Selectivity on Aid Modality: Determinants of Budget Support from Multilateral Donors

by

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Abstract

Since the late 1990s a selection on policy approach to aid was advocated such that more aid should be allocated to countries with good policies. A number of donors accepted this recommendation, including the World Bank, but there is little evidence that this has occurred. Donors, including the World Bank, seem no more likely to use policy and governance indicators to determine the amount of aid allocated to particular recipients. This paper argues that donors may exercise selectivity over the aid modality. Specifically, multilateral donors (we consider only) will cede more recipient control over aid by granting more budget support to those recipients with better service delivery systems and spending preferences aligned with the donor. We test this for the EC and IDA over 1997-2007 and find some support. The principal determinant of receiving budget support has been having a PRSP process in place, and this can be considered a good indicator of aligned preferences. Furthermore towards the end of the period (2005-07) there was some increase in the share of countries receiving budget support but then government effectiveness was also a determinant of eligibility, and having a PRSP increased the amount of budget support. Multilateral donors have been more likely to give budget support to countries with aligned spending preferences and better quality systems, even if they have not reallocated the total aid envelope in that way.

Keywords: Project Aid, Budget Support, Aid Modality, Aid Selectivity

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1 Introduction

The publication of *Assessing Aid* (World Bank, 1998) marked a watershed in debates on aid policy and advocated a selectivity approach whereby the effectiveness of aid could be increased if more was allocated to countries with good policies. This selectivity approach to aid allocation takes as a starting point the view that 'aid doesn't work' in the sense that the amount of aid alone has no effect on growth, but aid makes a positive contribution to growth in those countries with good policy (Burnside and Dollar, 2000). Furthermore, attaching policy reform conditionality to aid does not work, as donors 'are unable to exert significant net influence on policies and institutions, and are unable to by-pass the government in implementing expenditures' (Collier and Dollar, 2004: F245). As a consequence, (increased) aid should be given to those recipients already implementing good policies, especially to increase the effectiveness in poverty reduction (Collier and Dollar, 2002). The outcome was an argument for selective aid (re)allocation towards recipients with relatively good policies and institutions.

The underlying claims of this approach to selectivity have been challenged. A number of studies contest the claim that aid effectiveness in supporting growth is conditional on good policies (e.g. Hansen and Tarp, 2001; Dalgaard *et al*, 2004), whilst others find that aid has contributed to reducing poverty and improving the welfare of the poor independently of recipient policies (Mosley *et al*, 2004; Gomanee *et al,* 2005). The claim that conditionality is ineffective has also been contested (Mosley *et al*, 2004; Koeberle, *et al*, 2005; Morrissey, 2005). Interpreted strictly the claim is true: the *quantity* of aid is not a determinant of the *quality* of policy, or the specific reforms advocated by donors are rarely fully implemented within the relatively short time period of the associated aid programme. However, there is considerable evidence that the direction and broad content of reform for the majority of recipients is in line with what donors advocate (Koeberle, *et al*, 2005), i.e. aid conditions have influenced the trend in policy over time.

Even if the link between recipient policy and aid effectiveness is weaker than claimed one may still expect some increase in 'selectivity on policy' in donor aid allocation following World Bank (2008). A number of donors did declare that they would make use of greater selectivity on policy, notably the US, Netherlands and the Bank itself (Hout, 2007a). However, there is very little evidence that donors increased the amount of aid they give to countries with better policies or institutions since the late 1990s (Nunnenkamp and Thiele, 2006; Hout, 2007a, 2007b; Easterly, 2007; Clist, 2009). This need not imply that donor aid allocation does not respond to recipient policy; it may be that donors alter the type of aid they give to a particular recipient based on their perceptions of the quality of policy and institutions. Many factors influence which countries individual donors give aid to; allocation is influenced by the commercial and strategic concerns of donors (recipients are chosen based on their ties to the donor) and by the needs of the recipients (see Clist, 2009). Individual donors tend to have their own selection criteria, although some global trends can be observed across many donors. For example, Boschini and Olofsgard (2007) find that the end of the Cold War explains a global reduction in aid in the 1990s although there was no significant effect on allocation, whereas Headey (2008) finds that aid effectiveness increased after the end of the Cold War. This suggests that the changes were in the types of aid granted rather than selectivity in amounts of aid. Something similar may have occurred since the late 1990s. The purpose of this paper is to assess if two multilateral donors, the World Bank (IDA) and EU collective aid (EC), exercise selectivity over aid modalities, so that it is the type of aid given (and specifically the

extent to which the donor retains control over disbursement) that responds to the quality of policy and institutions.

The conventional argument for why donors do not exercise selectivity on policy or governance is that conditionality fails: donors are unable to punish (by withdrawing aid) recipients who do not meet their conditions because the countries are poor and hence in need of aid (Collier, 1997). This is not an entirely convincing argument as donors could still exercise selectivity at the margin, by giving some more aid to countries that improve governance or policy and some less to those that do not (indeed, this is the argument in Collier and Dollar, 2002). As observed above, there is no evidence that this has happened. It is possible that the warm glow effect whereby donors 'gain utility from the act of giving' (Andreoni, 1990: 473) is so strong as to override concerns about governance. Donors appear to face the Samaritan's Dilemma where concern for the poor stymies their ability to punish low levels of recipient effort; Svensson (2000) argues this should be less of a concern for multilateral donors as they are likely to be less inequality-averse.

This may overstate the problem faced by donors as even if they feel constrained in their ability to alter the levels of aid they can still alter the terms. While aid volumes may not be altered in response to poor governance, aid composition might: the policy lever for dealing with low levels of governance is the *type* of aid delivered, specifically the amount of control a recipient is granted. This suggests that donor allocation is not a two-stage decision of who gets aid and how much but a three-stage decision that also considers what type of aid should be given. This is elaborated in Section 2 with a brief review of the theoretical literature and the outline of a model to motivate the analysis. Section 3 describes the data and empirical specification, while Section 4 reports and discusses the results. Section 5 concludes by considering if the increased use of budget support is indicative of selectivity on modality.

2 Modelling Aid Modality Choice

Once a donor has decided how much aid to allocate to a particular recipient they face a choice of how to deliver the aid. A number of factors will influence this choice related to dimensions such as administration costs and capacity building (e.g. is it more cost effective to work through recipient service delivery systems) or whether the donor wants to target the aid (on particular groups, regions or services). There are many different types of aid so that one could envisage a spectrum of modalities along the dimension of interest (such as the degree of donor as against recipient control, potential fungibility or transaction costs). The theoretical literature discussed below models the aid modality choice between two types of aid, typically Project Aid (PA) and General Budget Support (GBS) intended to capture the extremes of control over disbursement. Projects give control to the donor: they can select the target groups and the good or service being delivered, retaining control over implementation and therefore expenditure. At the other extreme, General Budget Support confers control to the recipient over allocating and administering the disbursement. In neither case is control complete (e.g. donors can influence budget allocation). In practice modalities are between the extremes; projects may involve donors and recipients working together while budget support may be targeted on a specific sector.

Project aid has always been attractive to donors but it imposes excess costs on recipients by encouraging fragmentation (many donors operating separate projects), a lack of co-ordination hence high transaction costs and, as it neglects recurrent expenditures and local systems, can undermine local institutions (Ohno and Niiya,

2004: 6). The shift towards programme and sector aid from the 1990s addressed some of these weaknesses by clustering projects (Harrold, 1995). Budget support is a natural extension intended to strengthen recipient systems and reduce administration costs. For example, the World Bank's budget support in Uganda was found to be twice as efficient as project support in terms of cost per dollar disbursed (Miovic, 2004). In contrast, 'for the Netherlands, the decrease in costs (due to pooled funding, harmonisation of procedures and less time needed in direct programme management) is outweighed by the increased time use due to co-ordination, particularly on the sector level... Overall, increased intensity of co-ordination has led to an increase of transaction costs for Ugandan partners' (Netherlands Ministry of Foreign Affairs, 2003: 71). An extensive evaluation found that the use of GBS improved the overall quality of aid through increased coherence, harmonisation and alignment (IDD, 2006). However, Killick (2004) and Frantz (2004) argue that there is limited evidence that GBS decreases transaction costs; Foster (2000) argues that GBS is in some cases less predictable; and Batley (2005) reports evidence of timing problems that undermine potential reductions in transaction costs. Even if GBS does not deliver all the anticipated benefits it nevertheless signals support for and belief in the capacity of the recipient to use aid effectively. In contrast, donor-implemented projects are appropriate when there is limited trust or confidence in recipient systems to disburse aid effectively.

Cordella and Dell'Ariccia (2002, 2003 and 2007) present the best known model of a donor's choice between GBS and PA. The Cordella and Dell'Ariccia (2007, hereafter CDA) model is presented as most representative of multilateral donors; we only outline the most relevant features to relate to our model. The model has a principle (donor), an agent (recipient) and two goods – a development and non-development good. The recipient derives utility from both goods, whereas the donor derives utility only from the development good and CDA assume that the donor is more altruistic than the recipient (although they only require that the donor and recipient have differing preferences over the two goods; recipient types are distinguished by their preference for the development good). The essential idea is that the donor wants to increase spending on development.

If the donor elects to use project aid they can target their aid on specific spending. However, total development spending may not increase by PA if the recipient reallocates some of its own spending (away from the project area); the effectiveness of PA is limited by fungibility. There is a related efficiency loss of project aid to the extent that it is not aligned with recipient activities (this can be seen as corresponding to the coordination and transaction costs mentioned above).[1] Thus, although PA gives the donor control over its aid this is at the expense of being unable to influence the recipient's expenditure allocation and imposes an efficiency cost on recipient spending. A limitation is that the donor is required to deliver all aid through one of the modalities rather than a combination; in practice, donors use a variety of types of aid (a richer framework could model the shares allocated for each type). Unconditional budget support confers no influence on recipient action but also removes donor control over the use of aid, so this option would only be attractive if donor and recipient spending preferences are closely aligned. Conditional budget support allows the donor to influence recipient allocation by monitoring a component of development spending (or equivalently requiring the recipient to undertake some costly action to increase development effectiveness). In this way the fungibility problem is solved, but at a cost: 'an inefficiency may emerge if donors are forced to

1 A minor limitation of the CDA model is that while project aid is subject to a cost that can be interpreted as an efficiency cost, GBS is not. This assumes that project aid is never more efficient than GBS, but the evidence base for an efficiency gain from GBS is certainly not conclusive (Batley, 2005; Frantz, 2004; Killick, 2004; Netherlands Ministry of Foreign Affairs, 2003).

impose higher levels of expenditure on the more controllable components of the budget' (Cordella and Dell'Ariccia, 2007: 1261).[2]

Leaving aside details and extensions there are three core implications of the CDA model. First, budget support only increases spending on the development good under conditionality so it imposes a cost on recipients. Second, budget support is preferred to project aid if preferences are reasonably well aligned and the efficiency loss of project aid is high, whereas project aid is favoured under the opposite conditions. Observing that aligned preferences imply projects are consistent with recipient allocation suggests this efficiency loss condition is generally redundant. Third, 'budget support is preferable to project aid when total aid is small relative to the recipient's own resources' (Cordella and Dell'Ariccia, 2007: 1261). The intuition for this is that fungibility is greater (more likely) when the project is small because it is a less important element of recipient spending hence easier for the recipient to adjust its own allocation.

Morrissey (2006), in reference to Cordella and Dell'Ariccia (2003), argues that the fungibility concern is rather unimportant. If donor and recipient preferences on allocation are aligned, then irrespective of the importance of aid in spending recipients will allocate aid more or less in the way donors' desire and GBS is appropriate. Furthermore, as White and Morrissey (1997) show, conditionality serves no useful purpose in this case, and may be counter-productive (because it introduces a risk of unintended non-compliance with conditions that may give an incorrect signal that the recipient is a 'bad' type). On the other hand, if preferences are not aligned, conditionality is ineffective (White and Morrissey, 1997) and fungibility is less likely to undermine GBS if aid is a *large* share of the budget. The intuition here has two elements: i) it is easier to monitor the allocation of spending over broad headings than actual spending on many particular projects, and ii) if aid is a large share of the budget recipients have fewer own resources to reallocate. Thus, fungibility arguments do not undermine the case for GBS to poor countries; fungibility is a 'red herring', in the words of McGillivray and Morrissey (2000).[3] A more important issue in choosing GBS over project aid relates to the effectiveness of public spending; donor projects may be more effective at delivering services than government spending in poor countries (see Gomanee *et al*, 2005; Morrissey, 2009).

Jelovac and Vandeninden (2008, hereafter JV) address another limitation of CDA by allowing donors to allocate aid to both modalities. The results are very sensitive to the assumptions made on the efficiency and fungibility losses of project aid but differ from CDA in two major ways. First, while CDA always prefer conditionality, JV find that the effectiveness of conditionality (even assuming full commitment) depends on the efficiency of the two modalities, preference alignment and the relative size of the aid budget. Second, project aid is only preferred when preference alignment *and*

2 Bougheas *et al.* (2007) also treat conditionality as a prior action that imposes a cost, but their concern is whether the donor will offer conditional or unconditional aid (which, they argue, depends on beliefs about the distribution of recipient types). This applies most clearly to the CDA scenario when recipient type is not known to the donor, and suggests that conditionality may not be effective in revealing recipient types.

3 McGillivray and Morrissey (2001) elaborate on this by distinguishing between policy officials (who negotiate with donors) and implementing officials (who undertake spending). Given imperfect transmission of information (such as on aid conditions) to spending officials, which is more likely to be the case when recipient systems are weak, there will be a difference between spending outcomes and intentions independent of any desire of policy officials to use aid as a fungible resource. Again, fungibility *per se* is not the core issue. Fritz and Kolstad (2008) also question the high degree of fungibility assumed by some of the theoretical papers, but agree that in certain situations it renders project aid no different in outcome to budget support.

project aid's efficiency loss are low. Although JV places more emphasis on the role of the efficiency of each type of aid, they assume that project aid is at best as efficient as budget support. The only efficiency loss with budget support is the reallocation of resources due to preference misalignment (the crowding out of development expenditure). This does not allow for cases where project aid is more efficient than budget support (e.g. if the recipients have weak expenditure monitoring and service delivery systems).

Hefeker (2006) uses a similar model to CDA in which the donor and recipient utility functions attach weights to (spending allocated to) two groups, the rich and poor, but the donor is more pro-poor than the recipient (analogous to the CDA assumption that the donor is altruistic and attaches more weight to development). Bureaucratic incentives are allowed as the donor's objective function includes bureaucratic utility weights that differ for GBS and project aid so that when granted budget support is of a greater amount than project aid. However this requires the donor to have the ability to increase the amount of aid (if selecting budget support). This is a limitation because the determination of the donor (country) budget is not modelled and the choice between budget support and project aid is not strictly over shares. Other differences from CDA are that both types of spending are arguments in the donor's utility and the recipient's reservation utility is given by a minimum level of aid (rather than no aid in CDA), as donors are subject to the Samaritan's Dilemma. The latter has merit as it allows for a low donor offer of aid, rather than withholding of aid, to form part of the reserve utility of the recipient. Project aid is subject to fungibility; the assumption of complete fungibility may be unrealistic as fully reallocating part of the budget is likely to be costly and time consuming for recipients. Budget support allows the donor to set a target for the proportion of the budget allocated to the poor and conditionality increases the target proportion (i.e. increases spending on the poor). The model allows for the different types of aid to have different efficiency parameters but this is not exploited.

As in CDA, budget support is preferred when aid is small relative to the recipient's own resources. However, Hefeker (2006) concludes that if there is no preference alignment, budget aid will be *preferred* because there is a bureaucratic incentive to give the larger amount of budget aid. This counter-intuitive conclusion arises from the (questionable) assumptions that the amount of aid can be increased and the fact that each agent does not take into account the preferences of the other (i.e. they are considered separately). Furthermore, the model is based on shortfalls in utility from a target level of consumption rather than implicit production functions. However, this introduces a limitation: the target consumption includes aid and giving aid increases the target consumption of a recipient by more than the increase in their actual consumption (there is inconsistency between target and actual utility).

Svensson (2000) considers aid allocation in the context of the Samaritan's Dilemma (different aid modalities are allowed but allocation between them is not a focus). Donors are inequality averse and allocate aid to poorer recipients. Recipients anticipate this which gives rise to a moral hazard problem as they have less incentive to decrease poverty; the donor's attempt to punish poor recipient effort is stymied by their own inequality aversion. The analysis is an elegant explanation of the failure of donors to implement conditionality, and hints at why donors do not implement selectivity (in the amount of aid). Although the model assumes full commitment this may not be unduly restrictive; Federico (2004) shows that even under weak commitment, conditionality is preferred to no conditionality. Related papers tend to have a more restrictive structure. For example, Azam and Laffont (2003) assume that donors can offer complete contracts with perfect monitoring. This is rather unrealistic for the aid setting where contracts 'cannot be enforced in courts and the generally poor record of conditionality demonstrates that such agreements have not been self-enforcing either' (Hagen, 2006a: 268).

An Illustrative Model

As with CDA, the model we present has a multilateral donor in mind on the basis that they are more likely to be able to exercise selectivity. Svensson (2000) argues that international organizations have less inequality aversion and are therefore less susceptible to the Samaritan's Dilemma. Although Hagen (2006b) argues that this would not resolve the dilemma if aid efficiency varies across recipients, and it is not evident that multilaterals have less inequality aversion or are better able to enforce conditionality, it supports the tendency for multilaterals to be more selective. We suggest that the use of different instruments may offer a way out of the dilemma: the amount of aid can be chosen to address poverty needs (the 'Samaritan impulse') while the type can be responsive to recipients effort and policies (the 'efficiency impulse'). Our model does not require full commitment provided donors can influence the composition of recipient spending, for which there is some evidence (Mosley *et al*, 2004; Gomanee *et al*, 2005). Furthermore, following the arguments above, we do not consider fungibility *per se* as a factor in the donor's decision.[4] The donor only needs to consider preference alignment as revealed by the recipient's allocation of government spending and the effectiveness of recipient relative to donor systems in delivering services.

Consider a situation with two agents, a donor (D) and recipient (R) and two possible goods consumed within the recipient country (g_1 and g_2); g_1 can be thought of as all expenditures that are valued by both the recipient and the donor, and g_2 as all expenditures that are valued by the recipient but not the donor. The recipient's utility is then a weighted sum of these two goods, whereas the donor only values the former. This is referred to as the development good for ease, but note that it is not necessary to assume the 'development good' is actually more efficient (in meeting the donor's objective, such as reducing poverty) than the 'non-development good', merely that there is a possibility of preference misalignment. The distinction between the two goods is simply a demarcation between those which the donor considers a valid use of aid and that which it does not. The utility functions of the recipient and donor are:

$$U_r = \alpha g_1 + (1-\alpha) g_2 \quad (1)$$

$$U_d = g_1 + a_r + a_d \quad (2)$$

Where $\alpha \epsilon [0,1]$, and a higher value of α represents a higher degree of preference alignment between the donor and recipient; a_r and a_d represent GBS and Project aid respectively (given the subscript *d* or *r* according to whether it is controlled more by the donor, Project aid, or the recipient, GBS). The Samaritan impulse is incorporated into the utility function of the donor as the sum of aid disbursed, $a_r + a_d$. Donors "gain utility from the act of giving" (Andreoni, 1990: 473) as well as from the effect of their giving. The amount of aid remains constant, and can be treated as predetermined in a donor process. For simplicity we use the utility function of $U_d = g_1$ and assume that all aid is disbursed because of the warm glow effect. The donor chooses between the types of aid that it has available (we consider only two for

4 This also avoids the confusion in CDA regarding where fungibility arises. Directly it relates to projects that crowd out 'developmental expenditure that the recipient would have undertaken in the absence of the donor's intervention' (Cordella and Dell'Ariccia, 2007: 1261). However, later it is claimed that 'fund diversion is easier under budget support than under project financing' (Cordella and Dell'Ariccia, 2007: 1275). If recipients want to treat aid as a fungible resource they can do so irrespective of whether it is project or budget support.

convenience), so as to maximise its expected welfare. The simple production functions of the two goods and the budget constraints of the recipient and donor are.

$$g_1 = e + \theta a_d \quad (3)$$

$$g_2 = m \quad (4)$$

$$G + a_r \geq m + e \quad (5)$$

$$A = a_r + a_d \quad (6)$$

Where m and e are production inputs of the recipient (analogous to expenditure allocation) for the two types of good, a_r and a_d are GBS and project aid respectively, θ is an efficiency parameter for project aid, and G is the recipient's own discretionary budget. Whereas the theoretical literature has generally constrained project aid to be at best as efficient as GBS, here it is only assumed that $\theta > 0$ so that θ can be interpreted as the efficiency of project aid *relative* to GBS. Implicitly, we assume that the efficiency parameter is $\theta = \theta^*/\lambda$, where λ is the efficiency of a_r. To simplify matters (without losing generality), we use the relative efficiency term θ and normalise the parameters such that $\lambda = 1$. We start by assuming all variables are common knowledge, and impose the simplifying assumption that recipients are either good ($\alpha = 1$) or bad ($\alpha = 0$) from a donor perspective. The model only considers discretionary spending, so no production of the development good does not equate with no utility for the poor, merely no extra utility above some base level (the later introduction of the probability of misalignment tempers this assumption).

If the recipient is type α_1, there is no preference misalignment as both agents sole concern is the g_1 good.

$$U_r = U_d = g_1 \quad (7)$$

In this case the recipient chooses $G + a_r = e$, regardless of the donor's actions, and the entire recipient's discretionary spending is approved by the donor. The donor's utility is given by:

$$U_d = e + \theta a_d = G + a_r + \theta a_d \quad (8)$$

Where there is no preference misalignment the sole consideration is the relative efficiency of the two modalities. The donor would seek to maximise its utility, and comparing the marginal efficiency of the two types of aid gives:

$\frac{\partial U_d}{\partial a_r} = 1$, $\frac{\partial U_d}{\partial a_d} = \theta$.

So, donors would choose to distribute aid either as GBS or as project aid, depending on the efficiency parameters of the two; if $\theta > 1$ the donor would choose project aid, if $\theta = 1$ it would be indifferent, and if $\theta < 1$ it would choose GBS. If the recipient is type α_0, there is complete preference misalignment regarding the discretionary budget. As such, the recipient, regardless of the donor's choice, chooses $G + a_r = m$. Clearly, the donor then chooses project aid (as all resources given to the recipient would be 'misspent'), and so $g_1 = \theta a_d$. We now move to the more interesting situation where there is not complete information.

with probability p, $\alpha = \alpha_1 = 1$

with probability $1 - p$, $\alpha = \alpha_0 = 0$.

Where $p \epsilon [0,1]$, the distribution of which is commonly known. We first find the recipients reserve utility function, given by project aid. If it is the bad type, it does not allocate any resources towards the development good. If it is the good type, it

gains utility both from its entire discretionary budget, but also from the donor's project aid.

$$U_r^{PA}(\alpha_0) = g_2 = m = G \quad (9)$$

$$U_r^{PA}(\alpha_1) = g_1 = e + \theta a_d = G + \theta a_d \quad (10)$$

And the recipient's expected utility is then $E(U_r^{PA}) = G + p\theta a_d$.

Under Project aid, the donor's utility is the total development good it produces, augmented by any produced by the recipient.

$$U_d^{PA}(\alpha_0) = \theta a_d. \quad (11)$$

$$U_d^{PA}(\alpha_1) = G + \theta a_d. \quad (12)$$

The donor's expected utility is then $E(U_d^{PA}) = pG + \theta a_d$.

If the donor were to give GBS, the donor's utility would be completely determined by the recipient's actions. If they have misaligned preferences, the recipient does not allocate any of its additional discretionary resources to g_1, and so the donor receives no utility. If they have aligned preferences, all resources are spent on the development good (g_1). Irrespective of their preferences, the recipient always allocates its available resources as it sees fit, and so always receives the output it desires. This can be stated as:

$$U_d^{GBS}(\alpha_0) = 0 \quad (13)$$

$$U_d^{GBS}(\alpha_1) = e = G + A \quad (14)$$

$$U_r^{GBS}(\alpha_0) = U_r^{GBS}(\alpha_1) = G + A \quad (15)$$

And so

$$E(U_d^{GBS}) = p(G + A) \quad (16)$$

$$E(U_r^{GBS}) = G + A \quad (17)$$

The reserve utility for the recipient is given by project aid. For GBS to be given instead, both agents need to receive at least as much utility under GBS. The agent's participation constraints are:

$$E(U_r^{GBS}) > E(U_r^{PA}) \quad (18)$$

$$E(U_d^{GBS}) > E(U_d^{PA}) \quad (19)$$

For the recipient, this means

$$G + A > G + p\theta A$$

i.e. if $1 > \theta \cdot E(p)$ then GBS is preferred, which means Project aid is only preferred if the efficiency gained from using project aid (if any) is enough to offset the potential preference misalignment.

The donor will prefer GBS if

$$p(G + a_d) > pG + \theta a_d$$

i.e. if $E(p) > \theta$. This can be understood as depending on whether the expected preference misalignment is smaller than the relative efficiency loss of project aid. This simple framework shows that there are two main factors that influence the choice of aid modality: the preference alignment (modelled here as the expectation of preferences being aligned) and the efficiency of Project aid relative to GBS. The

model maintains the role of alignment from the existing theoretical literature and adds a more appropriate role for the relative efficiency of the two types of aid. In order to derive a reduced form equation, we can simply state that:

$$\frac{a_r}{A} = F(E[p], \theta)$$

As θ has been understood as the *relative* efficiency parameter, we can extend this slightly by relaxing the normalisation $\lambda = 1$ and letting $E(p) > \hat{\theta}/\lambda$ determine the donor's modality choice, where λ is the absolute efficiency of a_r and $\hat{\theta}$ is the absolute efficiency of a_d. This gives:

$$\frac{a_r}{A} = F(E[p], \hat{\theta}, \lambda)$$

Where $F'(E[p]) > 0$, $F'(\hat{\theta}) < 0$ and $F'(\lambda) > 0$. In keeping with the previous theoretical literature, we find that the greater the degree of alignment, the more likely GBS will be preferred by the donor. The efficiency of GBS and project aid are important influences on choice but we do not rely on direct concerns about fungibility, the relative size of aid or the assumption that donors possess commitment technology.

3 Empirical Specification and Data

The relationship $\frac{a_r}{A} = F(E[p], \theta, \lambda)$ is specified for estimation as:

$$\frac{a_r}{A} = \beta_0 + \beta_1 Preferences + \beta_2 Governance + \beta_3 Transaction\ Costs + \beta_4 Controls + \varepsilon$$

With the expectation that $\beta_1 > 0$, $\beta_2 > 0$, and $\beta_3 < 0$.

A major impediment is data scarcity. Ideally, a measure of the control a recipient exercises over aid would be used but this is not available. Data on aid modalities are limited and often incomplete; not all aid can easily be ascribed to a particular modality and it is difficult to identify the level of recipient or donor control for any modality. We therefore estimate only the donor decision to give budget support, which is assumed to imply most control to the recipient, and use different measures to capture independent variables (details on data sources are in the Appendix).

Knack and Eubank (2009) conduct analysis that is close in spirit. They propose a simple model in which an individual donor is more likely to use recipient systems if they are more likely to benefit from their improvement (measured by the donor's share of aid to the recipient), their citizens have a high level of trust in development aid and/or the recipient systems are already of a high level. This is tested using three dependent variables taken from the OECD (2008) to measure elements of recipient control. There focus is on explaining differences between donors, and is limited by using data that relates only to 2008 (and covers an average of only 13 recipients per donor). As our concern is with the choice of GBS by IDA and the EC we require data covering more recipients over a period of time.

Data on total aid and GBS are from the OECD Creditor Reporting System (CRS) dataset. As donors only give GBS to some recipients we estimate a two-stage model. The first (eligibility) stage is a probit for the donor where the dependent variable is a dummy equal to one if the recipient received GBS from the donor within the last three years (to counteract the volatile reporting of individual aid instruments). A zero denotes that the recipient has received aid from that donor, but not GBS. Countries that have not received any type of aid from the donor are not included, as the decision as to the amount of aid is seen as exogenous (a prior stage). The data covers 1997-2007 and up to 88 potential recipients.

Independent Variables

Two measures are used to capture the alignment of preferences (p) between donor and recipient. The first is *public spending on education* as a percentage of GDP. This is close to what has been termed 'pro-public expenditure' (PPE) and should be a good proxy for e (the development good's input). The second measure is a *prsp* dummy that takes the value one if the recipient has published a PRSP-related document (this includes progress reports and so forth). This is to capture ownership and the existence of a recipient-led approach, which are likely to increase the efficiency of government-implemented aid-funded activities, and may capture alignment more accurately as the process requires a number of prior actions to be taken over a period of time.

Governance is conceptualised using a narrow definition of the ability to convert aid inputs into development outcomes. We expect that a donor is less likely to use recipient systems if it incurs a large efficiency loss in doing so, which would be represented here by a positive coefficient on the variables representing governance. There are two main datasets which are relevant here. From the first we can choose from the six Governance Matters variables including *government effectiveness* and *control of corruption* from 1996 for up to 190 countries. The second is the CPIA, which includes the variables *general public sector quality* and the *quality of the budget*, but only for up to 75 countries over the years 2005-2008. The two sets of variables are correlated, particularly *public sector management* and *government effectiveness* (0.84). *Government Effectiveness* is chosen as it provides the best reflection of the theoretical conceptualisation of governance (which is the efficiency of government in producing a development good) and coverage.

Transaction costs are a common argument for using newer aid modalities that give the recipient more control. To the extent that they capture the efficiency of project aid they are a measure of λ. If this is a major motivation, we would expect more control to be granted to recipients that face higher transaction costs. The *number of donors* is included as a measure of how fragmented aid is within a given country. The expectation is that recipients with higher fragmentation would have higher transaction costs, and in turn see more efforts by donors to reduce these costs. Ideally this would be a concentration measure, but this is not available. Aid dependency is another potential indicator for higher transaction costs: for a recipient that receives large amounts of aid relative to its GDP, the transaction costs are higher as a percentage of GDP (even when assuming some economies of scale). The measure of aid dependency used is *aid as a % of GDP*.

A number of other variables are included as controls. The income of a recipient (*GNI per capita* PPP in international dollars) is used to measure income. C*eteris paribus*, poorer recipients might be more likely to receive more control as donors reward good governance relative to a recipient's income level. Controlling for income then allows for the quality of governance to be understood relative to the recipient's income level. The *share of a donor's aid budget* that a recipient represents is included as donors are more likely to grant recipient control (GBS) to recipients that are important to them. In Knack and Eubank (2009) this variable is motivated by the reputational stake a donor has in a country, and the likely ability of the recipient to benefit from any resulting institutional improvement. In our case it can also be interpreted as capturing the potential for the donor to give some aid in the form GBS if it has a large programme in the recipient.

Alternative measures are employed as a robustness check by replacing two variables (*education spending* and *government effectiveness*) with two variables taken from the CPIA data. The *equity of public resource use* is chosen to measure

alignment. The variable captures government spending and taxation in relation to their effect on the poor. The specific indicators are (IEG, 2009: 79):

- 'Identification of those (individuals, groups, localities) that are poor, vulnerable, or have unequal access to services and opportunities
- Adoption of national development strategy with explicit interventions to assist groups identified above
- Systematic tracking of composition and incidence of public expenditures and their results feed back into subsequent allocations
- Incidence of major taxes (progressive or regressive) and their alignment with poverty reduction priorities'

This variable captures alignment as conceptualised in the theoretical literature, as the share of discretionary resources allocated to the poor. The second variable from the CPIA is *public sector management*. It is quite highly correlated with *government effectiveness*, but has a narrower focus. Again, it closely resembles the theoretical literatures as it is the efficiency of the government, rather than a broader notion of governance that includes, for example, democratic values. These two variables are only available over 2005-07 so the robustness analysis is limited to short period. However, this allows us to examine the later years more closely and we can assess any changes in the determinants of allocating GBS.

4 Econometric Results

Table 1 reports results for allocation of GBS by the EC and IDA over 1997-2007; only recipients that receive some aid from the donor are included (as IDA is restricted to low-income countries, the EC covers more recipients). The first two columns are the first stage eligibility (probit) regression. The last row reports the fraction of recipients that receive GBS for each donor; IDA gives at least some GBS to 20% of its aid recipients and the EC to 21% so in this respect they are very similar. The final two columns are the second stage levels (OLS) results, where the last row indicates the amount of GBS; on average, GBS accounts for almost half of IDA aid and just over a third for the EU. Thus, both donors give aid to about a fifth of recipients and when they do so it is likely to be a significant share of aid. They are willing to cede considerable control to recipients.

There are notable differences in the coefficients on determinants, comparing the EC and IDA and their eligibility and level decisions. We consider eligibility first, i.e. what factors influence the decision to grant GBS. Of the two alignment parameters, the existence of a PRSP is a significant determinant of receiving GBS for both donors. Public spending on education is only significant for IDA eligibility (but negative). Thus *PRSP* seems better at capturing alignment, perhaps because the process allows donors to monitor and influence a recipient's spending pattern. As the World Bank is directly involved in the process it is not surprising that the effect is greater for IDA. Both donors are more likely to give GBS to major aid recipients (positive coefficient on aid/GNI), especially if the recipient is important to that donor (recipient share in donor aid is highly significant). The EC is less likely to give GBS to richer recipients or those with higher fragmentation (a negative coefficient on GNI pc and number of donors respectively). Neither of these variables is significant for IDA, and government effectiveness is not significant for either donor.

The samples for the amount of GBS (levels stage) are obviously smaller so significance levels tend to be lower. The most interesting result is the striking difference in which variables are significant for each donor. In the case of the EC, conditional on receiving GBS the level is higher for more effective government, but lower when a PRSP is in place and for richer recipients. In the case of IDA, in

contrast, GBS is higher when aid/GNI is higher and lower the more donors are present (fragmentation). As there should be a tendency for higher aid/GNI ratios to be associated with more donors this suggests that IDA is concerned with aid concentration. If there are fewer donors coordination is easier (and as there is likely to be a PRSP the main donors probably are coordinating) so for recipients receiving relatively high levels of aid more can be in the form of GBS. The EC, in contrast, grants GBS to (relatively) poorer countries receiving a lot of aid from fewer donors that are major recipients of EC aid. Given this, they receive more GBS if poorer but with relatively high government effectiveness (and if they are not involved in a PRSP process, noting that this lowers the probability of receiving GBS).

Table 1 Determinants of GBS recipients, 1997-2007

	Eligibility Stage		Levels Stage	
Donor	EC	IDA	EC	IDA
Public spending on education	-0.033	-0.10***	0.12	0.89
	(0.85)	(2.65)	(0.11)	(0.82)
PRSP document	0.78***	1.25***	-8.82*	-1.23
	(5.25)	(8.63)	(1.73)	(0.16)
Government Effectiveness	0.096	0.26	14.1***	-6.86
	(0.56)	(1.51)	(2.70)	(1.07)
Number of Donors	-0.036***	-0.0022	-0.28	-2.14***
	(2.93)	(0.22)	(0.80)	(4.52)
Aid/GNI %	0.029***	0.016**	0.17	0.53***
	(3.26)	(2.30)	(0.78)	(2.89)
GNI per capita (/100)	-0.0073**	-0.0057	-0.27**	0.00038
	(2.28)	(1.05)	(2.39)	(0.24)
Recipient Share in Donor Aid	0.39***	0.19***	5.01	0.56
	(3.44)	(4.63)	(1.33)	(0.35)
Observations	1058	927	221	188
Pseudo R^2/ R^2	0.195	0.300	0.088	0.202
Mean of Y	0.21	0.20	34.3	49.1

Note: The eligibility stage is the first stage regression using a probit with clustered standard errors (and pseudo- R^2 applies). The levels stage is the second stage regression using OLS with clustered standard errors (R^2 applies). The *t*-statistics are provided in parentheses with 10, 5 and 1% significance levels denoted by ***, ** and * respectively.

Table 2 reports the robustness check on eligibility for GBS over 2005-2007 with alternative measures for preference alignment and governance. Obviously the sample sizes are lower but the tendency to grant GBS has risen to 27% of recipients for both donors. Neither education spending nor equality of public resource use is significant (and these are the only consistently insignificant variables), but PRSP remains significant. Again, PRSP seems much better at capturing alignment.

Governance is now a significant determinant of the decision to grant GBS for both donors, whether measured by effectiveness or management (the former has higher significance). In the recent period the EC is more likely to give GBS to major aid recipients (positive coefficient on aid/GNI) and less likely for higher fragmentation (a negative coefficient on number of donors); both are more likely if the recipient is important to that donor (recipient share in donor aid is highly significant) and very slightly less likely for richer recipients (a negative coefficient on GNI pc). There does appear to have been increased selectivity for GBS as compared to the whole period, in 2005-07 a greater share of recipients received budget support and government effectiveness became a determinant, although a PRSP seems to remain the principal determinant.

Table 2 GBS Eligibility 2005-2007, Robustness Check

Donor	EC	IDA	EC	IDA
Public spending on education	-0.048	-0.091		
	(0.86)	(1.45)		
Equality of Public Resource Use			-0.43	0.19
			(1.28)	(0.49)
PRSP document created	0.63**	2.22***	0.95**	0.96***
	(2.02)	(5.93)	(2.24)	(2.63)
Government Effectiveness	0.55**	1.20***		
	(2.17)	(3.60)		
Public Sector Management			0.77*	0.85*
			(1.82)	(1.73)
Number of Donors	-0.035*	0.012	-0.044**	0.004
	(1.89)	(0.47)	(1.96)	(0.19)
Aid/GNI %	0.057***	0.0073	0.055***	0.002
	(3.49)	(0.68)	(3.25)	(0.13)
GNI per capita (/100)	-0.00008**	-0.0002*	0.00002	-0.0002*
	(1.99)	(1.90)	(0.18)	(1.78)
Recipient Share in Donor Aid	0.43**	0.17*	0.70***	0.17*
	(2.47)	(1.92)	(3.25)	(1.92)
Observations	298	259	183	202
Pseudo R-squared	0.271	0.379	0.20	0.239
Mean of Y	0.27	0.27	0.40	0.35

Note: As for Table 1 first stage regression using a probit with clustered standard errors.

The samples for the amount of GBS (levels stage) are quite small for 2005-07 so few variables in Table 3 are significant. It is notable that on average the amount of GBS fell slightly for IDA and significantly for the EC (from about a third to about a quarter of aid). The striking result is that having a PRSP in place is the only significant variable in most cases and is positive. Towards the end of the period, conditional on receiving GBS, having a PRSP seems to be the only significant determinant of the

amount of GBS for both the EC and IDA. As in Table 1, IDA continues to give less GBS if there are many donors. All other variables are insignificant.

Table 3 GBS Levels 2005-2007, Robustness Check

Donor	EC	IDA	EC	IDA
Public spending on education	0.14	1.72		
	(0.08)	(0.89)		
Equality of Public Resource Use			-2.11	-12.4
			(0.31)	(1.46)
PRSP document created	6.52	20.8**	19.6**	20.0**
	(0.56)	(2.67)	(2.60)	(2.16)
Government Effectiveness	4.48	0.88		
	(0.62)	(0.10)		
Public Sector Management			14.4	9.28
			(1.39)	(1.07)
Number of Donors	-0.055	-1.44	-0.63	-1.56*
	(0.14)	(1.40)	(1.22)	(1.85)
Aid/GNI %	0.25	0.12	0.33	0.20
	(0.84)	(0.39)	(1.51)	(0.74)
GNI per capita (/100)	0.0013	-0.0026	-0.0013	-0.0008
	(0.67)	(1.32)	(0.62)	(0.31)
Recipient Share in Donor Aid	6.16	1.30	4.73	1.43
	(1.00)	(0.67)	(0.87)	(0.85)
Observations	81	69	74	71
R-squared	0.036	0.125	0.137	0.135
Mean of Y	26.5	46.9	24.7	46.7

Note: As for Table 1 second stage regression using OLS with clustered standard errors.

5 Conclusions and Discussion

World Bank (1998) advocated a selection on policy approach to aid: more aid should be allocated to countries with good policies. This approach was given further support in Burnside and Dollar (2000), and extended to increasing the effectiveness of aid in poverty reduction by Collier and Dollar (2002). A number of donors accepted this recommendation, so we should have observed a selective aid (re)allocation towards recipients with relatively good policies and institutions. As noted in the introduction, there is little evidence that this has occurred since the late 1990s: donors, including the World Bank, seem no more likely to use policy and governance indicators to determine the amount of aid allocated to particular recipients. This paper argues that the amount of aid may not be a good indicator of donors' discretionary behaviour. For many reasons ranging for commercial self-interest to poverty aversion, individual donors will tend to allocate most of their aid to a fairly fixed set of countries without systematic changes in the shares each receives. The donors do have ability to alter

the way in which they deliver aid, and our suggestion is that selectivity is exercised over the aid modality. Specifically, multilateral donors (we consider only the EC and IDA) will cede more recipient control over aid (by granting more budget support) to those recipients with better (in the eyes of the donor) public expenditure monitoring and allocation mechanisms and better service delivery systems.

The focus of the analysis is on the decision of the two multilateral donors to grant budget support. There is a small theoretical literature related to this that focuses on the donor choice between project aid or budget support. We review this literature, which frames the choice largely in terms of fungibility, preference alignment and effectiveness of each of each type of aid. We argue that the concern with fungibility in these papers is misplaced and propose a simple model where preferences and efficiency are the determinants. In deciding whther to give budget support, the donor only needs to consider preference alignment as revealed by the recipient's allocation of government spending and the effectiveness of recipient relative to donor systems in delivering services. Donors will be more likely to give budget support to recipients whose allocation of public expenditure is in line with donor preferences, and will give more budget support if recipient systems are of higher quality.

This model is tested against EC and IDA granting of budget support (GBS) with variables to capture alignment (specifically having a PRSP process, spending on education or equality of public resource use) and the quality of government systems (government effectiveness or public sector management) with a number of controls. Over 1997-2007 on average both IDA and the EC give GBS to about a fifth of recipients and when they do so it is a significant share of their aid (half for IDA and a third for the EC on average, although the latter fell to a quarter over 2005-07). The best indicator of preference alignment is the existence of a PRSP, a significant determinant of receiving GBS for both donors. This seems quite plausible for IDA as the World Bank is closely involved in the PRSP process which incorporates (poverty reduction) expenditure allocation plans. The EC may be taking this as a signal of good expenditure allocation. The EC is less likely to give GBS to richer recipients or those with higher fragmentation (more donors); as the EC covers a wider (income) range of participants this suggests that GBS is concentrated in low-income countries (the only recipients for IDA). Both are more likely to give GBS to more aid dependent countries that are major recipients of aid from the donor.

Having decided to give GBS, government effectiveness is a significant determinant of the amount for the EC (but not IDA). The EC grants more GBS to (relatively) poorer recipients. There is a suggestion that IDA is concerned with aid concentration as it gives more GBS where there are fewer donors, hence more likely coordination, in major aid recipients (that have a PRSP process in place). Thus, in terms of the amount of GBS, the EC seems more concerned with government effectiveness whereas IDA seems more concerned with potential for donor coordination (which can be interpreted as reducing transaction costs).

Comparing results over 2005-2007 to the 1997-2007 period there is some evidence for increased selectivity in GBS as a greater share of recipients received budget support (although they tended to receive less, especially for the EC) in the later period. Government effectiveness became a determinant of eligibility for both donors in 2005-07 (and ceased to influence eligibility for the EC), although a PRSP seems to remain the principal determinant for eligibility. In the later period, conditional on receiving GBS, having a PRSP seems to be only significant determinant of the amount of GBS for both the EC and IDA. The number of donors (negatively) is the only variable that was a significant determinant of the amount of GBS granted by IDA in 1997-2007 and 2005-07: a PRSP has been the principal indicator of preference alignment over 1995-2007, but since 2005 government effectiveness has become an important determinant of receiving GBS (but not of the amount received). One interpretation is that as more recipients undertook a PRSP process

the quality of public expenditure systems became a discriminatory determinant of eligibility for budget support.

In relatively aid dependent countries, those that argue that GBS is the preferred modality focus on the ability of donors to influence the spending composition of recipients. The PRSP process seems to have been a good indicator of such preference alignment and hence eligibility for budget support. Only recently has government effectiveness become an important determinant of eligibility; a PRSP then influences the level, perhaps because it indicates that agreed spending commitments are in place. As there has been an increase in the proportion of recipients receiving GBS from the EC and IDA, there is an indication that they exercise some selectivity on aid modality, and that this reflects perception of alignment on spending and the effectiveness of government systems.

Future work would extend the analysis to address allocation of project aid. As there are many varied forms of aid delivery in practice, project aid allocation may not be the mirror image of GBS (the two need not sum to total aid). This is an issue to test. In general project aid is likely to be preferred when donors have less confidence in recipients systems, especially for monitoring and allocating expenditure. However, one could envisage situations where GBS is given to support and influence recipient capacity and spending, while projects are used to target specific areas of intervention. Donors are unlikely to make an ‘either or’ choice, and an extension of this work will be to consider a donor choice over how much of their in the form of budget support and how much in the form of project aid.

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Appendix: Data Sources

Dependent variables

CRS Dataset – This is the most comprehensive dataset available on General Budget Support and includes Project Aid, from the OECD-DAC, accessed at http://stats.oecd.org/ .

The dependent variables are transformed (except for the binary variable for GBS) so the modality is a percentage of total donor aid to the recipient (where total aid is from the same data source as the dependent variable to ensure comparability).

Independent variables

PRSP – A dummy was created to signify that a PRSP document has been agreed. The list of documents agreed was taken from the IMF (http://www.imf.org/external/np/prsp/prsp.asp)

Education spending – The amount of public money spent on education as a share of GDP from the World Development Indicators, provided by the World Bank, accessed at http://data.worldbank.org/data-catalog/world-development-indicators. Any missing data (especially in the years after 2006 and before 1998) are replaced with the nearest available data. This closely mirrors the best available data a donor would have, and is therefore a suitable solution.

The equity of public resource use - This is discussed at some length in the body of the text. It is taken from the CPIA, provided by the IMF and available from the World Bank's databank at http://data.worldbank.org/indicator/IQ.CPA.ECON.XQ. The variable ranges from 1 to 6, with a more positive number meaning a more positive situation.

Public sector management - It is taken from the CPIA, provided by the IMF and available from the World Bank's databank at http://data.worldbank.org/indicator/IQ.CPA.ECON.XQ. The variable ranges from 1 to 6, with a more positive number meaning a more positive situation.

Government Effectiveness – this is taken from the Worldwide Governance Indicators (WGI), accessed at http://info.worldbank.org/governance/wgi/index.asp. The variable ranges from -2.5 to 2.5, with a more positive number meaning a more positive situation.

Number of donors – This was constructed using the CRS/OECD dataset (http://stats.oecd.org/) to identify the number of donors giving aid to a recipient in a given year.

Aid/GNI – This is taken from the World Development Indicators (WDI), accessed at http://data.worldbank.org/data-catalog/world-development-indicators.

GNI per capita PPP (in current international dollars is taken from the World Development Indicators, WDI).

Share of a donor's aid budget –The total amount of aid disbursed by a donor in a given year was used as the denominator to give data in the form 'x% of donor's aid in year t was allocated to country y'.