with actual project activities. While such a threshold may make sense in principle, it always remains arbitrary. As long as any such threshold is introduced, the problem of implausible discontinuities mentioned in fn. 19 cannot be avoided. But we do not believe that this relatively minor issue will significantly alter the values of any indicator.

Regarding the appropriate level of measurement, a differentiated observation at the sector level appears relevant. There are likely important differences in the characteristics of the different sectors which make a separate analysis appropriate. Arguably, the fragmentation problem may be much stronger in some sectors than in others, and only a differentiated analysis will allow us to determine where reform is most strongly required. Finally, generating an overall country index may overestimate fragmentation if donors specialize in different sectors. It would be possible to aggregate sectoral indices into a national indicator by taking simple averages. General budget support can then be excluded given that the average would be based on CPA to the different sectors rather than the country portfolio. To the extent that important differences between sectors exist that can be captured by sector weights the appropriate alternative would be a weighted average. In countries where most of the transaction costs arise at the national level we suggest to construct an additional index for the national level. An average of sectoral indicators will then not provide an adequate measure of country level fragmentation. The usefulness of the overall as compared to the aggregated index thus depends on the specific country circumstances.

Our interviews also show that countries which differ in income and capacity have different needs in terms of avoiding aid fragmentation and proliferation. This is one of the most obvious messages when comparing our country-case studies for Burkina Faso and Vietnam. While the transaction costs implied are acknowledged by respondents in both countries, our interview partners in Vietnam generally consider that it is impossible to capture the problem in a quantitative indicator. The main argument is that a country like Vietnam knows exactly what it does, and would have the power to reject donors if their presence implied more costs than benefits. As benefits are not restricted to the area of aid, but may arise in terms of international relations more generally, or in terms of international trade, it does not suffice to look at aid effectiveness in this context.

The discussion strongly suggests that the whole exercise of computing indicators for aid fragmentation and proliferation therefore does not make sense for more advanced developing countries. We therefore suggest limiting the further discussion of the introduction of such indicators to low-income countries under a certain threshold of GNI per capita (PPP), with a certain degree of bureaucratic quality, secondary enrolment rates or other proxies of capacity.

When it comes to proliferation rather than fragmentation, we conclude that measuring in-country proliferation is misleading and might create aid reallocation incentives which are undesirable from the perspective of overall efficiency. Clearly, the same indices suggested to

measure fragmentation of aid can also be used to measure proliferation. However, we did not find any evidence that it is optimal for those donors to reallocate their aid who serve most sectors. We therefore suggest using these indicators as a first step in identifying potential problems. Decisions should then only be made on the basis of qualitative evidence derived in the context of a specific donor's contribution to a specific sector in a particular country.

5.2. Problems and suggested solutions

A substantial problem for which we cannot suggest any solution so far, is that of sector definitions. Depending on sector definitions, our indicators will vary considerably. Different sector definitions are employed simultaneously by different donors in a given country, so that donor activities may be very focused even if they appear to be widely scattered across sectors (see Section 4.1.6.1.). This problem cannot be overcome by using national sector definitions – not only because this would lead to a loss of comparability across countries, but also because even within a given country, it is very difficult to reach an agreement (and even if an agreement was made, the issue of cross-cutting activities would remain).

Currently, small activities which would fall into the DAC definition of “insignificant” can often be identified as activities related to a core project classified as part of another sector. If an indicator is introduced which sanctions scattered small aid activities, the expected reaction is simply a change in reporting. The question thus arises whether any meaningful interpretation of the indicators will then be possible. In any case, at least during the first couple of years, the indicator would have to be interpreted very cautiously.

Changing the cut-off point for “insignificant” donors ($\leq 10\%$ of funding) to “small” donors ($\leq 20\%$) as suggested above might mitigate the problem to some extent. But it remains a relevant caveat for the computation of any meaningful indicator.

According to our interviews, the mode of aid delivery matters at least as much as the number of donors. Special consideration will therefore have to be given to joint financing initiatives. This is particularly relevant when considering transaction costs from the recipient rather than from the donor perspective. In this context, it appears relevant to: (i) calculate CPA net of budget aid (but cross-check that aid proliferation for an individual donor is not driven by this deduction); and (ii) consider sector budget support in a similar way for the calculation of sectoral indicators. In principle, basket financing would also have to be considered separately, as an option between budget support and project aid. However, this appears difficult to implement in practice given current data availability. Moreover substantial qualitative differences between different types of baskets make them difficult to compare.

Small donors (in financial terms) are sometimes highly valued for their flexibility, their sector knowledge and experience and their innovative ideas. This implies that, at least when computing proliferation indices in order to generate incentives for donors to concentrate their aid, special know-how or other sector engagement needs to be taken into account. In this context, a secondary indicator to look at (e.g., in the context of a DAC peer review), could be the donor's activity as the sector coordinator “chef de fil” or, if the sector specification is sufficiently narrow, an indicator of know-how based on activities in the same sector across all developing countries.

5.3. Recommended additional information

It seems to us that the most challenging problem is the multidimensionality of fragmentation, as outlined above. Consequently, we are not sure the development of quantitative indicators is the right way forward here. As outlined above, they might be useful to give a first indication of the problem of fragmentation and proliferation. However, which of the indices discussed above is more or less preferable depends on the context of specific donor-recipient relationships, and the specific sector under investigation. Depending on the structure of this relationship, one or the other indicator can be more or less meaningful. We therefore recommend to only use the quantitative indicators suggested above to get a broad overview of potential problems with the fragmentation and proliferation of aid, and then discuss the specific case in detail, with the participation of the relevant donors and recipients. Additional information will be needed to make these decisions. In particular, information on government capacity is important, and on the governments' and donors' objectives. To the extent that the motives for giving aid are political or commercial rather than merely developmental, different considerations will be important.

Additional information we deem important based on the above discussion refers to the degree of basket funding, the mode of aid delivery, the degree of aid conditionality (and an evaluation of whether and to what extent these conditions are oriented towards development or rather geo-strategic motives), the number and size of projects, the existence of joint funding (and monitoring) mechanisms, the existence and strength of a lead donor, the extent of agreement or rather disagreement among major donors, and the activities of additional actors such as NGOs or 'new' donors.

While we think this additional information is vital to take a meaningful decision on whether a particular donor is beneficial or rather harmful in a particular sector and country, it is clear that most of this information cannot be collected in a standardized way. Without the context of this information we suggest to not give the calculation of quantitative indicators priority but rather rely on country- and donor-specific solutions.

5.4 Suggested next steps

In summary, we suggest analyzing whether and to what extent the fragmentation and proliferation of aid poses problems to the effectiveness of aid at the country-, sector-, and donor-specific level rather than on the basis of quantitative cross-country indicators. Still, we think the calculation of such indicators is useful to allow a first comparison. We therefore suggest (i) to calculate the indicators suggested above on a yearly basis for a time period as long as possible and as many countries as possible. The next step should be (ii) for the donors and recipients in a particular country to identify the most appropriate solution, based on additional donor- and sector-specific information.

For countries with sufficient institutional capacity we conclude that the calculation of quantitative indicators is not useful.

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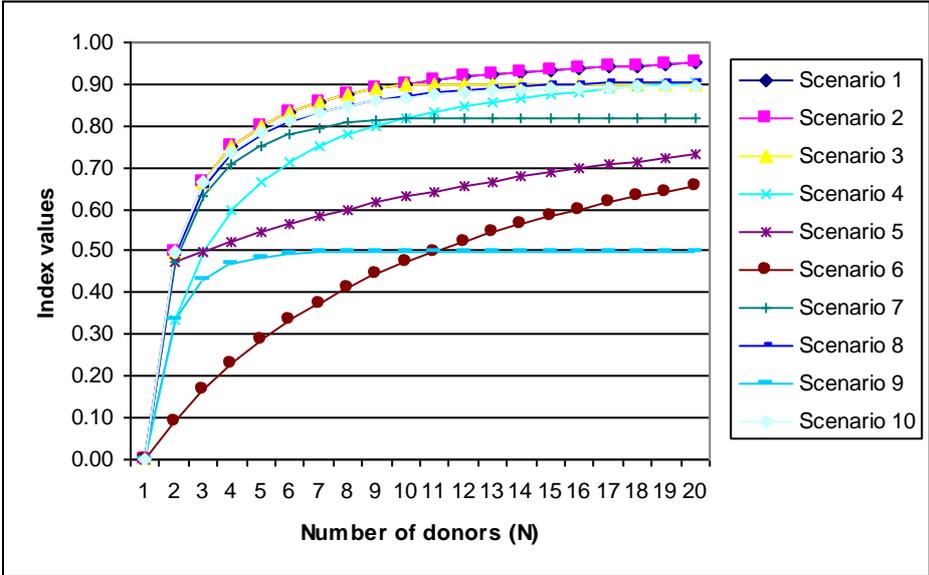
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Annex I: Fractionalization based on various indices

Figure 2 presents the fragmentation index derived from the concentration ratio based on the one largest donor ($NI=1$). The different scenarios are illustrated using the same colors and markers as in Figure 1 in the main text above, so that the figures can easily be compared. In fact, Figures 1 and 2 look strikingly similar. Only towards the right hand side with many donors, the different curves are slightly further away from each other in Figure 2 than in Figure 1. With $F_{CR(1)}$, not all indices reach values as high as with F_{HI} .

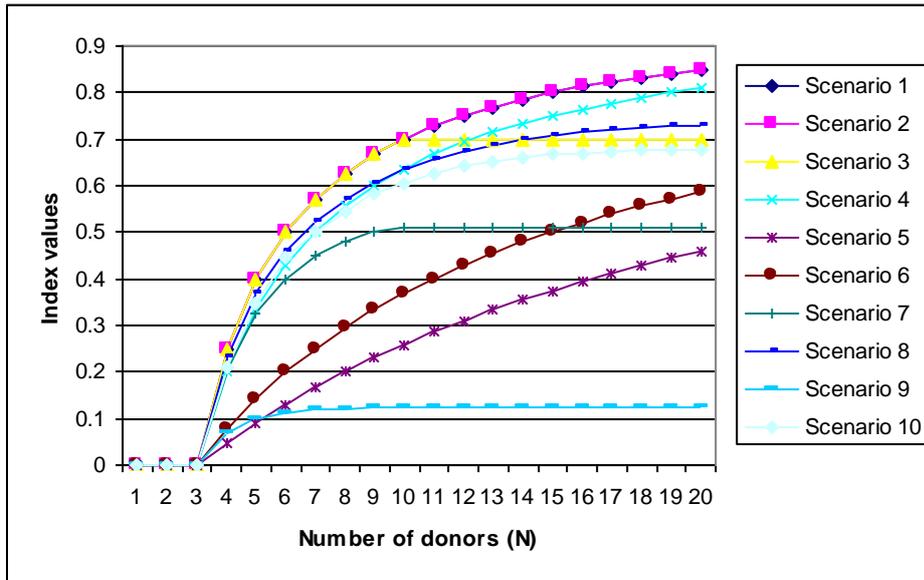
Figure 2: Fractionalization based on CR_1 under different scenarios



We get a significantly different picture, however, if we consider the fragmentation index based on a concentration ratio for the three largest donors $F_{CR(3)}$ (see Figure 3). This index captures the situation much better, if we can assume that up to three donors, fragmentation is no problem, since up to this level, the advantages of minimum competition may outweigh the additional cost for aid management and coordination.

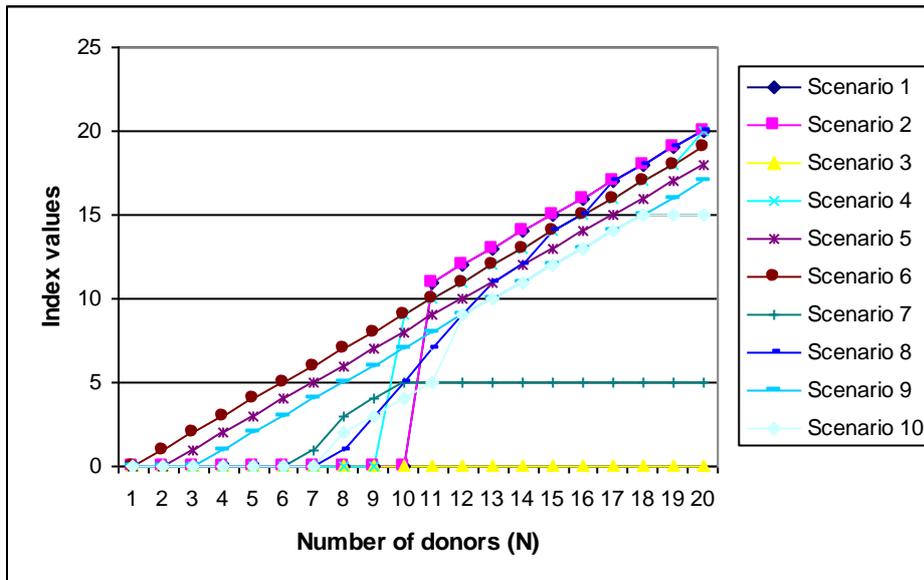
Given that the share of the three biggest donors is used jointly in the calculation, this fragmentation index is only computable when at least three donors are active in the country or sector concerned. For smaller donor numbers, we set the index equal to zero indicating that there is no fragmentation.

Figure 3: Fractionalization based on CR_3 under different scenarios



Let us finally consider the simple donor count for donors whose contribution remains under a certain aid share s . Figure 4 presents again the same scenarios as above, setting $s = 10\%$.

Figure 4: Fractionalization based on $DN(10\%)$ under different scenarios

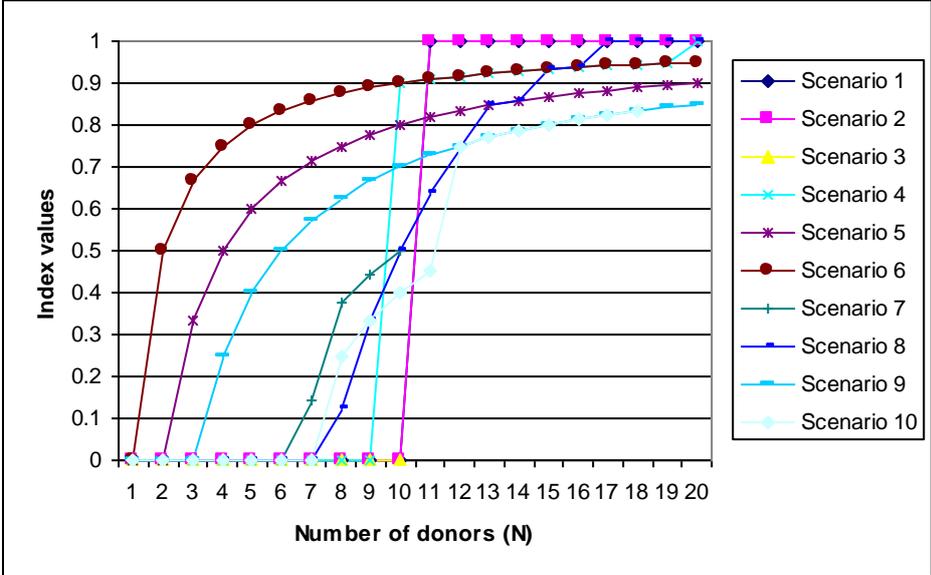


Clearly, the picture here is pretty different and quite rough. For various scenarios, we observe noticeable jumps in the measure ($F_{DN(0.1)}$) when the addition of one more donor leads the contribution of several other donors to fall under the 10% threshold (especially Scenarios 2 and 4). Scenarios 6, 5 and 9 which showed relatively low fragmentation according to all other indicators considered so far, now appear to go along with relatively high fragmentation, particularly when the overall number of donors is rather small (to the left of the graph). This is because they all come along with one to three dominant donors whose dominance (and hence the implied concentration) are not considered in the simple count index. At the same time, precisely due to this dominance of a few donors, most other donors fall below the required minimum share and therefore contribute to the rise of the fragmentation indicator. These features let the fractionalization measure based on donor counts appear rather

unattractive. While it is easy to interpret and easy to compute, taking into account proportions only in terms of a single cut-off point constitutes a non-negligible disadvantage.

Relating the simple count of donors with insignificant relationships to the overall number of donors does not solve the above mentioned problems (Figure 5). We still observe the same implausible discontinuities for a number of relevant scenarios. Whenever all donors in a country provide the same amount of financial support, augmenting the number of donors from 10 to 11 leads to a jump of the index from its minimum 0 (no fragmentation) to its maximum 1 (scenario 1 and 2).²⁴

Figure 5: Fragmentation ratio $F_{DN(10\%)/N}$ under different scenarios



²⁴ Also note that *very* small donors (“micro-donors”) might not generate significant additional transaction costs because they will only intervene punctually without (much) need for government action and strategic management. This leads to the suggestion to fully exclude micro-donors from the above calculations. This, however, will lead to yet another implausible discontinuity. Let the threshold be at 500 000 USD as suggested by Acharya et al. (2006). Then any donor with small activities just above the threshold will be considered most strongly detrimental to fragmentation, while with just a few dollars less, this donor’s activities would be considered as fully irrelevant in this respect.

ANNEX II: Fragmentation Indices for Vietnam, 2006-2008 Commitments

	Concentration index - 1 donor	Concentration index - 3 donor	Fragmentation ratio - proportion of non-significant relations (according to DAC report on fragmentation)	Fragmentation ratio - proportion of donors in Least 10%	1-HH-index - all donors
Education	0.78	0.41	0.35	0.61	0.86
Health	0.71	0.47	0.35	0.52	0.87
Population Policies and Reproductive Health	0.27	0.12	0.50	0.78	0.46
Water Supply and Sanitation	0.61	0.36	0.33	0.61	0.80
Other Social Infrastructure	0.53	0.34	0.40	0.55	0.74
Economic Infrastructure	0.59	0.18	0.78	0.83	0.73
Agriculture	0.75	0.31	0.55	0.70	0.82
Other Production Sectors	0.80	0.49	0.35	0.52	0.89
Environment	0.76	0.38	0.35	0.59	0.83
General Budget Support	0.63	0.28	0.18	0.45	0.78
Government and Civil Society	0.48	0.37	0.29	0.50	0.71
Multi sector	0.51	0.34	0.29	0.54	0.73

Example of fragmentation measures

Concentration index - 1 donor	Concentration index - 3 donor	Fragmentation ratio - proportion of non-significant relations (according to DAC report on fragmentation)	Fragmentation ratio - proportion of donors in Least 10%	1-HH-index - all donors
2	3	6	5	3
5	2	6	9	2
12	12	3	2	12
7	6	9	4	6
9	8	4	7	8
8	11	1	1	10
4	9	2	3	5
1	1	6	9	1
3	4	5	6	4
6	10	12	12	7
11	5	10	11	11
10	7	10	8	9

RANKING = 1 indicates the sector with highest fragmentation

Source: Fredrik Ericsson, OECD

ANNEX II (continued): Fragmentation Indices for Burkina Faso, 2006-2008 Commitments

	Concentration index - 1 donor	Concentration index - 3 donor	Fragmentation ratio - proportion of non-significant relations (according to DAC report on fragmentation)	Fragmentation ratio - proportion of donors in Least 10%	1-HH-index - all donors	Concentration index - 1 donor	Concentration index - 3 donor	Fragmentation ratio - proportion of non-significant relations (according to DAC report on fragmentation)	Fragmentation ratio - proportion of donors in Least 10%	1-HH-index - all donors
Education	0.61	0.27	0.50	0.63	0.77	4	6	2	5	4
Health	0.65	0.32	0.41	0.59	0.81	3	4	9	7	2
Population Policies and Reproductive Health	0.71	0.39	0.29	0.59	0.83	1	1	10	7	1
Water Supply and Sanitation	0.68	0.30	0.50	0.64	0.79	2	5	2	4	3
Other Social Infrastructure	0.51	0.22	0.47	0.60	0.71	8	7	6	6	8
Economic Infrastructure	0.46	0.15	0.47	0.67	0.66	9	9	6	3	9
Agriculture	0.60	0.22	0.29	0.57	0.72	5	8	11	9	7
Other Production Sectors	0.11	0.05	0.64	0.86	0.20	12	12	1	1	12
Environment	0.23	0.08	0.45	0.73	0.40	11	11	8	2	11
General Budget Support	0.34	0.12	0.29	0.43	0.53	10	10	11	12	10
Government and Civil Society	0.52	0.32	0.47	0.53	0.74	7	3	5	11	6
Multi sector	0.56	0.36	0.50	0.56	0.77	6	2	2	10	5

Example of fragmentation measures

RANKING = 1 indicates the sector with highest

Source: Fredrik Ericsson, OECD

Annex III: List of interview partners in Ouagadougou, Burkina Faso (21-25 June, 2010)

1. Government of Burkina Faso

Ministry of Economics and Finance

Justin HIEN, Director General of Cooperation

Inoussa OUMINGAT, Director of Bilateral Cooperation

Marie Eugénie MALGOUBRI, Director of Coordination of Poverty Reduction Policies

Dramane KONÉ, Director General of the Budget

Ministry of Agriculture, Water and Fisheries

Jean Matthieu BINGBOURÉ, Director General of Water Resources

Ousmane BONKOUNGOU, Head of service, Infrastructure Development for Water Supply

Stanislas TANOÛ, Planning and Technical Support

Mr. Paré, Head, Monitoring Office

Youbi BANTIDA, Vice-Head, Permanent Secretariat of Coordination of Agricultural Sector Policies (Accompanied by Helmut GOESER, GTZ)

Souleymane OUÉDRAOGO, Director General for the Promotion of the Rural Economy (Accompanied by Andrea WILHELMI-SOMÉ, GTZ)

Ministry of Territorial Administration and Decentralization

Baba DIÈME, Secretary General

Ministry of Basic Education and Alphabetization

Paul DIABOUGA, Director of Education Planning

Ignace ZOMBRÉ, Head of service, Planning and Prevision

Jean Edmont ZIDA, Head of Service, Coordination and Monitoring

Regional level

Gnissa GANOU, Regional Director of Basic Education and Alphabetization, Boucle de Mouhoun

2. Donors

Austria

Elisabeth SÖTZ, Councilor, Head of coordination office for Development Cooperation, Austrian Embassy

Denmark

Ulla TAWIAH, First Councilor, Royal Embassy of Denmark

European Union

Theo HOORNTJE, Head of Cooperation, Delegation of the EU to Burkina Faso
Firmin Gérard OUÉDRAOGO, Assistant to the Head of cooperation, Delegation of the EU to Burkina Faso

France

Patrice TRANCHANT, Director, Agence Française de Développement (Afd)
Christophe BARAT, responsible in the areas macroeconomics, water and sanitation, Afd

Germany

Ute MÖHRING, First Secretary, Head of cooperation, German Embassy

Marina MDAIHLI, Country Director, GTZ Burkina Faso

Stephan NEU, Office Director, KfW Ouagadougou

Luxembourg

Rol REILAND, Chargé d'Affaires a.i., Embassy of Luxembourg

World Bank

Galina SOTIROVA, Country Representative, The World Bank

Annex III (continued): List of interview partners in Hanoi, Vietnam (25-28 May, 2010)

1. Government of Vietnam

Ministry of Planning and Investment (MPI)

Dr. Ha, General Director Department of General Economic Issues

Ministry of Construction (MOC)

Mr. Pham Khanh Toan, Ph.D., Deputy Director General of International Cooperation Department

2. Donors

Australia

Mr. Kerry Groves, Development Counselor AusAID, Australian Embassy

Finland

Mr. Max Bonsdorff, Counselor Development Cooperation, Finnish Embassy

France

Ms. Emmanuelle Boulestreau, French Embassy
Mr. Matres, Director, Agence Française de Développement (AFD)

Germany

Ms. Wendling, Development Counselor, German Embassy

Japan

Mr. Toru Arai, Representative, Japan International Cooperation Agency (JICA)
Mr. Eichiro Hayashi, Senior Project Formulation Advisor, Japan International Cooperation Agency (JICA)

World Bank

Mr. Alain Barbu, Manager, Portfolio and Operations, World Bank Office Hanoi

3. Others

Like-minded Donor Group

Elke Foerster, Ph.D., LMDG Aid Effectiveness Advisor, Vietnam-Canada Project Support Unit