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The hard challenge of aid co-ordination

François Bourguignon[1] and Jean-Philippe Platteau[2]

July 2013

Abstract

Aid co-ordination is a constant theme of discussion among national and international aid agencies in their search for more effectiveness and efficiency in delivering development assistance. This paper seeks to clarify some of the arguments currently made in support of aid co-ordination, and to precise unavoidable trade-offs born of the existence of political costs. It is anchored in the available literature on aid delivery while focusing on the implementation problems of aid co-ordination among donor countries. In particular, it deals with: (a) the issue of consistently and collectively handling possible governance failures in recipient countries; and (b) the impact of heterogeneity of donor countries on the effectiveness of aid co-ordination.

Keywords: development aid, co-ordination, aid efficiency
JEL classification: C1, O1, O2, O4

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The Hard Challenge of Aid Coordination

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May 13, 2013

Abstract

Aid coordination is a constant theme of discussion among national and international aid agencies in their search for more effectiveness and efficiency in delivering development assistance. This paper seeks to clarify some of the arguments currently made in support of aid coordination, and to precise unavoidable trade-offs born of the existence of political costs. It is anchored in the available literature on aid delivery while focusing on the implementation problems of aid coordination among donor countries. In particular, it deals with: a) the issue of consistently and collectively handling possible governance failures in recipient countries; and b) the impact of heterogeneity of donor countries on the effectiveness of aid coordination.

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1 Introduction

The need for aid coordination has become a recurrent theme in the discussions and strategic thinking of national and international aid agencies. The Paris Declaration (March 2005) and the Accra Agenda for Action (September 2008) thus mentioned aid coordination as one of the key mechanisms to be mobilized with a view to enhancing aid effectiveness. The signatories, indeed, made a commitment to eliminate duplication of efforts and rationalize donor activities so that they become as cost-effective as possible. The European Union (EU), in particular, has enshrined the importance of aid coordination with other donors in several policy documents: Consensus on Development (2006), the Code of Conduct on Division of Labour (2007), and the Operational Framework on Aid Effectiveness (2009) based on the international aid effectiveness agenda. Among the ambitious goals featured in these documents are the following: a better alignment of donor priorities with partner countries' development strategy, the donor harmonization of conditionalities, improved mutual accountability and transparence, management for results, the delegation to a leading donor of the responsibility of managing aid to a particular country, co-financing arrangements, and even joint programming and the pooling of aid resources destined for recipient countries.[1]

The gains of aid coordination from the standpoint of donor countries can be usefully thought of as belonging to the categories of cost savings and governance benefits. Cost saving effects are expected to result from a substantial reduction in the individually borne transaction costs accompanying the various steps involved in the aid delivery process: exploratory missions, negotiations,

[1] Interestingly, effective coordination of aid programs is a legal obligation for the Union and its Member States. Article 210 of the Lisbon treaty thus states: "In order to promote the complementarity and efficiency of their action, the Union and the Member States shall coordinate their policies on development cooperation and shall consult each other on their aid programs including in international organisations and during international conferences".

delivery, monitoring, follow up, and evaluation. As for the governance effects, they are caused by a more effective implementation of conditionalities and better monitoring of aid uses, on the one hand, and higher levels of aid ownership and transparence, on the other hand. The poor in the recipient countries ought to be better off as a consequence of those improvements of governance and the more rational use of their scarce human capital resources. For donor countries, the main shortcoming of aid coordination is the loss of national sovereignty and the impeded ability to pursue national objectives through aid programs. For recipient countries, it is their diminished independence owing to reduced competition among donors.

Given the variety of effects likely to result from aid coordination schemes and the serious obstacles in the way of their realization, which add to their uncertainty, efforts to quantify the benefits of such schemes are extremely perilous (see the contribution of Bigsten in this issue for a recent attempt to assess the benefits of aid coordination among European countries). Our purpose in this paper is rather to clarify some of the arguments in support of aid coordination in the light of the unavoidable trade-offs born of the existence of political costs.Our discussion is anchored in the available literature but also proceeds by delving into the implementation problems. In particular, it sets about highlighting (1°) the difficulty of carrying out punishment against lapsing recipient governments, and (2°) the impact of heterogeneity of donor countries on the effectiveness of aid coordination.

The outline of the paper is as follows. In Section 2, we review the scant economic literature that touches on the issue of aid coordination on a theoretical level, either directly or indirectly. In Section 3, we analyze the issue of aid coordination as a n-player coordination game in which multiple equilibria exist. We also highlight the trade-off between the poverty reduction motive and the

political sovereignty of donors and lay the grounds for an analysis in those terms. In Section 4, we examine the case of homogenous donor countries assuming that their number is pre-determined and they are free to choose the intensity of their coordination efforts. In Section 5, we turn to the more interesting case of heterogeneous countries and attention is focused on the role of their size and preferences, and the manner in which these factors affect the feasibility and effectiveness of aid coordination programs. In Section 6, we discuss the case of Mali, which was selected by the Committee for Development Aid of the OECD as pilot country to initiate a review of aid effectiveness in 1996. This case study material brings into light a number of hurdles against effective aid coordination that were not addressed in the preceding analysis. Section 7 concludes the paper.

2 Aid coordination as a mechanism of incentive alignment

In the following, we start by reviewing two theoretical papers which directly address the problem of aid coordination by assuming the existence of multiple donors. Thereafter, we look at a number of papers which use a single donor framework to analyze aid delivery but conclude that aid must be coordinated to align incentives in the recipient countries with those of the donor.

2.1 Theories based on a multiple-donor framework

To begin with, Knack and Rahman (2004) examine how alignment of incentives is affected by the presence of multiple donors that independently provide aid to a poor country. Their contribution, focuses on staff recruitment by donors in the recipient countries. Each donor is assumed to maximize the poverty re-

ducing impact of its own projects, and project success is assumed to increase at a decreasing rate with the amount of skilled local staff time dedicated to the project. The authors compare the optimal level of administrator time devoted to each project when maximization takes place individually with the optimal level when donors seek to jointly maximize the poverty reduction impact of their projects. The central result is that the number of administrators to be hired declines when the concern of a particular donor for the success of the projects of other donors increases. Lack of coordination thus leads to excessive donor recruitment of administrators, thus causing unnecessary stress on the demand for scarce (staff) resources in the recipient countries.

Torsvik (2005) considers a group of rich countries that independently provide aid to a poor country, and how incentive alignment is affected by the presence of multiple donors aimed at poverty reduction. Since there are several donors, poverty alleviation in the poor country becomes a public good: if one donor provides aid, it has a positive effect on the welfare of all the other donors. As is typical in such situations, non-cooperation between the donors leads to an undersupply of aid. Cooperation or coordination between donors is therefore desirable to bring total aid amount closer to its social optimum.

The next question addressed by Torsvik is how foreign aid affects policy in the recipient country. If the donors can use enforceable conditional aid contracts to influence the recipient's policy, they are always better off with coordination than without it. When the donor-recipient relationship is not contractible, however, the recipient government has an incentive to exploit the poverty aversion of the donors to its own advantage, by reducing domestic transfers to the poor when aid for the poor is externally provided (the crowding-out problem).

Torsvik investigates this question by examining two different interaction regimes. First, if the donors are able to commit not to increase their aid in

response to crowding out by the recipient governement, then all of them make simultaneous moves in a non-cooperative game-theoretic setup. Donor cooperation has then the effect of increasing foreign support but also encouraging crowding-out. The incomes of the poor increase when donors coordinate their efforts and provide more aid than before, but it is not obvious that the utility of the donors increases as well.[2] In order that donor coordination proves beneficial from the donors' viewpoint, the government of the recipient country must have enough aversion to poverty to limit the crowding-out problem.

Alternatively, because of their strong aversion to poverty, donors may be unable to commit not to help the poor in response to crowding-out ('Samaritan dilemma'). Knowing that, the recipient country reduces the support for its own poor, ex-ante, in order to trigger more aid. In such a setup (donors act as Stackelberg-followers), donor coordination would again lead to increased aid flows, but not necessarily to more crowding-out. This is because, as a response to a fall in the support of the recipient country to its poor, they would increase total aid to a lesser extent when they cooperate that when each donor acts independently. Recipient governments are thus more effectively disciplined through donor coordination when the donors are unable to commit not to help the poor, that is, when they hold a weak bargaining power.

To sum up, when the recipient country's government shares the goals of the donors (it is equally averse to poverty), aid coordination is unambiguously beneficial. In the opposite case of diverging interests, however, coordination is not necessarily beneficial if contracts cannot be effectively used to align the interests of the recipient country with those of the donors, and if the latter do not face a Samaritan dilemma. According to intuition, when the recipient

[2]This is because their utility is negatively affected by the fall in the consumption of their own citizens, while the positive effect of the increased consumption of the poor in the recipient country, which is not optimal as a result of the crowding-out problem, may be insufficient to compensate the negative effect.

government is in a position to exploit the donors' generosity, its ability to do so is more effectively controlled through donors' coordination if the donors make their decisions regarding the amount of aid after it has itself decided how much of it will be transferred to the poor.

2.2 Theories based on a single-donor framework

Let us now turn our attention to theoretical works that use a single-donor framework to study aid effectiveness. A useful point of departure is the pioneer contribution of Azam and Laffont (2003) who use a principal-agent framework to determine the optimal aid contract. This contract specifies that the recipient government will receive an aid amount (which is endogenous) linearly dependent on the level of consumption of the poor that it provides.

Azam and Laffont put emphasis on the adverse selection problem: recipient countries vary in terms of the quality of their governance, and the donor ignores these quality levels when deciding about aid flows. Their prescription is that the donor should avoid giving aid to the worst-governed countries as this would deprive its own citizen without the poor in the recipient country getting much of it. To improve the situation, the authors propose that the donor community relies on a specialized international agency that would collect information about governance levels. Donor coordination, in this instance, would increase the neglect of the poor in the worst-governed countries.

Svensson (2000) and Svensson (2003) explicitly looks at conditionality as a way to mitigate the moral hazard problem of opportunistic recipients. He analyzes a two-stage game among two recipient countries and the donor.The optimal aid contract specifies the amount of aid disbursed as a function of the good or bad state of nature that prevails and reform effort helping the poor. Yet, as reform effort, is assumed to be non-observable and non-contractible, the

second-best contractis such that it induces the recipient to exert higher effort through aid flows being lower in bad states and higher in good states (more likely to occur when reform effort has been higher)(p. 70).

Like Torsvik, Svensson stresses a serious commitment or time-inconsistency problem on the side of the donor: ex post, the donor is tempted to increase disbursements to the country most in need. Anticipation that this will happen in turn lowers the recipient's incentive to carry out politically costly reform policies ex ante (2000, p. 70). A mechanism that may possibly mitigate the donor's commitment problem is to delegate aid management to an external agency with low poverty aversion, so as to avoid the time inconsistency caused by the donor's sensitivity to poverty. This delegation clearly is an act of aid coordination.

Gaspart and Platteau (2003) and Gaspart and Platteau (2010) use a one donor-one-recipient framework to probe into the conditionality mechanism considered as a means of disciplining opportunistic local elites. They posit a costly fraud detection function (the leader's decision is imperfectly observable) and a punishment mechanism (the leader and community are deprived of subsequent aid tranches if the former is caught). Yet, in all these papers, and through different channels, competition among donors causes the external discipline exerted on the leader to be loweredat the expense of the intended beneficiaries.

Donors competition may thus yield perverse effects, as analyzed in Platteau (2003). What is at work in the present case is a mechanism, labeled by Avner Greif (1994) 'Bilateral Reputation Mechanism' (BRM) in analyzing relationships between traders. If caught embezzling funds, a local elite are punished only by the aid agency or the donor that has actually provided the funds embezzled. Because of competition among donors, they are indeed ready to shift to another agency and start cheating again. Alternatively, the presence of other donors

puts a ceiling on the severity of the aid delivery package that a given agency may propose so as to reach more effectively the poor in the recipient country, as in Bourguignon and Platteau (2013).There are apparently two ways whereby this 'elite capture' problem can be mitigated. Reducing competition through concentration of aid supply in the hands of fewer agencies or donors is the first way but would be difficult to impose in what is essentially a free entry activity. The second solution consists of a coordination mechanism whereby donor agencies would mutually inform each other about fraudulent acts committed by intermediaries or local leaders.[3] If this Multilateral Reputation Mechanism (MRM) (Greif (1994)) is apparently more feasible than attempts to reduce competition, it is not devoid of serious practical difficulties that we highlight in the next subsection.

2.3 Information centralization as a mechanism of donor coordination

Applied to our problem, the MRM would work as follows. Operating within a repeated-game framework, a donor agency would adopt the strategy whereby it grants money to a country or area, but only provided that it is not known to have cheated another agency some time in the past. If money is thus disbursed and the benefiting country is later found to have cheated the agency, the latter dutifully reports the fraud and communicates the name of the fraudulent country to the other members of the donor community. Before embezzling funds, a country's elite or government would thus be incited to think twice because by cheating today it would spoil its reputation for future interactions with the whole donor community. The MRM is an equilibrium strategy. That is, if a government expects every donor agency to adopt such a strategy, its interest

[3]For a discussion of alternative coordination mechanisms, such as codes of conduct, ombudsmen, social auditing and accreditations, see Ebrahim (2003), pp. 819-24.

is to transfer the aid fund to the intended project beneficiaries. Knowing that reaction, the interest of all donor agencies is to cling to the MRM. Honest behaviour therefore gets established as a (Nash) equilibrium.

There are several problems with the MRM, however.[4] The first one stems from the fact that the information conditions that must be fulfilled for it to work are extremely stringent: information must circulate perfectly between donor agencies. This is hard to obtain when donors are numerous and heterogeneous in terms of several key characteristics (size, preferences, methods, time horizon, etc.).

Is the establishment of a private third party charged with centralizing information (as suggested by Milgrom et al. (1990)) the solution to the problem caused by the costliness of generating and communicating information? Such a system can effectively work only if donors have an incentive to detect fraud and report fraudulent experiences to the third party. However, in so far as the detection and reporting of a fraud once it has occurred entails costs but brings no benefits to the individual agency which has been cheated, such an incentive does not exist.

In order to create adequate incentives, the third party should be able to exercise pressure on the detected fraudulent leader so as to make it return the stolen money to the original donor. As a result, so the theory goes, the threat against potential recipients would be effective and, if caught, a fraudulent government would be prompted to comply with the third party by returning the money stolen (so that its name is removed from the black list). This said, honesty will be established as a (symmetric sequential) equilibrium under the above mechanism only if a number of conditions are met, in particular, the cost of the various steps in the whole procedure (information query, appeal to

[4] We ignore the problem that, in order to counter the elite' temptation to embezzle funds, donors should in theory give them a flow payment or rent each period, and this flow should be at least equal to the interest on the one-off embezzlement of aid they could carry out.

the third party, recovery of the stolen money) is not too high. Unfortunately, some of these assumptions are likely to be violated so that the mechanism is not self-enforcing.

A second problem lies in the fact that local elites or governments may not be actually concerned with preserving their reputation because their time horizon is short and they could be quite happy with running away with the money stolen from one single project.

Finally, one key actor has been missing from the foregoing discussion, namely the ultimate purveyors of funds from whom donor agencies obtain their financial resources. They are taxpayers for national and international organizations, or the general public mobilized in fund-raising campaigns for NGOs. A serious dysfunctioning of the MRM arises if donors expect their ultimate sponsors to react negatively to news of embezzlement in their projects. A donor organization may have no incentive to report the acts of malfeasance detected in its projects if it believes that other agencies will refrain from revealing their own bad experiences. That the above risk is real is evident from the atmosphere of secrecy that surrounds the activities of many donor organizations, including NGOs. To reduce such a risk, there is no other way than improving the general public's understanding of aid delivery processes and the possibility of failures, so that honest donors which openly admit of cases of cheating are not unfairly sanctioned to the benefit of more opportunistic ones.

Central funding bureaucracies (such as the European Union) could possiby surmount several of the above problems through coordination. In particular, they could establish a rating of donor agencies based on criteria that avoid rewarding success while punishing failure since such criteria encourage the underreporting of failures (Edwards and Hulme (1996), p. 189). Self-reported cases of fraud detection could thus be considered as indirect evidence of the effectiveness

of monitoring activities rather than as signs of failure.[5]

The need for a proper evaluation of aid agencies is all the more pressing as, side by side with serious agencies, there exist careless organizations that are not equipped with proper monitoring and sanctioning mechanisms. They tend to disburse funds quickly either because they do not have a good understanding of the game, or are not single-mindedly pursuing the objective of poverty alleviation. The second problem arises when, in spite of all their pro-poor rhetoric, aid organizations are concerned with reproducing themselves as job- and income-providers for their employees.In the same way that "bad money chases good money", the operation of these opportunistic aid agencies risks driving 'good' agencies out of business or, else, it will force them to relax or altogether give up their gradual and conditional disbursement procedures.

3 Participation in an aid-coordinating scheme: a broad framework

In this section, we pursue two different objectives. First, we represent the issue of aid coordination as a n-player (pure) coordination game, which allows us to characterize the multiple equilibria that are associated with it. Second, we lay the grounds for the model to be expounded in the next section by highlighting a trade-off between poverty reduction (the altruistic aim of the donors) and political sovereignty.

3.1 The conditionality mechanism as a coordination game

The reason why aid coordination may have positive effects on the level of

[5]Note that outcome measures, assuming that they are feasible, are not ideal yardsticks inasmuch as they induce aid agencies to select communities or countries where outcomes can be more easily attained.

governance becomes clear as soon as one realizes that aid governance can be conceived as a public good. If a country is alone in setting conditions aimed at improving governance in a recipient country, the benefit from conditionality is likely to be small because of the recipient country being able to turn to other, more lenient donor countries. The conditionality-imposing country which will therefore forsake its strategy or weakens it conditionality. To overcome that obstacle, there must obviously be a sufficiently large group of donor countries willing to engage in the governance-improving process, thus lending it a collective character.

In fact, the conditionality mechanism resembles an n-player pure coordination game in the sense that there exists a critical threshold of players beyond which it becomes individually profitable for each participating player to bear the cost of collective action or contribution to the public good. All that is needed is that the individual benefit increases with the number of contributors: if the cost of individual contribution is constant, there will necessarily be a critical number of contributors such that the individual benefit starts exceeding the individual cost of participating.

Precisely the same point can be made in regard of ownership and transparency, two critical dimensions of the Paris agenda. It can, indeed, be argued that, without donor coordination, there is a great temptation for the recipient country to tailor development objectives and to present results according to the perceived preferences of each individual donor so as to extract maximum rents. In front of a sufficiently large group of donor countries, on the other hand, the recipient country is better disciplined into pursuing ambitious priorities, adopting adequate strategies and being more transparent on results.

Let us now illustrate the above argument with the help of a simple framework. Assume that there are N players and implementing aid coordination (the

public good) yields individual benefits to each member of the group equal to $b(m)$, where m stands for the number of voluntary contributors. Adopting a continuous framework and logically assuming that that $db(m)/dm = b'(m) > 0$, a player will participate as long as the number of voluntary contributors is such that: $b'(m) > c$.[6]We then examine two cases.

First, there are increasing returns to scale in coordination benefits over the whole range of possible participants: $b''(m) > 0$. We further and crucially assume that $b'(1) < c$, implying that, if no other country imposes conditionality, a particular country will never find it profitable to do it alone. Finally, we assume that cooperating always provide a net benefit when N-1 players participate, $b'(N-1) > c$. Under these conditions, there exists a critical number of countries, m^*, such that $b'(m) > c \; for \; m \geq m^*$. Once a certain number of other players agree to contribute to aid coordination, a particular country has an incentive to follow suit since the cost of its individual contribution is less than its marginal individual benefit. In other words, as long as at least m^* other players contribute, a particular country prefers to join the collective effort to free riding and none of the cooperating countries has an incentive to stop doing so.

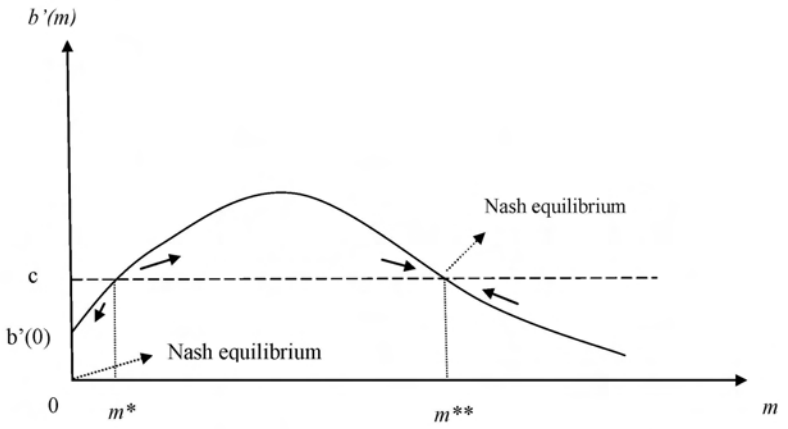
In such a game, there are two possible (Nash) equilibria (in pure strategies): no coordination takes place or every country agrees to join the coordination scheme. We are in an Assurance Game: if a particular country expects that no other country will join the aid coordinating effort, it will not contribute either, yet if it expects that a sufficiently large number of other countries are ready to contribute, it will also contribute, and this corresponds to the efficient outcome.

The problem is slightly more complex if we assume that increasing returns to scale in the provision of coordination benefits are succeeded by decreasing returns, so that $b''(m) < 0$ beyond some value of m. Thus, the additional

[6]In a discrete framework, this condition would write: $b(m)$–$b(m-1) > c$

benefit of participation in the coordinating group when there already are m participants, b'(m), increases and then decreases, such as is illustrated in Figure 1.[7] An upper threshold, m^{**}, is now added to the lower threshold, m^{*}. Below m^{*}, and above m^{**}, the individual marginal benefit of participation falls short of the cost c. The two possible (Nash) equilibria are now: $m = 0$ and $m = m^{**}$: either no one contributes, or m^{**} potential participants do contribute. The first outcome will be observed if countries expect that less than m^{*} other countries are going to participate in the coordination effort. The second, more favourable outcome happens if the expectation is that at least m^{*} other individuals or countries are going to join this collective effort.

Figure 1: Coordination equilibria in the presence of two thresholds



If the total group size, N, is smaller than m^{**}, every potential participant joins the coordinating scheme. But if N exceeds m^{**}, the public good is only

[7]Note that for the problem not to be trivial, it is assumed in Figure 1 that $b'(m)$ goes through a maximum greater than c and falls below c for large enough values of m.

produced by a subgroup of individuals or countries. In that case, it is not even clear that m^{**} is a Nash equilibrium since every participant will be tempted to join the $N - m^{**}$ free riders. Moreover, when $N > m^{**}$, the outcome characterized by m^{**} coordinating participants is socially inefficient. [8]

Our next step is to acknowledge that coordination is not simply a binary variable (whether aid coordination takes place or not) but a continuous variable that can take on different values depending on the number of participating countries and the extent to which aid efforts are coordinated by them. Let us assume that all the member states of a pre-existing club, say the European Union, have agreed on coordinating their aid efforts. There remains the question of how far they are ready to go in the direction of aid coordination.

3.2 The trade-off between aid effectiveness and political independence

Intensification of aid coordination efforts is expected to (1°) reduce the transaction costs borne by each individual donor country; (2°) enhance aid effectiveness in the sense of better reaching the donor's objectives in the recipient countries; and (3°) entail a political cost in the form of a loss of national autonomy in dealing with particular aid recipient countries. This cost may be of a diplomatic nature, as coordinating with other donors means giving up strategic levers on the action of recipient countries' governments. It may also be political by conveying the idea of a loss of political independence, or sovereignty in the public opinion of the donor country. There is thus a trade-off between aid coordination benefits –cost-saving and governance effects– and this political cost.

[8] The optimal number of contributors is the value m° that maximizes $Nb(m)$–mc. The collectively rational outcome thus requires that the collective marginal benefit is equal to the marginal cost, that is, $Nb'(m^{\circ}) = c$. This is to be compared to the individually rational (Nash) outcome, m^{**}, which is by definition such that $b'(m^{**}) = c$. Bearing in mind the assumption of decreasing returns, it is evident that $m^{\circ} > m^{**}$.

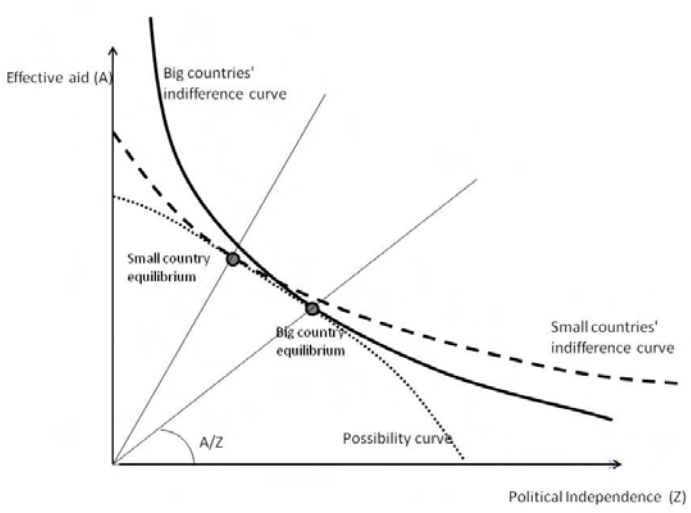
How the equilibrium level of coordination will be set depends on the countries' preferences regarding their political independence and the weight they attach to poverty reduction in developing countries. Such preferences can be represented by conventional indifference curves, such as those shown in Figure 3, where the extent of political independence is measured along the horizontal axis while the amount of development aid effectively reaching the poor (labeled effective aid) is measured along the vertical axis.

The willingness to exchange political control against aid for the poor diminishes sharply when a great measure of political control has already been lost and, conversely, such willingness is greatest when the country concerned still retains a lot of political control. The equilibrium level of coordination will be determined by the tangency between an indifference curve, on the one hand, and a 'possibility curve' (dotted line in Figure 3) showing the amount of effective aid that can be achieved for a given loss of political control, on the other hand. The latter allows for the fact that, as aid is better coordinated, (1°) the net amount of aid available to the recipient countries increases thanks to a reduction in transaction costs, (2°) a larger portion of the (net) aid amount reaches the poor thanks to improved governance of the recipient country, but (3°) political control diminishes.

As pictured in Figure 3, donor countries can be expected to have heterogeneous preferences. In particular, big and small countrie tend to incur different costs when they raise their coordination effort. Big countries tend to assign much greater weight to considerations of political sovereignty and control than smaller ones, if only because they are more able to design strategies that serve their own national interests. An indifference curve for a small donor country (the dashed line) is rather flat over most of its range, indicating that, in order to increase the amount of effective aid, this country is ready to surrender large

measures of political independence. The situation is exactly opposite for big countries which tend to exact a high price, in terms of effective aid, to agree to forego even small amounts of political control and independence.

Figure 2: The trade-off between political independence and aid effectiveness when aid efforts can be coordinated: big versus small countries



3.3 Two remarks

Two remarks need to be made before turning our attention to our model of aid coordination. First, cost-savings resulting from donor coordination do not accrue only to donor countries but also benefit recipient countries directly -e.g. less pressure on high-level staff as mentioned in section 2. Therefore, if donor countries internalize the latter in their cost-benefit calculus, aid coordination will appear more profitable to them. Yet, there are also disadvantages caused by intensified aid coordination for the recipient country. In particular, a loss of sovereignty or 'ownership' is suffered as a result of the more rigorous implementation of conditionalities by coordinating donors. We nevertheless choose to

ignore this aspect on the ground that it does not necessarily serve the interests of the poor who are the target of development aid.

Second, because of the emergence of new donor countries (China, Saudi Arabia, Brazil, etc.) or organizations (private foundations), Western donor countries and Japan now hold a diminishing part of the aid share in many developing countries. As a consequence, there are significant additional benefits to be reaped from the enlarging of the space of coordination through the inclusion of those new aid actors. They ought not to be over-estimated, however. As a matter of fact, the assumption of increasing returns is likely to be over-optimistic as far as some big new actors in the 'aid market' are concerned. Instead of the Assurance Game, the game with external aid donor agencies may resemble a Prisoner's Dilemma. This means that donor agencies may be better off free riding on the coordination efforts of other donors than joining these efforts to reduce transaction costs and improve conditionality. It is thus a well-established fact that "many African leaders have embraced the Chinese, especially when offered vast loans for infrastructure projects. By contrast, the leaders say, Western governments these days offer little more than lectures on good governance" (The Economist, 2011).[9]

It is true that the present set-up ignores the utility function of the recipient country and does not delve into the incentive aspects of aid coordination for recipient countries' governments. Its governance-disciplining efforts are rather crudely summarized in a reduced-form function that specifies elite capture as negatively related to the intensity of aid-coordinating efforts. Compared to Torsvik's model sumarized above, these simplifications allow us to explore other aspects of the aid coordination problem. In particular, the effects of the presence of political costs of aid coordination and heterogeneity of donor countries can

[9]Yet, it would seem that "growing numbers of Africans are turning against the saviours from the East", in part because the Chinese too often indulge in corrupt practices in collusion with local officials and inspectors (Leader "Rumble in the jungle", April 23rd-29th 2011).

be highlighted in a systematic manner.

Having thus sketched the broad setup of our theory, we are now ready to present its details and main results, starting with the simple case of identical donor countries (Section 4), and then proceeding with the more realistic case of heterogeneous countries (Section 5).

4 The case of identical donor countries

We consider the case of a fixed number, m, of identical donor countries belonging to a pre-existing club (say, the European Union) that have to choose the level or intensity of their aid coordination effort. We denote by e_i the effort made by country i in coordinating aid in the club, e.g. collecting and exchanging information with other members on the effectiveness of its aid projects, sticking to collective recommendations, etc.. . We assume that $0 \leq e_i \leq a$, so that the coordination effort of a particular country cannot exceed a certain finite value, say because political independence goes to 0 when $e_i \to a$. The assumption that all donor countries are identical means, in our context, that they have the same preference, the same aid budget, and the same cost function. We define T_i as the aid budget of country i, C_i as its transaction cost of delivering aid, Z_i as the measure of its political independence or sovereignty. Moreover, the share of the net aid budget, $T_i - C_i$ accruing to the target group (the poor) in the recipient country, denoted by α, is an increasing function of the overall coordination effort by donors ($\alpha'() < 0$). Assuming that a country's utility function is a Cobb-Douglas, and taking the aid budget, T_i, as given, we are then able to write the maximizing problem of the donor country i as:

$$\underset{e_i}{Max} U_i = A_i^{\beta_i} Z_i^{1-\beta_i}$$

$$where\ A_i = \alpha(e_i + \sum_{j \neq i} e_j) \left[T_i - C\left(T_i, e_i + \sum_{j \neq i} e_j \right) \right];\ Z_i = Z(e_i)$$

Thus, A_i represents the effective transfer of donor i to the poor in the recipient country.

As specified above, β_i (identical for all countries) is the parameter measuring the intensity of the preference of country i for poverty reduction, which is the objective of aid. The inverse, $1-\beta_i$, is therefore the weight attached to political sovereignty or national power and prestige. The value of β_i determines the shape of the indifference curves. The higher it is, the flatter is the indifference curve, as shown in Figure 3.

Coordination efforts have two beneficial effects, reducing transaction costs and improving the targeting of aid, and one negative consequence, a loss of political sovereignty. The targeting improvement and the political loss are taken into account in the utility function above. The transaction cost, C, of delivering aid for country i is specified as an increasing function of the aid budget, T_i, and a decreasing function of the aggregate coordination efforts of all donor countries, $E = e_i + \sum_{j \neq i} e_j$. We thus have: $C_i^1 > 0$; $C_i^2 < 0$, with the upperscript indicating the first derivative of the cost function with respect to either its first or second argument. Finally, the loss of political sovereignty suffered by country i as a result of aid coordination depends only on its own individual coordination effort, e_i implying that $Z'(e_i) < 0$.

We look for a symmetrical Nash equilibrium of the game played by the m donor countries. Hence country i considers the coordination efforts of the other countries as given while it maximizes its utility, U_i. To solve this problem, it is convenient to take the logarithmic form of the utility function:

$$\underset{e_i}{Max} LogU_i =$$

$$\beta_i Log\left\{\alpha(e_i+\sum_{j\neq i}e_j)\left[T_i-C\left(T_i,e_i+\sum_{j\neq i}e_j\right)\right]\right\}+(1-\beta_i)\,LogZ_i(e_i)$$

Since coordination efforts are identical for all countries at equilibrium ($e_1^* = e_2^* = ... = e^*$), we can drop all lowerscripts and write the solution as:

$$\beta\left[\frac{\alpha'(me^*)}{\alpha(me^*)}-\frac{C^2(T,me^*)}{T-C(T,me^*)}\right]=-(1-\beta)\frac{Z'(e^*)}{Z(e^*)} \tag{1}$$

At equilibrium, the marginal benefit of coordination is equal to the marginal cost, each being weighted by its corresponding elasticity in the utility function. The two components of the benefit show up in the LHS, the gain in targeting the poor and the reduction in the transaction per additional unit of coordination effort. The RHS features the marginal cost of coordination in the form of a loss of political sovereignty.

To obtain unambiguous comparative-static results, we must make a number of additional yet realistic assumptions about the signs of second derivatives. They are as follows: $\alpha"(\,) < 0$; $C^{22}(\,) > 0$; $Z"(\,) < 0$. In words, we assume that there are decreasing marginal returns to the provision of aid coordination in terms of both the quality of targeting and transaction-cost savings, and that the marginal disutility of losing political independence increases with coordination. Under these conditions, it can easily be checked that, in accordance with intuition:

$$\delta e^*/\delta\beta > 0;\ \delta e^*/\delta m < 0$$

To see how the equilibrium coordination effort depends on the aid budget, an additional assumption is needed on the cost function, namely that, at equi-

librium:

$$\frac{\partial Log(T - C(T, me))}{\partial T} \geq 0; \; \frac{\partial}{\partial e}\frac{\partial Log(T - C(T, me))}{\partial T} \leq 0 \qquad (2)$$

The first condition reasonably requires that, when the aid budget increases by one unit, the cost increases by less than one unit. If this were not the case, then the aid actually tranferred to the recipient country would diminish with the total budget. The second assumption states that the proportional increase in the net amount of aid - i.e. budget minus transaction cost - due to an increase in the aid budget decreases when coordination is more intense. This assumption may be rewritten as:

$$C^2(1 - C^1) - C^{21}(T - C) \leq 0$$

As the fisrt term on the LHS of that inequality is negative - i.e. $(1 - C^1)$ is positive as implied by the first inequality in (2)- this condition is automatically satisfied if $C^{21} = 0$, that is to say if coordination reduces only the fixed cost part of the transaction cost. If coordination is assumed to reduce the variable cost part too, then condition (2) requires C^{21} not to be too negative.[10]

Under the preceding simple assumptions, it is easily shown through differentiating the first order condition (1) that the coordination efforts decline with the aid budget:

$$\delta e^* / \delta T < 0$$

These various results are summarized in Proposition 1 below:

[10]To see that this condition is not unduly restrictive, consider the following reasonable (bilinear) specification of the transaction cost: $C = (a - \gamma E) + (b - \beta E)T$ (with $E < b/\beta$), where $E(= me)$ in the symmetrical equilibrium. In that expression, the first term stands for the fixed transaction cost whereas $(b - \beta E)$ is the variable cost per unit of the total aid budget. Thus, both the fixed cost and the variable cost decline with E. With that expression, it is easily established that condition (2) is always satisfied within a reasonable range of T.

Proposition 1: Under reasonable assumptions, the incentive to coordinate aid efforts increases (1°) when a country has a stronger preference for poverty reduction compared to considerations of national sovereignty and prestige, (2°) when the size of the coordinating club of donor countries is smaller, and (3°) when the size of the individual aid budget is lower.

The intuition of these results is simple. First, when the donor country attaches marginally more importance to its altruistic objective of poverty reduction, it increases its level of coordination effort at equilibrium. And, conversely, if it attaches marginally more importance to its political independence and national interests. Second, the presence of one more country in the aid-coordinating club induces other participating donor countries to decrease the level of their coordination effort. A donor country thus "exploits" the presence of an additional member country to reduce its own political cost of aid coordination. Third, a decrease in the budget that each individual donor country dedicates to poverty reduction prompts an intensification of its coordination effort. This is because, under assumption (2), the fall in the cost of aid delivery obtained through more coordination represents a larger share of the actual aid, $(T - C)$, when the total budget, T, is restricted - i.e. the second term on the LHS of (1) increases with T. As the marginal gain of coordination is now higher, the marginal cost must increase at equilibrium, which requires an increase in the coordination effort. Thus, the coordination effort falls when the aid budget increases.To complete our analysis of the case of identical donor countries, three remarks are in order. To begin with, the preceding proposition and equilibrium condition (1) hold only for an interior solution, which imposes some restrictions on the parameters β, T, m, namely:

$$\frac{\beta}{1-\beta} \leq \frac{-Z'(a)/Z(a)}{\alpha'(m)/\alpha(m) - C^2(T, ma)/\left[T - C(T, ma)\right]}$$

Less than maximum coordination effort , a, will be chosen only if the preference for effective aid relative to political independence is not too high and if the number of donors in the club and/or the amount of aid is large enough.

The second remark makes a straightforward point: if inside the club an authority (say, the European Commission) exists that can choose the level of coordination and impose it on all members, that level should correspond to its maximum possible value. Indeed, the authority ought to neglect the political costs of aid coordination and maximize the aggregate amount of (European) aid reaching the poor, that is:

$$\underset{e}{Max} W = \alpha(me)\left[m\left(T - C(T, me)\right]\right.$$

Since there is no cost of coordination internalized by the authority, it will obviously choose the corner solution $\tilde{e} = a$.

Our third remark draws attention to an interesting equivalence result. Assume that the objective function of each donor country in the club is that of a pure rather than an impure altruist. In other words, each donor's utility is positively influenced by the amount of aid that reaches the poor, whichever the source the aid actually comes from (provided that aid comes from within the club). The donor's problem is then:

$$\underset{e_i}{Max} LogU_i =$$

$$\beta_i Log\left\{\alpha(e_i + \sum_{j\neq i} e_j)\left[mT - C\left(T, e_i + \sum_{j\neq i} e_j\right) - \sum_{j\neq i} C\left(T, e_j + \sum_{k\neq j} e_k\right)\right]\right\}$$

$$+ (1 - \beta_i)\, LogZ_i(e_i)$$

The solution of this problem is given byexactly the same equilibrium condition as that obtained with the impure altruistic country (see equation (1)). This means that the level of individual coordination efforts is not affected by whether donor countries value the aid given to the poor by other member countries. Note however that this behavioral equivalence between pure and impure altruism is conditional on all donors being identical.

5 The case of heterogeneous donor countries

We assume that there are two types of countries, big and small countries. The big countries (labeled type 1) have greater aid budgets than the smaller ones (labeled type 2) and they also have a stronger preference for political independence: $T_1 > T_2$, and $\beta_1 < \beta_2$. In accordance with what has been found in Section 4, these assumptions imply that, were they allowed to impose their own preferred choices, the big countries would opt for a lower coordination level than the small countries. The same outcome would obtain if we assumed straightaway that countries of type 1 have a weaker preference for poverty reduction than those of type 2, and all countries are of the same size (in terms of aid budget). What will actually happen in a heterogeneous coalition will depend on the prevailing decision mechanism. There are several possibilities here.

The first possibility hardly requires comments: if there exists an authority able to impose the coordination level that best meets the objective of aid, it will choose the maximum level, a, so that targeting of the poor is achieved in the best possible manner. This solution is obviously closer to the choice favored by the small countries. It is not very realistic, however, to assume that the club's authority, if it exists, is able to enforce a coordination level that ignores political costs. It may thus be content with setting a level, e^*, that maximizes the aggregate utility of the member countries. Assuming, for the

sake of convenience, that there is an identical number of big and small countries inside the club ($m_1 = m_2$) allows us to write the authority's maximization problem simply as:

$$\underset{e}{Max} W = \beta_1 Log\left\{\alpha\left(me\right)\left[T_1 - C(T_1, me)\right]\right\} + (1-\beta_1) LogZ(e)$$

$$+\beta_2 Log\left\{\alpha\left(me\right)\left[T_2 - C(T_2, me)\right]\right\} + (1-\beta_2) LogZ(e),$$

where $m = m_1 + m_2$. The equilibrium condition is then:

$$m\beta_1\left[\frac{\alpha'\left(me^*\right)}{\alpha\left(me^*\right)} - \frac{C^2\left(T_1, me^*\right)}{T_1 - C\left(T_1, me^*\right)}\right] + m\beta_2\left[\frac{\alpha'\left(me^*\right)}{\alpha\left(me^*\right)} - \frac{C^2\left(T_2, me^*\right)}{T_2 - C\left(T_2, me^*\right)}\right]$$

$$= -\frac{Z'\left(e^*\right)}{Z\left(e^*\right)}\left(2 - \beta_1 - \beta_2\right) \tag{3}$$

The second approach does not rely on the presence of a centralized authority: big and small countries bargain together in order to arrive at a commonly agreed coordination level which by definition has to be unique. Because big countries have larger aid budgets, it is rather natural to think that they wield more power in the bargaining process so that the coordination level ought to better reflect their preferences than those of the small countries. For example, in the setup of two countries (or two groups of countries), we can think of the problem as that of solving the following Nash bargaining game in which bargaining strength is assumed to be a function of the size of aid budget:

$$\underset{e}{Max}\ \left(U_1 - \underline{U}_1\right)^{T_1}\left(U_2 - \underline{U}_2\right)^{T_2}, \tag{4}$$

where $\underline{U}_1$ stands for the reservation utility of big countries and $\underline{U}_2$ stands for

that of small countries (we can actually think of the club as made of two countries only, one big and one small). Before concluding that the interest of the big countries will always be better reflected in the equilibrium level of coordination, we must nevertheless check whether $\underline{U}_1$ exceeds $\underline{U}_2$. The reservation utility of a big country, which provides its threat point, can be conceived as the utility that it could achieve if the negotiation with small countries collapsed and big countries coordinated their aid efforts among themselves, without any externality between their aid programmes and that of small donors. We reason analogously for the definition of the reservation utility of a small country. We can then write that:

$$Log\underline{U}_1 = \beta_1 Log\left\{\alpha\left(m_1 e_1^*\right)\left[T_1 - C(T_1, m_1 e_1^*)\right]\right\} + (1-\beta_1) LogZ(e_1^*)$$

$$Log\underline{U}_2 = \beta_2 Log\left\{\alpha\left(m_2 e_2^*\right)\left[T_2 - C(T_2, m_2 e_2^*)\right]\right\} + (1-\beta_2) LogZ(e_2^*)$$

We know that $e_1^* < e_2^*$ and $\beta_1 < \beta_2$. It follows that $(1-\beta_2)LogZ(e_2^*) < (1-\beta_1)LogZ(e_1^*)$. Regarding the first term in the above expressions, it is also evident that $\beta_2 Log\left[\alpha_2\right] > \beta_1 Log\left[\alpha_1\right]$. Therefore, whatever the relative values of the net amounts of aid, $(T_i - C_i)$, we cannot rule out the possibility that the reservation utility of the small countries is higher than that of the big countries. If that is the case, whether the small countries succeed in negotiating a coordination level closer to their own preferred level will depend upon the magnitude of T_1 relative to T_2. Indeed, the difference between T_1 and T_2 determines not only the magnitude of the gap between $T_1 - C_1$ and $T_2 - C_2$ and hence the gap between reservation utilities (for a given coordination effort), but also the

respective bargaining strengths of the two types of donor countries as indicated by equation (4). We can therefore state the following proposition:

Proposition 2: When the club of aid-coordinating countries is heterogeneous in the sense that it includes both big and small countries, and when the agreed coordination level is the outcome of a Nash bargaining process, this level may be closer to the level preferred by either the small or the big donor countries. A key role in determining the result is played by the relative sizes of the aid budgets: the larger the aid budget of the big countries compared to that of the small countries, the more likely the former will be able to tilt the coordination effort level in the direction of their preference.

A third possibility that we may want to consider is the following: the big countries are strong enough to impose their own conception of coordination yet subject to the participation constraint of the small countries. Since by assumption there is an equal number of big and small countries, the problem can be simply written as:

$$\underset{e}{Max} LogU_1 = \beta_1 Log\left\{\alpha(me)\left[T_1 - C(T_1, me)\right]\right\} + (1-\beta_1) LogZ(e)$$

$$s.t. \quad \beta_2 Log\left\{\alpha(me)\left[T_2 - C(T_2, me)\right]\right\} + (1-\beta_2) LogZ(e) \geq Log\underline{U}_2$$

Three cases can then arise. In the first case, the participation constraint of the small country is not binding and the equilibrium coordination level, $\tilde{e}$, satisfies the equation below:

$$\beta_1 m\left(\frac{\alpha'(m\tilde{e})}{\alpha(m\tilde{e})} - \frac{C^2(T_1, m\tilde{e})}{T_1 - C(T_1, m\tilde{e})}\right) = -(1-\beta_1)\frac{Z'(\tilde{e})}{Z(\tilde{e})} \qquad (5)$$

In the second case, the small country's participation constraint is binding and the solution, $\hat{e}$, solves the following equation:

$$Log\underline{U}_2 = \beta_2 Log\left\{\alpha\left(m\hat{e}\right)\left[T_2 - C\left(T_2, m\hat{e}\right)\right]\right\} + \left(1-\beta_2\right)LogZ(\hat{e})$$

This case is all the more likely to arise as the discrepancy between the two stand-alone preferred coordination levels, e_1^* and e_2^*, is large. If this gap is too wide, a third case can arise because the solution $\hat{e}$ may actually fail to satisfy the participation constraint of the big country itself. In this case, satisfying the small country's participation constraint may prove too costly for the big countries in which case they would prefer to form a coordination subgroup among themselves.

That aid coordination is constrained by big rather than small donor countries directly follows from our assumptions and is reflected in the result $\tilde{e} < e^*$(see Appendix I for the proof). In words, the level of coordination and, therefore, the amount of aid reaching the poor are higher when coordination is chosen by a club's authority maximizing the aggregate welfare of the member countries than when it is chosen by the big countries in an unconstrained manner. Furthermore, when they are allowed to impose their preferred coordination level, and this can again be done in an unconstrained manner, the big countries unambiguously prefer that solution to the stand-alone situation. Formally, we have that $U_1\left(\tilde{e}\right) > U_1\left(e_1^*\right)$. This results from three effects working in the same direction. Joining hands with the small countries has the effect of raising $m.e$ so that targeting is improved (α rises) and transaction-costs are reduced (C_1 falls). In addition, the fall of e induced by the enlarged size of the aid-coordinating group (from m_1 to $2m_1$) causes the political cost of coordination to decrease (Z falls).

To establish the above, we just need to show that $\delta\left(m.e\right)/\delta m > 0$ despite the fact that $\delta e/\delta m < 0$. This requires that the elasticity $\eta_{e,m} = \left(\delta e/\delta m\right)\left(m/e\right)$

be larger than -1. It is proven in Appendix II that this is indeed the case. We can therefore state the following proposition:

Proposition 3: When the differences between β_1 and β_2, and between T_1 and T_2 are not too large, so that the big donor countries, if allowed to, can impose their preferred level of coordination in an unconstrained manner, they will always be better off following this way than standing alone. The resulting coordination level, however, will be lower than if it were chosen by a club's authority maximizing the aggregate welfare of both big and small countries. As a consequence, the amount of aid reaching the poor in the aid recipient country will also be smaller in the first than in the second situation.

6 The case study of Mali[11]

Since Mali has been selected by the Committee for Development Aid of the OECD as pilot country to initiate a review of aid effectiveness in 1996, several steps have been taken to reform aid practices and to set up new local institutions. In particular, various commissions, groups, and mechanisms have been put into place to facilitate the exchange of information and the coordination of aid efforts both between donor agencies and between them and the government of Mali. In addition to the streamlining of conditionalities and project specialization among donor agencies (with a leading donor assigned to each aid sector), there was a real effort by European donors to foster continuous dialogue with the government of Mali so that it could assume leadership in defining development objectives and strategies. Institutional or organizational innovations also aimed at rationalizing aid delivery,follow-up and evaluation procedures, at

[11] We want to express our gratitude to Anne-Caroline Burnet from CRED, University of Namur, who has collaborated with us in conducting the interviews in Mali, and to Hervé Bougault, head of the local office of the Agence Française de Développement, who has organized many of the meetings during which the required information was collected.

stabilizing aid flows in a multi-year perspective so as to allow more predictable budgetary projections, and at improving budgetary procedures in the host country to increase transparency and make planning more effective. The idea of joint programming became a central plank in the new strategy to support the so-called Strategic Framework for Growth and Poverty Reduction (CSCRP) for the years 2002-2006, 2007-2011, and 2012-2017. Actual coordination rests on three distinct levels: the global, the sectoral, and the sub-sectoral levels, all of them involving different mechanisms and group meetings.

Evaluation of the experience to this date has been carried out by a team of experts and reported in the « Rapport Final - Evaluation nationale de la mise en œuvre de la Déclaration de Paris (phase 2) », Ministère de l'Economie et des Finances (MEF). Their observations as well as those resulting from our own field interviews during the month of July 2011 suggest a number of interesting lessons that are summarized and discussed below.

There have been genuine efforts to share information among donors, particularly between countries of the European Union, and between donors and the government of Mali. This helped to increase trust between donors and the aid recipient country. Coordination works relatively well at the sub-sector level, particularly in the health and education sectors, and it is especially effective when it comes to sharing information and diagnoses, and to discussing joint approaches to follow up and evaluation. Also appreciated is the work of the Pool Technique, a cell of technical support created by the donors to help harmonize their aid efforts and prepare their consultations with national authorities. The existence of this mechanism causes a significant reduction of transaction costs for the donors as well as for the host government which can talk with only one interlocutor acting on behalf of all the donors.

Yet, despite the numerous institutions and mechanisms created towards fos-

tering harmonization of aid efforts, results have been essentially disappointing. Central weaknesses are the following:

- The indecisiveness and lack of leadership of the recipient government have weakened the coordination mechanisms

- Dispersion of roles and duplication of structures in charge of the management of aid efforts have remained important.

- Some donor agencies have refused to align themselves on the new mechanisms, and new donors have been particularly reluctant to join the coordination efforts, mainly because their interventions are focused on projects.

- Donors remain unwilling to pool financial resources with a view to funding common initiatives.

- Donors, especially from big countries, remain strongly reluctant to slim down parallel structures through which they used to deal with local authorities (e.g., diplomatic and political channels). Furthermore, because of deep-rooted habits of autonomy on the part of national aid agencies, the EU Code of Conduct on the Complementarity and Division of Labor is not easily put into practice. By refusing to forsake part of their national prerogatives, these donors prevent the realization of possible savings in transaction costs.

Some of the above conclusions deserve further comments. To start with, not all European countries appear to be on the same wavelength regarding the approach to development aid. This is in spite of the fact that they all support the Paris Declaration process. Some countries (Denmark, Sweden, and the Netherlands) tend to give preference to coordination with non-European countries (such as Canada) which they deem closer to their own aid philosophy. One major point of division among European countries actually concerns the role of the General Budget Support (GBS) strategy (with Germany, France, and Belgium more supportive than the three aforementioned countries), implying the

existence of divergent opinions regarding the usefulness of conditionality. It is interesting to note that the budget support approach remains well below the expectations of the government of Mali in terms of both aid volume- 12 per cent of the whole EU aid budget in Mali - and number of donors involved.

Second, the Delegation of the EU in Mali is relatively strict when it comes to deciding the suspension of aid for budget support whenever the outcome indicators prove disappointing. Variable tranches are then not disbursed till the indicators improve or the government takes up measures toward that end. Yet, not all donors feel comfortable with this approach and some of them consider the EU's policy too harsh. During two consecutive years, the Delegation has thus suspended its aid to Mali but was alone in doing it. Other donor agencies disagreed with the indicators used by the Delegation to reach its decision, or with their interpretation or measurement. A more serious problem arises from the fact that disbursement decisions depend on individual decisions made by donors. In other words, the donors consult with each other to decide whether the agreed-on indicators have been satisfied (a hard process in itself), but the actual disbursement of the money at stake is left to the appreciation of each donor. This lack of coordination about the manner in which non-fulfillment of conditions set by the donors is followed up at the level of actual disbursement decisions is a serious obstacle to effective aid coordination.

Third, rationalization of donor missions to the field has barely begun and parallel units subsist. Thus, 60 such units for the implementation of rural development projects have been recorded for the year 2008, as against 65 in 2006. For another thing, only 15 percent of the project/program interventions for rural development were carried out under the aegis of joint programs in 2009, a figure to be compared to the set objective of 66 percent for 2010. In reality, there is no such thing as a joint basket of donor interventions. Joint

missions have not increased either: most donor agencies continue to organize their field missions separately. In addition, few projects (only 22 of them in 2009, representing 20 percent of the total) have been co-financed by several donors (the proportion was 18 percent in 2008). Finally, 58 percent of the projects/programs of rural development financed by European agencies were keeping a parallel management unit.

Fourth, some donors refuse to use national systems and procedures on the ground that they are not compatible with international norms and are unreliable and inefficient. Thus, the share of OECD donors' aid that follows the national procedures of budgetary implementation, financial monitoring and control was only 30 percent in 2010. This is actually a regression from the figure of 34 percent recorded for the years 2007-2009. Where the situation is clearly better is in matters of alignment of donor aid on national objectives and priorities: 73 percent of OECD public aid in 2007 were obeying national priorities (60 percent in 2005). Quality of national systems of budgetary planning, financial management and market adjudication is a key aspect conditioning donors' alignment on them. In 2009, only 37 percent of development aid allocated to the public sector were properly adjudicated through open calls, as against 45 percent in 2005. In contrast, 40 percent went through the national system of public finance in 2009, as against 29 percent in 2005 and 34 percent in 2007: this increase was essentially caused by the increase in the number of donors practicing budget support.

A last aspect deserves to be emphasized. The involvement of the government of Mali remains weak and its appropriation of the Paris Declaration process is far from satisfactory. The country still lacks a genuine national strategy toward development aid and the government seems unable to conceptualize its own view about national development priorities. It tends to rely on the ideas, proposals

and prescriptions coming from the donor agencies without setting them against a list of objectives set by itself in consultation with the local population. It is therefore not surprising that a definition of budgetary guidelines toward meeting objectives is altogether absent. Participation of the private sector and the civil society is entirely achieved through sector-level groups. Communication of information between the government of Mali and the donors is deficient, and information management at the level of the government itself is lacking in many respects. As a result of these weaknesses and the persisting duplication of aid management structures, aid efforts and outcomes remain hardly transparent.

7 Conclusion

Aid coordination is a very desirable objective, in particular because it can reduce the costs of delivering and monitoring aid (the transaction cost effect) and improve the targeting of the poor (the governance effect). The latter effect is achieved through more effective disciplining of the central or local governments and agencies in the host countries. In practice, however, we observe too little of such aid coordination. This paper has drawn attention to some of the most awkward problems that plague attempts to coordinate or harmonize aid efforts. First, even when the problem of aid coordination is seen as a 'pure' coordination problem, coordination ought not to be taken for granted. As a matter of fact, donor countries may fail to coordinate because, in the absence of a centralized decision-mechanism, they do not expect that other countries, or enough other countries, will join the coordinating group.

Second, aid coordination involves incentive problems that exhibit the structure of a Prisoner's Dilemma rather than a pure coordination game. Serious problems of free riding need to be overcome.

Third, as attested by our case study of Mali, donor countries may take po-

litical costs seriously into account when they decide about the level or intensity of aid coordination efforts they want to apply. A trade-off is thereby created between costs and benefits of coordination and the equilibrium level of coordination that donor countries want is far from optimal from the standpoint of aid targeting and aid outreach. Absent these political costs (and provided that 'pure' coordination problems are surmounted), greater coordination of aid efforts would lead to lower transaction costs (of delivering and monitoring aid) and higher shares of the aid budgets reaching the target groups.

As soon as political costs are acknowledged, an interesting issue emerges in so far as all donor countries do not value political costs in the same way. The question then arises as to how a group of heterogeneous countries will choose a necessarily unique level of aid coordination inside the club. Different scenarios are possible and some are more favourable than others to aid effectiveness through better coordination of donors' aid efforts. Empirical research regarding the actual processes of decision-making inside (potential) clubs of aid-coordinating countries is still in its infancy, and one may hope that in the near future our knowledge in this respect will improve. Only then will we be able to better understand which scenarios are more relevant and what consequences follow from them

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Appendix I

The equilibrium condition (3), which maximizes the aggregate welfare of big and small donor countries, can be written thus:

$$\beta_1 B_1 + \beta_2 B_2 = -\frac{Z'(e^*)}{mZ(e^*)}(2 - \beta_1 - \beta_2)$$

$$where\ B_i = \left[\frac{\alpha'(me^*)}{\alpha(me^*)} - \frac{C_i^2(T_i, me^*)}{T_i - C_i(T_i, me^*)}\right]$$

Because $\beta_1 B_1 < \beta_2 B_2$, the above equality implies the following inequality:

$$-\frac{Z'(e^*)}{mZ(e^*)}(2 - \beta_1 - \beta_2) > 2\beta_1 B_1$$

Let us now reason ex absurdo. If e^* were a solution for the problem in which big countries impose, in an unconstrained manner, their preferred level of coordination, it would satisfy equation (5) and we could infer that:

$$\beta_1 B_1 = -(1 - \beta_1)\frac{Z'(e^*)}{mZ(e^*)} < -\frac{1}{2}\frac{Z'(e^*)}{mZ(e^*)}(2 - \beta_1 - \beta_2),$$

which simplifies thus:

$$1 - \beta_1 < \frac{1}{2}(2 - \beta_1 - \beta_2)$$

This inequality implies that $\beta_1 > (\beta_1 + \beta_2)/2$, which is impossible since $\beta_1 < \beta_2$ by assumption. We conclude that $\tilde{e}$ must be different from e^*. It must actually be the case that $\tilde{e}$ is smaller than e^*so as to raise the value of B_1 and, therefore, $\beta_1 B_1$:

$$\tilde{e} < e^* \Longrightarrow$$

$$\beta_1 \left[\frac{\alpha'(m\tilde{e})}{\alpha(m\tilde{e})} - \frac{C_i^2(T_i, m\tilde{e})}{T_i - C_i(T_i, m\tilde{e})} \right] > \beta_1 \left[\frac{\alpha'(me^*)}{\alpha(me^*)} - \frac{C_i^2(T_i, me^*)}{T_i - C_i(T_i, me^*)} \right]$$

Appendix II

Let us start from the stand-alone equilibrium condition for the big countries, equation (5), which we write thus:

$$\Lambda_1 = \beta_1 \left[\frac{\alpha'(m_1 e_1^*)}{\alpha(m_1 e_1^*)} - \frac{C_1^2(T_1, m_1 e_1^*)}{T_1 - C_1(T_1, m_1 e_1^*)} \right] + (1 - \beta_1) \frac{Z'(e_1^*)}{Z(e_1^*)} = 0$$

We want to find the expression for $\delta e_1^* / \delta m_1$, where the variation of m_1 is construed as a variation in the size of the club of aid-coordinating countries (actually enlarged to include the small countries).

We find that:

$$\frac{\delta \Lambda_1}{\delta e_1} = \beta_1 m_1 \left[\frac{\alpha'(-)\alpha"(-) - (\alpha'(-))^2}{(\alpha(-))^2} - \frac{(T_1 - C_1(-))\, C_1^{22}(-) + \left(C_1^2(-)\right)^2}{(T_1 - C_1(-))^2} \right]$$

$$+ (1 - \beta_1) \left[\frac{Z(-)Z"(-) - (Z'(-))^2}{(Z(-))^2} \right] < 0$$

$$\frac{\delta \Lambda_1}{\delta m_1} = \beta_1 e_1 \left[\frac{\alpha'(-)\alpha"(-) - (\alpha'(-))^2}{(\alpha(-))^2} - \frac{(T_1 - C_1(-))\, C_1^{22}(-) + \left(C_1^2(-)\right)^2}{(T_1 - C_1(-))^2} \right] < 0$$

We thus immediately obtain the required expression:

$$-\frac{\delta\Lambda_1/\delta m_1}{\delta\Lambda_1/\delta e_1} = \frac{\delta e_1}{\delta m_1} = -\frac{e_1\beta_1 X}{m_1\beta_1 X + (1-\beta_1)\left(\frac{ZZ"-(Z')^2}{Z^2}\right)},$$

$$where\ X = \left[\frac{\alpha'\alpha" - (\alpha')^2}{\alpha^2} - \frac{(T_1 - C_1)\,C_1^{22} + \left(C_1^2\right)^2}{(T_1 - C_1)^2}\right] < 0$$

Note that since $X < 0$, the above expression implies that $\delta e_1/\delta m_1 < 0$. Dividing both the numerator and denominator by $m_1\beta_1 X$, we obtain the following, more elegant expression:

$$-\frac{\delta e_1}{\delta m_1} = \frac{e_1/m_1}{1+\mu},$$

$$where\ \mu = \left(\frac{1-\beta_1}{m_1\beta_1 X}\right)\left(\frac{ZZ" - (Z')^2}{Z^2}\right) > 0$$

The elasticity of $e_1$with respect to $m_1$writes therefore as:

$$\eta_{e_1,m_1} = \frac{\delta e_1}{\delta m_1}\frac{m_1}{e_1} = -\frac{1}{1+\mu},$$

which is higher than -1, or smaller than +1 in absolute value. It follows that $\delta(m_1 e_1)/\delta m_1 > 0$. QED