ECONOMIC DEVELOPMENT & INSTITUTIONS

FOREIGN AID AND GOVERNANCE: A SURVEY

François Bourguignon

Paris School of Economics

Jan Willem Gunning

Vrije Universiteit Amsterdam

August 2016

Oxford Policy Management · UKaid from the British people · UNIVERSITÉ DE NAMUR · PSE PARIS SCHOOL OF ECONOMICS ÉCOLE D'ÉCONOMIE DE PARIS · ADE ANALYSIS FOR ECONOMIC DECISIONS

Abstract

This paper surveys the literature on the two-way relationship between development aid and the quality of institutions in developing countries. Aid may improve institutions, e.g. when conditionality succeeds, but it can also have unintended effects that are typically negative, e.g. by inducing rent seeking. The direction of causality is the other way around when the quality of institutions in developing countries is taking into account by donors when they allocate aid between countries.

The paper presents a canonical model as a framework for analysing such effects. The key elements in this framework are the differences between donor preferences and those of the recipient government, the extent to which the ruling elite in the recipient country cares about the poor, and the cost of taxation. The paper then discusses both the theoretical and empirical literature on aid and institutions, a subset of the literature on aid effectiveness. The discussion uses the model and is structured around the two roles of aid: aid as finance and aid as reform. The paper focuses on the way aid is allocated between countries and delivered within a country (that is with what forms of conditionality and monitoring) affects outcomes such as poverty. It concludes that the empirical and theoretical literature are imperfectly matched. This suggests useful directions for future research.

About Economic Development & Institutions
Institutions matter for growth and inclusive development. But despite increasing awareness of the importance of institutions on economic outcomes, there is little evidence on how positive institutional change can be achieved. The Economic Development and Institutions – EDI – research programme aims to fill this knowledge gap by working with some of the finest economic thinkers and social scientists across the globe.

The programme was launched in 2015 and will run until 2021. It is made up of four parallel research activities: path-finding papers, institutional diagnostic, coordinated randomised control trials, and case studies. The programme is funded with UK aid from the UK government. For more information see http://edi.opml.co.uk.

Outline

Introduction

1. Governance and conditionality in canonical models of the donor-recipient relationship

1.1 Aid, governance and conditionality in a simple model of the donor-recipient country relationship

1.2 Optimizing aid delivery as an alternative view at the conditionality of aid

1.3 A recipient country facing various donors

2. Aid as 'finance': governance criteria in aid allocation

2.1 Optimal unconditional allocation of aid by a single donor with several recipient countries

2.2 Aid selectivity and governance in practice

2.3 Final remarks on aid allocation

3. Aid as 'reform': the effect of aid on institutions and governance

4. Evidence on the effect of aid on institutions

4.1 Evidence not limited to particular channels: econometric studies

4.2 Evidence not limited to particular channels: case studies

4.3 The paradox of aid effectiveness

4.4 Evidence for particular channels

Conclusion

References

Introduction

The volume of foreign aid, its effectiveness in promoting development and the quality of the recipient country's governance and institutions are intimately related. A low level of governance inevitably reduces the impact of aid on development and discourages donors, afraid that only a small part of aid will actually reach its intended goal. Through conditioning aid on institutional reforms, donors may try to promote key governance improvements favourable to development. At the same time, aid may itself indirectly affect governance and institutions in ways which may not always be favorable to development and institutions.

In trying to enhance the effectiveness of aid if through conditions upon the use to be made of it or observed development performances in recipient countries, donors face four major types of constraint, most of which of an institutional nature:

- the ability of the recipient countries' governments to deviate from donors' intended objectives by exploiting the fungibility of aid flows or, simply, not complying with the required reforms;

- the limited credibility of the threat of sanctions by donors if conditionality is not met - i.e. the so called 'Samaritan dilemma' or the political economy of aid bureaucracies;

- the competition among donors;

- the cost of effectively monitoring aid programs.

In addition, there also is a possibility that the conditionality sought by donors may not fit the needs or the reality of the recipient country.

Even though effectiveness may be enhanced through progress in alleviating these constraints, thus reducing the leakage of aid toward non-developmental uses, the risk exists that 'free' public resources undermine the quality of the governance and political institutions in the recipient country. The case most often made concerns the reduced need to resort to taxation to finance public activity and public goods, which diminishes the accountability of the State to citizens and facilitates the persistence of corrupt authoritarian regimes.

This two way negative relationship between foreign aid, its development effectiveness and the weakness of institutions in developing countries has triggered severe critiques to the foreign aid, and even suggestions that it should be cut down (Easterly, 2006, Moyo, 2009, Deaton, 2013). On the side of the donors, it has made the allocation of aid more selective, favouring countries with better governance and leaving aside worse governed, and most often poorer countries. In both cases, a major consequence is to reduce and/or misallocate the resources potentially available to foster the reduction of global poverty.

The main goal of this survey is to review the economic theory and the evidence underlying the preceding arguments, with a view at identifying ways of minimizing the potentially negative spillovers of foreign aid on the governance of recipient countries and improving the overall institutional apparatus of aid delivery in donor and recipient countries, as well as in international organizations.

The literature on foreign aid is voluminous, especially on the issue of the aid effectiveness, measured as the effect of aid on economic growth. This survey intends to be selective with an emphasis on the institutional factors that both determine the volume, the allocation and the effectiveness of aid and on its institutional consequences in recipient countries.

The paper first offers a short synthesis of the theoretical literature on the aid donor-recipient relationship based on a simple model meant to cover the key dimensions of that relationship. Part 1 of the paper thus provides a simple theoretical framework for the review of the policy oriented literature on the two-way relationship between governance and aid in the remaining of the paper. The following two parts deal with the more applied literature considering in turn the ways aid and institutions interact in producing development outcomes.

One way is through aid relaxing the budget constraint of the recipient country's government. In this view aid enables the government to finance activities which it would not have funded without such an increase in resources. What matters in this case is the size of the increase, not its source: if government revenue had increased by the same amount in some other way (for example as a result of an oil boom) then it would have been spent in exactly the same way. In this case, therefore, aid is assumed to have no effect on the way the government spends additional revenue or on institutional arrangements in the economy. Aid has an effect solely by providing additional revenue and thereby enabling an increase in government spending. This is the case of *aid as finance* handled in Part 2, which closely resembles the way foreign aid was initially perceived in the famous 'two-gap model' in the late 1960s.[1] In the spirit of a survey that deals with aid and institutions, however, that part of the paper actually deals with the way recipient countries' governance and other institutional features affect how donors allocate their aid among countries and therefore how much a given country receives.

Alternatively, aid is seen as an instrument for changing policies and institutions in a way favourable to achieving donor objectives, poverty reduction the first place. Such reforms would, in this view, not have taken place without the aid; in particular, it would not have taken place if the government had received the same amount of additional revenue from another source. This implies that donor and government objectives differ: the aid is needed to convince the government to undertake a reform which it would not have implemented otherwise.[2] This is the case of *aid as reform.*

This taxonomy is useful. For example, some critics of conditionality consider it an illusion to think that aid can be used to change policies or institutions. In effect they argue that aid can be effective only as finance, which amounts to a return to the conventional wisdom of half a century ago. In practice aid can play both roles but conceptually they are clearly quite different. The distinction between *aid as finance* and *aid as reform* is therefore often illuminating.

The discussion of 'aid for reform' is organized into two parts. Part 3 of the paper discusses the various channels through which aid can possibly affect the institutions of recipient countries, several of them in the line of the arguments developed in the first part of this

---

[1] Technically, in that model aid relaxes either the savings or the foreign exchange constraint, whichever was binding in the initial situation. See Chenery and Strout (1966).
[2] This difference in objectives is the key issue in the literature on conditionality: if the two agents would be in full agreement conditionality would be pointless. In the extreme case aid acts as a bribe.

survey but within a more pragmatic perspective. Part 4 concentrates on the evidence available about the actual impact of aid on institutions. This literature extends the voluminous body of work on the effectiveness of aid, effectiveness being considered almost exclusively under the angle of GDP growth, which is briefly summarized in that part of the present survey.

The concluding section is devoted to the issues that remain largely unanswered in the aid-governance literature and suggests possible directions for future research.

1. Governance and conditionality in canonical models of the donor-recipient relationship

Despite the importance of the subject for development and despite the intensity of the debate on the effectiveness of aid, there are relatively few fully elaborated theoretical models of the relationship between donors of aid and governments in recipient countries. Even though aid practitioners may not always have the principal-agent model and the theory of optimal contracts in mind, a sound theoretical framework seems a prerequisite for an in depth analysis of the way aid and recipient countries' institutions do interact in affecting development.

A synthetic review of the theoretical aid literature emphasizing the role of institutions and governance in recipient countries was undertaken for this survey through a simplified model meant to incorporate the main features of existing models. This led to a self-standing companion paper to this survey. We give a summary of it in what follows, referring the interested reader to the full paper available online.[3]

As a starting point, we consider the simple case of one donor and one recipient country, aid being viewed by the donor as a transfer to the government of the recipient country aimed at alleviating poverty in that country. In other words, the donor is considered as perfectly altruistic and possible strategic motives for aid are ignored. The government of the recipient country is assumed to use the aid flow of resources as it pleases if aid is unconditional, so that the fraction that will reach the poor depends on its objective function and the domestic constraints it faces. However, the donor may wish to make its aid conditional on part of it reaching the poor either directly or through policies that will affect them favorably. A simple framework that borrows from two key models of the donor-recipient relationship, respectively Adam and O'Connell (1999) and Azam and Laffont (2003), is used to discuss the role of the recipient country's institutions and governance in this framework. An alternative framework relying on Bourguignon and Platteau (2015) is then shortly presented, which seems particularly adequate to handle the case of a single donor facing various recipient countries as analyzed later in this paper. Finally, a few remarks will be made on the case of several donors.

1.1 Aid, governance and conditionality in a simple model of the donor-recipient country relationship

As in the rest of this paper, aid is seen here as a transfer by the donor to the recipient country, the aim of which is to reduce poverty. However, because aid takes place between sovereigns, the government of the recipient country will ultimately have the responsibility of channeling the resources provided by the donor to the poor people in its population either directly or in the form of some policy that benefits them. This is where the governance in the recipient country matters. In a country ruled by some egocentric autocrats - i.e. an 'extractive' regime in the words of Acemoglu and Robinson (2012) - only a small part, if any, of the donor's transfer will reach the poor. The opposite would hold with more 'inclusive' institutions. The main issue in the donor-recipient relationship is how a donor should handle this potential 'leakage' in the aid flow. Most of the literature focuses on the case of a full

---

[3] http://www.parisschoolofeconomics.eu/en/bourguignon-francois/working-papers/aid_canonical_model.pdf

autocratic regime in the recipient country. The following model takes a more general perspective in the sense that the well-being of the poor may weigh positively, even marginally so, in the objective function of the recipient country's government. It turns out that this somewhat modifies some conclusions of the existing models

a) A simple model of distortive (and regressive) redistribution

The preceding general argument may be formalized in the following elementary way along the lines of a model of Adam and O'Connell (1999).

Let the population of a recipient country, of size unity, be partitioned into two groups, the elite with weight *n* in the population, and the rest of the population, deemed to be poor, with weight *1-n*, even though the model can easily be extended to the case where there is a middle class in between.[4] Let *y* stand for the standard of living of the elite, and *x (< y)* for that of the poor. Both include an after tax market income part and a cash transfer. The market income part depends on a distortive policy instrument, say a proportional tax rate, *t,* with the income accruing to the elite being a fixed multiple, *c (>1),* of the income of the poor. The after tax market income of both groups is denoted *h(t)* for the poor and *c·h(t)* for the elite, with *h(t)* being a decreasing and a concave function of *t.* If *z* and *s* are respectively the cash transfers made by the government to the elite and to the poor, the net income per capita in the two groups is given by:

$$y = c \cdot h(t) + z \qquad\qquad (1.1.a)$$

$$x = h(t) + s \qquad\qquad (1.1.b)$$

whereas the cash transfers must satisfy the following budget constraint:

$$n \cdot z + (1-n) \cdot s + G \leq H(t); z \geq 0, s \geq 0 \qquad\qquad (1.2)$$

where *H(t)* stands for the tax revenue and *G* for exogenous public expenditures. *H(t)* actually stands for the well-known Laffer curve and is assumed to be inverted-U shaped.[5]

An important institutional constraint in this model, but not really specific of low income countries, is that the existing institutions do not allow for lump-sum negative transfers, as made clear by the last part of (2). Indeed, if this were possible then there would be no need for a distortive tax instrument to fund public expenditures and redistribution.

The policy instruments in this model consist of *t, z* and *s.* They are assumed to be chosen by a government that maximizes the following objective function:

$$Max \, u(y) + \theta v(x) \qquad\qquad (1.3)$$

under the constraints (1.1) and (1.2). This function, in particular the parameter θ, is meant to encapsulate the effect of those institutional features in the recipient country that determine the poverty alleviation inclination of its government. It is generally absent from the theoretical models of aid, which thus rely on the assumption that $\theta = 0$, as in Adam and O'Connell

---

[4] It will be seen below that it would probably make some of the conclusions stronger.
[5] It can be seen that *H(t)* and *h(t)* are related though $H(t) = [nc + (1-n)]h(t)/(1-t)$

(1999), or on the assumption that (1.3) is quasi-linear in *y*, as in Azam and Laffont (2003), which will be seen to be almost equivalent. Yet, there is no reason to believe that recipient countries are all run by pure autocrats or that autocrats do not have to care about the poor population in their country, if only to maintain themselves in power. Several alternative interpretations of the objective function (1.3) depending on the institutional context in the recipient country will be given below.

Before doing so, it is worth noticing that in the preceding framework, foreign aid, *a*, is simply a shift parameter in the budget constraint. It is equivalent to replacing *G* by *G-a* in (1.2), which becomes:

$$n \cdot z + (1 - n) \cdot s + G - a \leq H(t); \ z \geq 0, s \geq 0 \qquad\qquad (1.4)$$

This budget constraint is valid as long as aid is unconditional. If the donor imposes some condition on the use of aid, the preceding budget constraint remains valid but some additional condition has to be added to the maximization of (3).

The preceding model is specified in a purely static way but it could be interpreted in a dynamic way with personal incomes *x* and *y* being defined as a discounted flow over some period and the tax rate affecting negatively the growth rate.[6]

b) The implicit institutional framework of the model

A first interpretation of the preceding framework would be that institutions work in the recipient country in a way equivalent to a benevolent social planner with (1.3) as a social welfare function, *u( )* and *v( )* being standard increasing and concave income utility functions and θ being the weight given to the poor.

In a more politically realistic way, a second interpretation is that (3) stands for some bargaining between political representatives of the two population groups, θ being then the relative bargaining power of the poor group. It may also stand for a government in a semi-democratic setting maximizing votes in its favor in the next election, the vote of the elite depending positively on *y* and that of the poor people on *x*, while θ would represent the relative weight of their vote at the election - which would be different from *(1-n)* if turn-out rates differ or if the elite is able to influence the vote of the poor. This argument would be reinforced if a middle class with more political power than the poor had been introduced in the model, which could be hurt as much as the poor by an increase in the distortive tax rate without a proper cash transfer compensation.

In a fully democratic society and assuming reasonably that *n < 1/2*, θ would be infinitely large as the majority would decide about the tax rate and redistribution as in the well-known model by Meltzer and Richard (1981). Symmetrically, θ would be zero in a country where an egotistic elite would hold full political power without any risk of losing it. Note that the first case is equivalent to assuming *u(y) = 0* and *v(x)* or θ *= 0* in the second case.

Intermediate cases may be interpreted in various ways. Some papers in the theoretical aid literature assume the recipient country is ruled by an elite that cares about the poor. θ would then represent its degree of altruism, as in Besley (1997). Alternatively, θ may be

---

[6] This is indeed the specification used by Adam and O'Connell (1999) in a two period model.

interpreted as a penalty that the elite would incur under one form or another if they pressured too much the poorest part of the population. For instance, if the probability of a rebellion were a decreasing function of the standard of living of the poor, say *π(x)* with *π′( ) < 0*, and *θ* the utility cost of subduing the rebellion, as in Acemoglu and Robinson (2001), or being overwhelmed by it, the expected utility of the elite would depend on:

$$y - \theta\pi(x) \qquad (1.5)$$

which is of the same form as (1.3) above but with a different interpretation of *v(x) (= - π(x))* and most importantly a quasi-linear specification with respect to *y*.

This quasi-linear specification has strong implications. In particular, it leads to results very close to the pure autocratic elite with $\theta = 0$. To see this consider the simple problem of allocating a given amount *B* among the two groups. The maximization of (1.3) with $\theta = 0$, the pure autocracy case leads obviously to *x = 0*, whereas the solution with a quasi-linear specification in *y* leads to a constant value for *x*, given by $v'(x) = (1 - n)/n\theta$, so that any change in *B*, for instance through aid, is fully appropriated by the elite and has no impact whatsoever on the poor.[7] In reference to the case above where the elite fears for its future, this could be referred to as the 'constrained autocracy'.

With such references, it is tempting to consider the general case (1.3) with $\theta > 0$ and u''(y) < 0 as a 'non-autocratic' regime, which does not mean democracy ($\theta = \infty$) and is consistent with a political regime that may be dominated by the elite. In that sense the present model is more general than the earlier theoretical literature on aid based on the assumption of autocratic regimes.

In summary, the weight θ assigned to poor people in the objective function (1.3) as well as the shape of the functions *u( )* and *v( )* may result from very different institutional settings. As far as the donor-recipient country relationship is concerned, however, which settings is ultimately responsible for θ being high or low or for the functions *u( )* and *v( )* being more or less concave does not really matter. What matters is how much weight the decision process in the government sphere is, in one way or another, giving to the poor.

Institutions are also implicit in other parts of the model. In particular, it was assumed above that the distortion in the economy was due to a tax that could finance, inter alia, a transfer, *z*, to the elite. Actually, this rent may be generated unofficially and in a distortive manner in many different ways, for instance through holding monopolistic positions or through high-level corruption. Representing such rent-seeking distorting behavior through the tax system and a fully transparent budget constraint in (1) and (2) is over-simplifying. Yet this specification captures the essential fact that there are instruments in the hands of the government of the recipient country to extract rents in favor of the elite - or possibly of the poor - at the cost of reducing the efficiency of the economy.[8]

It should also be emphasized that the preceding interpretations of the objective function of the recipient country's government are based on the assumption that the 'governance' parameters, θ, *u( )* and *v( )* are exogenous. Many issues related to institutions in

---

[7] This is the familiar case of 'zero income effect' associated with quasi-linear utility functions in consumer theory.
[8] Non-tax distortive redistribution instruments may not be consistent with the budget constraint (2). Yet, the present framework may be extended to more than one redistribution instrument - see the companion paper.

development may in fact relate to the way those parameters may be modified, by development itself or by policies. Some such cases will be alluded to in section 3.

c) *The basic properties of the model with respect to aid and governance*

We now go over the main properties of the model sketched above, which seem important for the analysis of the aid and governance issue. [9]

i) The case of unconditional aid

Unconditional aid is equivalent to reducing the need to finance public expenditures - see (1.4) above[10]. Analyzing the effect of aid is thus like letting *G* vary. The following properties are easily derived.

Property 1. Cash transfers in favor of the poor and the elite cannot be both positive due to the convexity of the function *h(t)*, or the deadweight loss of taxation. It is thus the case that either the rent of the elite, *z*, or the transfer to the poor, *s*, or possibly both are equal to zero.

If this were not the case, it would be possible to improve the welfare of one group while maintaining that of the other constant. To see that, assume a cut in the rent z going to the elite , and a compensating drop in the tax rate so as to maintain it net income, y, constant. Then adjust the income the cash transfer to the poor in a way consistent with the overall budget constraint, 1.3. As the total income of the country net of taxes increases by the saving on the deadweight loss arising from the tax cut, the net income of the poor is also increasing. Thus, the original situation with positive cash transfers to the two groups could not be an equilibrium. [11]

There thus are three regimes in that economy depending on whether part of the tax revenue is spent on cash transfers or not and in the former case whether the transfer goes to the elite or to the poor. For a given aid flow, or public expenditures, a cash transfer in favor of the elite will take place for low values of θ and in favor of the poor for θ above some threshold. In between, there is an interval where the government makes no cash transfer and uses all the tax revenues and the aid flow to cover public expenditures. We concentrate in what follows on the two cases where θ is below the threshold where cash is transferred to the poor or, in other words, where the government has no pro-poor bias, which somehow justifies the intervention of the donor.

Under this assumption, we now examine the effect of a small increase in the aid flow on the tax rate and the rent, *z*, actually transferred to the elite.

Property 2. In the case of an autocratic regime ($\theta = 0$ or $u(y) = y$), an increase in the aid flow increases the rent *z* going to the elite if the rent was initially positive whereas the tax rate remains constant.

---

[9] The reader interested in the way these results are derived and in some additional properties is referred to the companion paper.
[10] It is assumed reasonably and realistically that *a < G*.
[11] This argument does not go through when one of the two groups receives no cash transfer because its marginal utility in the government's objective function is lower than that of the other group. Therefore, adding the incomes of the two groups as in the preceding argument would not be justified.

In other words, this is the case where the aid flow is fully confiscated by the elite.

Property 3. If θ is strictly positive but relatively small - and u ( ) strictly concave - an increase in aid is spent partly on reducing the tax rate whereas the income of both the elite and the poor rise. Yet, the effect on the rent going to the elite is ambiguous, except if it is initially small, in which case aid will drive it to zero.

This property is important since it suggests that as the society moves away from strict autocracy, aid becomes *effective* in the sense that it increases the efficiency of the economy by reducing distortions, thus benefiting the poor as well as the elite. Surprisingly, this effect that goes through unconditional aid generating less distortion is rarely emphasized in the literature.[12]

Another practical implication of the preceding property is the justification it gives to aid selectivity. If the aid flow is endogenous or if the donor has a fixed amount of aid to allocate among various recipients, the model suggests that the aid received by a country should rely on variables representing the quality of the governance and the level of public expenditures of a country. Practically, however, the size of aid might not have to depend on a complex combination of policies and institutions. It could simply rely on the pro-elite bias in the recipient country, which may be described in different ways, but in particular by the size of the rent going to the elite or the inequality of incomes.

ii) The case of conditional aid

Instead of transferring unconditionally a flow of resources that depends, inter alia, on the governance of the country and its exogenous expenditures, the donor can make the volume of its aid conditional on the *policy* pursued in the recipient country, namely here the tax rate or possibly a cash transfer to the poor. Yet, such a conditionality will be accepted only if the welfare of the government of the recipient country is at least equal to some reservation level, *U*, supposed to be exogenous or some function of θ and *G*.

The optimal volume of conditional aid is then given by the solution of:

$$Max_{x,a} \, V(x) - Ca \quad s.t \quad (1.1), (1.2), (1.4) \text{ and } u(y) + \theta v(x) \geq U; \; z, s \geq 0 \qquad (1.6)$$

where $V(x)$ is the utility that the donor derives from the standard of living of the poor in the recipient country and *C* the unit cost of aid. The solution of this maximization problem may lead to two regimes depending on whether the rent going to the elite is zero or strictly positive in the absence of aid.

Property 4. If the rent of the elite is nil in the absence of aid, the optimal conditional aid involves a lower tax rate and possibly a cash transfer to the poor.

Property 5. If the rent of the elite is strictly positive in the absence of aid, the optimal conditional aid always reduce the distortive tax rate and the rent going to the elite.

---

[12] It might seem that this result depends on *G* being exogenous. The case of endogenous public expenditures is analyzed in the companion paper without modifying the preceding property.

Depending on the preferences of the donor and the governance parameter θ, the rent of the elite may be driven to zero and even replaced by a cash transfer to the poor.

Property 6. When the objective function of the recipient country's government is linear - as in the case of the 'constrained autocracy' - both the flow of optimal aid and the income of the poor are increasing with the governance parameter θ (although it was seen the latter has no effect with unconditional aid.)

Property 7. The optimal conditional aid is 'supported' by a contract imposed upon the recipient country's government that relates the aid flow to be received to the tax rate

$$a = A + B.t \qquad\qquad (1.7)$$

where the constants *A (> 0)* and *B (< 0)* are appropriately chosen.

In other words, left free to choose the tax rate *t* under the preceding constraint and its own budget constraint, the government of the recipient country would choose the value that is optimal from the donor's point of view.

iii) The crucial issue of time consistency in conditional aid

The preceding decentralized contract could also be set *ex post*, in the *(a, x)* space rather than, *ex ante*, in the *(a,t)* space[13]. From the point of view of the implementation of the conditionality, and that of the optimal contract itself, there is a major difference between both approaches. In the latter case, the contract is about the policy to be implemented, whereas in the former case the contract is in terms of the outcome of the policy. There is a time dimension in that case which is absent from the optimal aid contract on policy. If there is some unobserved randomness in the actual outcome, i.e. the income of the poor, a crucial issue of *time consistency* then arises, which may ultimately make conditionality ineffective.

Assume some random shock is affecting the economy, and in particular the income of the poor. This has two implications. First, the optimal contract in the *(a, x)* space must take into account that randomness. Second, assume that the observed outcome is extremely low, so that the aid flow stipulated by the contract would be very small. How would the donor react to a demand by the recipient county not to comply with the contract and provide more aid than in the contract? If the donor is expected to do as requested, actually in agreement with its altruistic utility function in (1.6), then a key credibility problem arises. If the government in the recipient country anticipates such a behavior by the donor, it will simply ignore the conditionality rule (1.7) expressed as a function of the outcome *x*. This problem is known in the aid literature as the 'Samaritan' dilemma - see Svensson (2000, 2003) and the survey by Kumar (2015). From a theoretical point of view, this really is the heart of the aid conditionality issue. It is this issue of credibility that led Torsvik (2005, p. 506) to conclude that "it is more realistic to model the interaction between the parties (i.e. the donors and recipient countries' governments) as a non-contractible relationship".

---

[13] Azam and Laffont (2003) analyze in detail the nature of the optimal *ex post* contract.

This issue of *ex ante* vs. *ex post* aid contracts, their time consistency and more generally the credibility of the conditionality of aid is taken up in more detail and in a more pragmatic way below in section 3.

- Summary of the implications of the preceding model and extensions

Despite its simplicity, the model analyzed in this section has several important implications for the role played by institutions in the aid donor-recipient relationship, when the donor is assumed to exclusively care about the welfare of the poor in the recipient country. First, of course, the way the recipient country's government weighs the interest of the poor and non-poor is crucial in determining the impact of unconditional aid on the efficiency of the economy and the income of the poor. Second, the fact that any redistribution of domestic income is costly in terms of economic efficiency makes aid a factor of economic efficiency and/or costless redistribution, the more so the more inefficient the institutions achieving domestic redistribution in one direction or another, i.e. the tax system in the model but, more generally, all rent-generating institutions. Third, conditional aid is necessarily more efficient and more pro-poor than unconditional aid for the same volume of aid. This is the case in all institutional contexts, provided that aid conditionality may be defined *ex ante* in terms of observable and irreversible policy instruments or reform decisions. If conditionality is defined *ex post* on outcomes, i.e. the income of the poor, or if policies and reforms are reversible then time consistency and credibility issues make conditional aid actually equivalent to unconditional aid. Even in that case, the problem is probably less serious when there are several recipient countries competing for a given amount of aid.

Two extensions of the preceding model are studied in the companion paper to this survey which do not lead to drastically revise the preceding properties and conclusions. The first one consists of endogenizing the public expenditures assuming the latter enter separately the objective function (1.3) of the government.[14] The second extension introduces an additional distortion in the model which is under the control of the government and generates a rent to the elite - e.g. monopoly power or import license- so that the rent does not consist exclusively of a cash transfer as in the model above.

1.2   Optimizing aid delivery as an alternative view at the conditionality of aid

For further use in the next section of this survey and also as an alternative to the preceding model, it is worth mentioning the recent work by Bourguignon and Platteau (2015a) who revisited the one-donor-one-recipient country relationship using a somewhat different framework. Their approach focuses on the way aid is delivered and the implicit conditionality in the mode of delivery rather than on the volume of aid and quantitative conditional goals. It also deals with the institutions in the recipient country in a slightly different way than in other models in the literature, emphasizing the substitutability between internal and external ways of disciplining the leadership in the recipient country.

---

[14] To be complete, and maybe to fit more closely to aid practices, one could also have government expenditures as a partial determinant of the efficiency of the economy, as an argument of the h( ) function in (1.1), possibly instead of the tax rate, t.

The volume of aid is assumed to be exogenous and the main issue is how it is to be delivered, i.e. the extent of monitoring and the size of the penalty in case the leadership in the recipient country appears to be embezzling too much of the aid flow instead of channeling it, in one way or another, to the poor. The behavior of the recipient country's leadership, as the elite of the previous model, is expressed in terms of the share of aid, *y*, it keeps for itself and is represented by the following objective function:

$$Max_y \ y - \theta y^2 - \gamma \pi(by) \ s.t. \ y \in [0,1] \qquad (1.8)^{15}$$

where θy^2 is meant to represent the 'internal discipline' that the population of the recipient country may impose on its leader in case it diverts too high a share of the foreign aid. γ is the penalty inflicted by the donor if the leader may be convicted of embezzling some part of the foreign aid, *π( )* being an increasing function that describes the probability this would happen. For a given *y*, that probability is higher the more closely the donor monitors the use being made of aid, *b* being the intensity of the monitoring. The $\gamma\pi()$ term thus represents the 'external discipline' exerted by the donor on the government of the recipient country

The internal discipline, θy^2, in (1.8) plays the same role as θ in the preceding model and may describe various institutional settings. It may correspond to the political system with the leadership losing electoral power if seen as diverting too much of the aid flow. For a given aid flow and if the diverted resources are used to buy political support this term may stand for the declining marginal return of that political investment.

The donor wishes to maximize the share of aid, *1 - y*, that will reach the poor people, but incurs a cost, that of the monitoring of aid and that of the penalty if needed. The latter may correspond to the fact that the penalty may affect the poor people in the recipient country - as when the penalty consists of reducing future aid - as well as the reputation of the donor country's government with respect to its constituency or the donor community - e.g. donor agencies do not like publicizing their failures. The donor's objective function thus is:

$$V[w + a(1 - y^*)] - C(b) - D(\gamma) \cdot \pi(by^*) \qquad (1.9)$$

where *V( )* is the is the utility the donor derives from alleviating poverty in the recipient country - *w* being the income of the poor without aid and *a* being the flow of aid per capita - *C( )* and *D( )* are the cost functions incurred by the donor. They are increasing and convex whereas the welfare function *V( )* is increasing and concave. Finally, *y** is the solution of the leader's maximization problem (1.8), and is thus a function of the aid delivery parameters *b* and γ and of the internal discipline, or governance parameter, θ.

'Conditional' aid in this setting does not refer to the volume of aid, which is exogenous, but to the way it is delivered. The intensity of the monitoring and the size of the penalty ultimately determine the share of aid that will reach the poor. Unlike in the preceding model, the way aid is actually transferred to the poor is not explicit. It may consist of lump-sum transfers if existing institutions allow for this or involve some policy instruments as in the preceding section.

---

[15] Kilby and Dreher (2010) use a similar framework, the share of embezzled aid being replaced by the distance between actual and intended pro-poor policies and the penalty being the reduction in the volume of aid.

Using a standard principal-agent framework, the optimal aid delivery (b^*, γ*) is given by the solution of the following program:

$$Max_{b,\gamma} V[w + a(1 - y^*)] \; - C(b) - D(\gamma) \cdot \pi(by^*) \, s.t. \;\; y^* - \theta y^{*2} - \gamma\pi(by^*) \geq U$$

where, as before, U is the reservation utility level of the leader in the recipient country.

The question is then to know how the optimal aid delivery (b^*, γ^*) and the associated level of fraud, y^*, vary with the quality of the internal governance, θ.

The following properties can be shown. a) The internal discipline, θ and the external discipline (b^*, γ^*) are substitutes in the sense that the latter falls when the former rises. b) Somewhat paradoxically, there may be 'over-substitution' in the sense that the extent of the fraud, y^*, may increase despite the fact that the internal governance θ has improved. This is because the donor may reduce the external discipline by more than the increase in the internal discipline. This second result depends on the shape *of* the various functions in the model, and in particular the cost functions, but it is shown in Bourguignon and Platteau (2015b) that it holds under very standard assumptions on these functions.

These results are important because they show that the delivery of aid - monitoring and punishing in case of fraud detection - can be used to counteract the negative effects of bad governance on the effectiveness of aid in reaching the poor or some other predetermined goal. The logic of the conditionality here differs from what was seen earlier in the sense that no contract is signed according to which aid is provided if some assigned reform is put in place. A more or less close monitoring with an explicit penalty in case of no completion is what replaces the conditionality contract. Unlike in the preceding canonical model, the quality of the domestic institutions and the attitude of the leadership with respect to poverty does not determine the volume of aid. It determines the intensity of the monitoring of aid.

As in the preceding model, one may also doubt that donor will actually activate the penalty γ in presence of evidence of embezzlement by the leadership of the recipient country. Time consistency is as much an issue here since there is a lag between the disbursement of aid and the time evidence on the use made of it becomes available and a new aid tranche has to be disbursed - or not disbursed if this is the penalty. This issue is less likely to be a problem if the donor faces several recipient countries as will be seen in the next section of this paper.

1.3   A recipient country facing various donors

Part of the theoretical aid relationship literature focuses on the case where a single country receives aid from and several donors. Various issues arise in such a framework. They essentially refer to whether donors need to cooperate rather than to compete in the case they all want to actually be present in the recipient country, which then acts as a kind of discriminatory monopsonist, or to act independently, in which case they may be ending giving too much or too little in a more or less efficient way.[16] The institutional issue in such a framework has very much to do with donors and their capacity to indeed coordinate or not

---

[16] See in particular Torsvik (2005), Knack and Rahman (2007), Platteau and Gaspart (2003), Bourguignon and Platteau (2015), Auriol and Miquel-Forensa (2015).

(Bourguignon and Platteau, 2015c). Interestingly enough, this has also to do with the nature of the institutions in the recipient country.

If donor countries coordinate, the role of domestic institutions in affecting the volume and the delivery of aid is the same as in the analysis above. The interesting issue then is whether, the quality of institutions in the developing countries may trigger more or less cooperation among donors. The framework proposed by Torsvik (2005) with two altruistic donors and a fully autocratic government in the recipient country sheds light on this issue.

If the recipient country's government were channeling all the aid received to the poor, donors would face a typical public good situation asking for some coordination among them. As they both care about the standard of living of the poor in the recipient country, the non-cooperative Nash equilibrium would lead to too little aid being provided, as each donor would consider the aid of other donors as given, as in the well-known free-rider problem. By contrast, if they do coordinate, each donor would know its contribution will be topped up by the other donor, thus increasing the marginal utility of his own contribution. The overall aid flow would therefore be larger. Donor coordination is thus a good thing if the recipient country's government can be trusted in channeling aid, or at least a good part of it, to the poor. However, it makes matters worse if this is not the case, as the recipient country is actually facing a single donor with the negative consequences seen above for the effectiveness of aid. In this very simple example, the pro-poor bias of the recipient country's government matters for whether donors should coordinate or not.

It turns out that this kind of result also depends on the way aid is delivered and the preceding result can be reverted if the aid relationship is considered under a different, dynamic angle. Consider a sequential game where the recipient country's government would first decide about a policy leading to some standard of living of the poor and then donors would transfer aid directly to the poor, or possibly to the government with a fully enforceable contract according to which all the aid will be channeled to the poor. In such a situation, coordination among the donors is necessarily a good thing, even though the government of the recipient country may not have been pro-poor in the first stage of the game, anticipating that the donors would compensate what it implicitly took away from the poor. Likewise, Platteau (2003) has shown how the recipient country's leadership would take advantage of competition among donors when the latter have to show to their own constituency that they indeed provided aid to that specific country.

In summary, this short argument shows that the nature of institutions in the recipient country may determine not only the volume and the type of delivery of foreign aid but also the way in which multiple donors would organize themselves to be as effective as possible.

2. Aid as 'finance': governance criteria in aid allocation

The simple model sketched at the beginning of the preceding section shows the distinction that can be made in the role of aid between its function as 'finance' and as 'reform'. When unconditional, aid was simply modifying the budget constraint and had a pure financial role. In the model, it could be used to increase the rent going to the elite but also to reduce the tax rate. In the latter case, it was having an impact on the efficiency of the economy and therefore a 'reforming' effect on it. But this was its main purpose. Within another setting, quite frequent in the donor-recipient relationship, aid could have financed an increase public expenditures - on top of the cash transferred to the elite - rather than a cut in taxes.

Things are different when aid is made conditional, either on reducing tax rate, or on improving the efficiency of the economy in alternative ways, including some specific additional public expenditures, or on diminishing poverty. In that case, the finality of aid is indeed 'reform', as it somehow goes against the mere preferences of the recipient country's government.

In line with 'aid for finance', this section analyzes the way the aid the aid received by a country depends on the quality of its institutions and governance. It focuses in particular on the issue of the allocation by a donor of a given aid budget along several recipient countries, and how donors may take into account both the relative quality of governance and the strength of needs in allocating more to some and less to others.[17] In the previous section, this was mostly exogenous, except in the case of conditional aid, which will be analyzed in more detail in the next two sections.

As before, we start from a simple vision of unconditional aid, taking the behavior of leaders in recipient countries and therefore the institutions behind them as given. Using the Bourguignon and Platteau (2015a) framework presented earlier, it turns out that some simple allocation rules can be derived. Those rules are then compared to the actual allocation implemented by donors and explicit allocation rules posted by multilateral donors. Finally, some additional issues concerned with the implications of aid conditionality and the multiplicity of donors for the selectivity of aid are taken up.

2.1. Optimal unconditional allocation of aid by a single donor with several recipient countries

The issue of allocating a given volume of aid among a set of recipient countries, and, in the first place, selecting those countries that would receive aid, has been studied rather early in the aid literature, although most often empirically and more with the objective of identifying the motivation of donors than the role of recipient countries' institutions. As a matter of fact, early theoretical models like those of Dudley and Montmarquette (1976) and Trumbull and Wall (1994) interestingly and symptomatically enough, largely ignored the issue of aid effectiveness and the role of recipient countries' governance. The same is true of the early empirical literature.

---

[17] We ignore here purely humanitarian aid and in particular disaster relief of which particular needs are the single determinants.

The first paper to explicitly tackle the issue of aid effectiveness in allocating aid is probably the very influential paper by Collier and Dollar (2002), thereafter C-D, which explored the country allocation of aid that would have the maximum impact on global poverty, given the policy and the institutions in recipient countries and their positive impact on growth and poverty reduction.[18]

The model below expands on both the early models of aid selectivity and the Collier-Dollar approach by introducing the quality of institutions in the former and providing a more general theoretical framework to the latter. It is based on a simple framework proposed by Bourguignon and Platteau (2015b).

A single donor is assumed to have an exogenous amount of aid, A, to allocate among two countries (i = 1, 2). A generalization to any number of countries will be given later. Both the size, n_i, and the mean income, w_i, of the poor population before taking into account the effect of aid are exogenous in the two countries. Note that w_i differs from the standard GNI per capita commonly used in the aid allocation literature. The knowledge of the proportion of poor people in the population, the share of household income in GNI, and the distribution of household income within the population or some measure of inequality would be necessary to infer both wi and n_i from the knowledge of the GNI per capita and the size of the population. We shall consider in what follows that both w_i and n_i are observed by the donor but all the analysis could be conducted in terms of the GNI per capita and the size of the total population, provided that a way to go from one to the other set of characteristics is available.

As in one of the models in the first part of this paper, it is assumed that, out of a given aid flow to country i, only a percentage x_i reaches directly or indirectly the poor, the rest being appropriated by the elite.[19] Unlike in the previous section, however, it is assumed that this effectiveness ratio is exogenous. Assuming that the utility, $V(\,)$, the donor derives from providing aid to a country depends on the living standard of the poor in that country, given the impact of aid, the objective function of the donor may be denoted:

$$Max_{s_1+s_2 \leq 1} \ n_1 V\left(w_1, \frac{s_1 A x_1}{n_1}\right) + \ n_2 V\left(w_2, \frac{s_2 A x_2}{n_2}\right) \qquad (2.1)$$

where s_i is the share of total aid going to country i. To simplify, most of the analysis is restricted to the case where the function $V(\,)$ is additive and takes the following logarithmic form:

$$V(w_i, s_i A x_i/n_i) = Log\,[w_i + s_i x_i A/n_i] \qquad (2.2)$$

Note that this specification assumes that the donor is essentially altruistic and does not provide aid for other motives than poverty reduction in the countries that receive it.

---

[18] It is interesting to note that despite the emphasis put on the effectiveness of aid since the late 1990s, some authors kept analyzing the allocation of aid without really introducing it in their framework. For instance Feeny and McGillivray (2008) expand Dudley and Montmarquette (1976) by indeed introducing in their analysis a variable that represents the 'bureaucratic expediency of allocating aid in a specific recipient country', which may have something to do with recipient countries' institutions. In their empirical application, however, they proxy this variable by the lagged volume of aid.

[19] Note that unlike in the model of section 1.2, the parameter, y_i, which we shall call the 'aid effectiveness ratio', is the share of aid actually used to alleviate poverty, rather than the share diverted by the leadership yi (= 1- x_i).

The solution of (1) with the specification (2) leads to the following first order condition for an interior solution:

$$\frac{w_1 + s_1 x_1 \, A / n_1}{x_1} = \frac{r w_2 + s_2 x_2 \, A / n_2}{x_2}$$

and, using $s_1 + s_2 = 1$, to:

$$s_1 = \frac{n_1}{n_1 + n_2}\left[1 + \frac{n_2}{A}\left(\frac{w_2}{x_2} - \frac{w_1}{x_1}\right)\right] \qquad (2.3)$$

and symmetrically for s_2.

In other words, the share of country i in the aid granted by the donor is its share in the total population of poor people corrected by a term that describes its advantage in terms of *'governance adjusted needs (GAN)'*, x_i/w_i. In this expression the 'needs' is logically represented by the inverse of the initial income and governance by the share of aid that reaches the poor. If the two countries have the same initial income, then the country with the better governance, i.e. the higher x, will get more than its demographic share. If the two countries have the same governance, the country with the highest needs, i.e. the lowest w_i, will get more than its population share. If the poorest country is at the same time the less well governed, it may end up at an advantage or a disadvantage with respect to the other country depending on the two GAN ratios y_i/w_i.

An interesting and more general case can be generated by replacing the logarithmic form in (2) by the familiar power function:

$$V(w_i, s_i A x_i / n_i) = \frac{1}{1 - \varepsilon}[w_i + s_i x_i A / n_i]^{1 - \varepsilon}$$

where $\varepsilon \in [0, \infty]$ can be interpreted as the aversion of the donor to poverty - or inequality among the poor. In that case, the share of country 1 is given by:

$$s_1 = \frac{n_1 x_1^{1/\varepsilon - 1}}{n_1 x_1^{1/\varepsilon - 1} + n_2 x_2^{1/\varepsilon - 1}}\left[1 + \frac{n_2 x_2^{1/\varepsilon - 1}}{A}\left(\frac{w_2}{x_2^{1/\varepsilon}} - \frac{w_1}{x_1^{1/\varepsilon}}\right)\right] \qquad (2.4)$$

Two changes are readily apparent when comparing this formula with (3) above. On the one hand, the GAN ratio is now $w_i/x_i^{1/\varepsilon}$, which takes into account the aversion of the donor to poverty. On the other hand, even in the case where both countries have the same GAN ratio, the allocation of aid still depends on the relative governance of the two countries as can be seen in the term before the square bracket. In the extreme cases, it can be seen on (2.4) that only governance matters and all the aid is allocated to the country with the best governance when the donor has no poverty aversion ($\varepsilon = 0$). On the contrary, needs -i.e. w_i - play a predominant role when poverty aversion is infinite.

The optimal allocation of aid may also lead to corner solutions. In the logarithmic case (i.e. $\varepsilon = 1$), all aid is allocated to country 1 if the following condition is satisfied:

$$w_1/x_1 < w_2/x_2 - A/n_1$$

This condition is equivalent to a lower bound on the GAN ratio that depends positively on the GAN ratio of the other country and negatively on the total amount of aid.

An interesting property of the optimal allocation of aid is that aid shares depend on the total amount of aid being granted. In the preceding condition, it is clear that if the GAN ratio of country 1 is larger than that of country 2, then all the aid available will go to country A if the total amount available is small enough. But, it will be shared among the two countries if the total volume of aid is above some critical value.

This simple two country model can easily generalize easily to any number of countries as shown in Bourguignon and Platteau (2015b)

2.2. Aid selectivity and governance in practice

The preceding discussion was largely theoretical but the literature on aid allocation is mostly empirical. Two types of approach may be distinguished in that literature. The first is essentially descriptive, seeking to identify the implicit criteria, including self-interested ones, used by donors in selecting aid recipients and allocating aid among them. Concerning recipient countries, criteria included almost exclusively income per capita and population in a first stage. However, following the influential World Bank report "*Assessing Aid*" in 1998 and its focus on policy and institutional factors as aid effectiveness, the emphasis shifted towards governance factors. The second approach to aid allocation is prescriptive.[20] It explores the allocations that would be optimal in view of some explicit social welfare function or global development objective and incorporates factors that are thought to make aid more or less effective in reaching development goals, including of course some institutional and policy features of the recipient countries. Somewhere between these two approaches, lies another one that consists of formal aid allocation rules actually used by multilateral donors, in particular the so-called Performance Based Allocation (PBA) rule in the aid management arm of the World Bank (IDA) and other multilateral development banks.

We review these three perspectives on aid allocation and the corresponding role of institutional factors in turn.

---

[20] This distinction between descriptive and prescriptive analysis of aid allocation was made by McGillivray (2004)

- Donors' aid allocation criteria

Most of the early descriptive econometric models of the geographical allocation of aid bore upon the motivation of the donors, and in particular political motives. The characteristics of the recipient countries were restricted to the GDP per capita and population. The attention of the analysts focused on the elasticity of aid with respect to these two indicators alongside other variables standing for non-developmental motivations of donors, for instance the strategic importance of recipient countries, their economic potential (for the donor country), cultural and ideological similarity, etc.[21] Such an approach was quite understandable at a time the behavior of the donors was influenced more by the geopolitics and the Cold War than purely developmental goals.

Things did change during the 1990s, in particular with the reassessment of the developmental role of foreign aid - e.g. World Bank (1998) - and, most importantly, the starting debate on the effectiveness of aid in promoting economic growth and development. In this respect, the paper by Burnside and Dollar (2000) a draft of which circulated some years before its publication had a powerful influence by suggesting that the quality of policies and institutions in a country was a major factor in making foreign aid development effective. Based on this, it was then logical to ask whether such factors influenced the allocation behavior of donors.

An influential paper in this respect was Alesina and Dollar (2000) showing regressions on the geographical allocation of aid that included among explanatory variables the democratic nature of the recipient countries and their openness to trade - with the finding that more open and more democratic countries were indeed receiving more aid. In another influential paper, Alesina and Weder (2002) tested whether, other things equal, available corruption indicators were affecting the aid share of recipient countries. Their general answer was negative, even though differences were found across donors - with Scandinavian donors allocating relatively less to countries with the reputation of being corrupt. More recent estimates by Dreher *et al.* (2011) also found no effect on the identity of aid recipients, although the effect on how much aid recipients would actually receive was significant.

The impact of other aspects of recipient countries' policy or institutional features on donors' aid allocation behavior was analyzed, with varying results depending on available data. In a comprehensive analysis of bilateral donor-recipient aid flows, Berthélémy and Tichit (2004) found a significant impact of past economic growth, FDI flows, primary school enrollment and progress in infant mortality in recipient countries. Yet, it was not really clear whether all these variables actually reflected policies or institutions in recipient countries or some other factor. Restricting the analysis to aid flows from various donors to Sub-Saharan countries between 1977 and 1998, Birdsall *et al.* (2003) found no significant effect of the Country Policy and Institutional Indicator (CPIA), an indicator elaborated by the World Bank that summarizes the quality of policies and institutions in a given country. However, working on a cross-section of donor and recipient countries annually between 1999 and 2002, Dollar and Levin (2004) found a significant elasticity of aid flows with respect to the CPIA index in a majority of donor countries and in multilateral organizations. This is possibly evidence of the broadly shared intuition that aid determinants have changed over time, donors having

---

[21] These categorization of variables is taken from the survey of the literature by Schraeder *et al.* (1998)

become more selective over the last 10 or 15 years in terms of the quality of policies and institutions in recipient countries.[22]

Dollar and Levin (2004) analysis, as well as several papers by Easterly on the weight of corrupt countries in the portfolio of DAC donors - in particular Easterly and Pfutze (2008) - may be considered more prescriptive than descriptive. In both cases, the objective was to rank donor countries in terms of their higher or lower sensitivity to corruption, or, more generally, institutions and policies' quality than to simply estimate the importance of these features in aid allocation among other factors.

- *Prescriptive empirical models of aid allocation*

Assuming donors are essentially motivated by altruistic rather than strategic or other non-developmental objectives, the theoretical model developed in the previous section lends itself rather easily to empirical implementation, provided that the right data are available to proxy its parameters and variables.

Collier and Dollar (2002), i.e. C-D, applied a model of this type to analyze the allocation of aid that would maximize global poverty reduction. They assume the poverty headcount ratio in country i, h_i, depends on GDP per capita, Y_i, according to $h_i = \varphi_i Y_i^{\eta_i}$, where φ_i is some income distribution parameter and η_i the growth elasticity of the poverty headcount, and consider the allocation of aid that will maximize the reduction of poverty:

$$Max \ \sum_{i=1}^{m} N_i \Delta h_i \qquad\qquad (2.5)$$

where N_i is the total population in country *i* and *m* the number of countries being considered. Assuming in addition that the growth rate of the economy is a function $F(p_i, \alpha_i)$ of a parameter p_i representing the quality of policies and institutions and the GDP share of aid, $\alpha_i (= s_i A/N_i Y_i$ with the same notations as before for total aid, *A*, and the share, s_i, going to country *i*)[23], the objective function (6) becomes:

$$Max_s \sum_{i=1}^{m} N_i F(p_i, s_i A/N_i Y_i) \, \eta_i h_i \ \ s.t. \ \ \sum_{i=1}^{m} s_i \leq 1 \qquad (2.6)$$

Assuming F ( ) is increasing and concave with respect to the aid share, α_i, this problem is similar to the optimal aid allocation model in the previous section, with some changes in the nature of the variables taken into account. In particular, the policy/institution parameter p_i plays a role opposite to *xi*.

The function $F(p_i, \alpha_i)$ used by C-D is a re-estimation of the growth-aid-policy relationship in Burnside and Dollar (2000). It is specified as:

$$G(p_i, \alpha_i) = B_{0i} + \alpha_i. (B_1 + B_2 p_i - B_3 \alpha_i) \qquad\qquad (2.7)$$

where the B's are coefficients estimated econometrically on panel recipient country data, B_2 and B_3 being strictly positive.

---

[22] For a broader survey of this issue see Pfeiffer and Boussalis (2015).
[23] Collier and Dollar's model is set in terms of α_i rather than s_i. The latter is used here for consistency with the initial theoretical model in the previous section.

With these specifications, the first order condition of the maximization problem (2.7) is:

$$s_i = (AN_i h_i / 2B_3) . Inf(B_1 + B_2 p_i - \lambda Y_i / h_i \eta_i, 0) \qquad (2.9)$$

where λ is the Lagrange multiplier associated with the constraint in (2.7).

It then follows that countries that will receive no aid are the countries with the lowest value of the following expression:

$$(B_1 + B_2 p_i) h_i \eta_i / Y_i \qquad (2.10)$$

which may be considered as the equivalent of the 'governance-adjusted need' (GAN) ratio in the preceding section. Countries the most likely to receive aid have a better governance (p_i) and/or more poverty (h_i) and/or low GDP per capita (Y_i) than the others. This expression is more intricate than w_i / x_i used before because poverty in the previous model was directly represented by w_i and n_i, whereas these magnitudes are now implicit behind h_i and Y_i.

When solving for the value of the Lagrange multiplier, λ, it turns out that the number of countries receiving aid actually depends on the size of the aid budget and on the distribution of the governance-needs parameters among countries. In other words, the amount of aid received by one country depends on the governance and needs of that country of *all* countries, not only the country concerned.. This is worth stressing because this does not appear to be common knowledge among aid practitioners. In the Collier-Dollar benchmark calculation for 1996, only about a third of 60 developing countries considered in their analysis received aid. Two thirds of these were in Sub-Saharan Africa, but countries like Guinea or Zimbabwe were not among them because of the poor quality of their governance.

Interestingly enough, countries not receiving aid in the poverty efficient aid allocation in C-D turned out to be countries actually receiving the least aid, as a proportion of GDP, in the official aid statistics (DAC), suggesting that donors' motivation was not too distant from the global poverty reduction objective. However, a major problem arose with India, which, according to the first order condition (2.9) above should have received a very substantial part of total aid, essentially because of its size.[24] In order to get results less distant from reality, the authors had to constrain the aid given to India. Their exercise is thus evidence of a 'small country' bias in the actual allocation of aid. Clearly, something is missing in the specification of the optimal aid allocation model based on some kind of utilitarian framework to explain that distance between the optimal and the actual aid allocation.

Beynon (2003) undertook some extensive sensitivity analysis of the C-D results, especially with respect to the coefficients of the Burnside-Dollar type growth-aid equation (2.8), the robustness of which has been subject to a rather hot debate.[25] The result is that the set of countries not receiving aid is rather robust, but the allocation of aid among countries receiving positive aid is not.

---

[24] For countries receiving aid, condition (9) is binding. It can be seen that this implies that the share of aid increases with population size. As India is considerably bigger than most developing countries, it should have received a substantial share of total aid. This issue does not arise in the case of China, the other giant developing country, because China was among the countries not receiving aid.

[25] See the discussion below in section 4.

A more fundamental weakness of the C-D's objective function is its focus on instantaneous poverty reduction, as opposed to poverty reduction over some longer time horizon. This is a difference with the general specification (2.2) used in the preceding section, which is consistent with any time period, as what really matters is the standard of living of poor people in the recipient country with and without aid over some arbitrary time period. On the contrary, the objective function (2.6) is short-term oriented, unless it is assumed that the decline in the number of poor will be constant over time. Wood (2007) showed how the optimal allocation of aid in the Collier-Dollar framework should depend on the donors' time horizon.

An interesting but rather different approach to the optimal allocation of aid was taken by Cogneau and Naudet (2007), who also indirectly relied on the C-D growth-aid-policy framework. Instead of adopting a welfarist objective function based on global poverty, they explored the implications of pursuing an equal opportunities approach, in the sense of Roemer (1998), to the optimal allocation of aid.[26] In other words, instead of taking aid as an adjuvant to poverty reduction, they considered it essentially as a way of compensating countries for adverse *circumstances* beyond their control and the reach of their policies and institutional reforms. This meant two key departures from the C-D approach. On the one hand, a distinction was made in projecting poverty reduction between the impact of circumstances beyond the control of recipient countries and that of policy efforts, as described by the CPIA indicator, among factors explaining growth and poverty reduction. In using the growth equation (2.8), Cogneau and Naudet thus replaced the policy/institution variable p_i by the value predicted in a regression of the CPIA indicator on initial country characteristics, as a proxy for 'circumstances'.[27] On the other hand, they replaced the global poverty minimization objective used in Collier-Dollar by a Rawlsian criterion minimizing the projected poverty in the country with the highest projected poverty at the time horizon of the exercise. Not surprisingly, the difference with the Collier-Dollar aid allocation was substantial.

- *The Performance Based Allocation rule in multilateral organizations*

A formal and explicit aid allocation rule among recipient countries is almost unavoidable in multilateral organizations where the multiplicity of partners would make negotiating about a specific allocation country by country an unmanageable task. Negotiating *ex ante* about the way the allocation must depend on country characteristics is easier.

The International Development Association (IDA), the aid management arm of the World Bank, has been using such a rule for almost 40 years. Other international development banks managing aid funds provided by their members do the same. However, if such a rule has existed for a long time, the formula that governs aid allocation changed several times. Interestingly enough, the formula in use today bears very much resemblance with the theoretical model in the previous section. The formula presently in use in IDA is as follows:

$$A_i = CPR_i^4 \cdot (GNI_i/N_i)^{-.125} N_i \qquad (2.11)$$

---

[26] A previous attempt at computing a 'post-welfarist' optimal aid allocation by Llavador and Roemer (2003), along the lines of Roemer (1998) led to somewhat surprising results, most aid going to East and South-East Asia, and practically nothing to Sub-Saharan Africa.

[27] Actually, they simply neutralized that variable by replacing it by its average across recipient countries.

where A_i is proportional to the aid allocated to country i[28], CPR_i is the 'country performance rating' as defined below, GNI_i/N_i is gross national income per capita (excluding aid), and N_i the population. CPR_i is itself an index that is defined as:

$$CPR_i = .24CPIA1_i + .68CPIA2_i + .08PPR_i$$

where *CPIA* is the Country Policy and Institutional Assessment index elaborated by the World Bank staff, which takes into account various aspects of policies and institutions. *CPIA1* stands for the average of the first three clusters of indicators (economic management, structural policies, policies for social inclusion) whereas the *CPIA2* index stands for the fourth cluster, which is about governance ('public sector management and institutions'). Finally, *PPR* stands for the quality of IDA's project portfolio, or the satisfactorily utilization of previous aid.

The correspondence between this PBA rule and the theoretical model discussed above is clear but incomplete. The income of the poor, w_i, and their number, n_i, are approximated by the GNI per capita and the total population, as if the distribution of income were the same across countries. However, it is quite possible for two countries to have the same GNI per capita and to have a different proportion of poor people and a different intensity of poverty among them. Concerning governance, the effectiveness ratio, x_i, in the theoretical model is approximated by the country performance rating, CPR, mostly based on the governance cluster of the CPIA index. Yet, the relationship between this indicator, itself a combination of various criteria, from accountability in the public sector to property rights, and poverty reduction is not a direct one.

In the light of the theoretical model (2.1) in the previous section and in particular the specification (2.4), the PBA rule appears very much biased towards governance in comparison with needs. This can be seen from the elasticities 4 and -.125 associated respectively with CPR and GNI/N in (2.11). With such elasticities, an improvement by one standard deviation (among low income countries) of CPIA2 (the governance cluster in the CPIA) would increase the aid flow of a country by roughly 45 per cent, whereas a drop in the GNI per capita by one standard deviation would increase it by only 7 per cent. In terms of (2.4) above, this would suggest a rather low value for the poverty aversion parameter ε.

This result may be consistent with the descriptive empirical analyses mentioned above, which find that the actual aid allocation by donors is increasingly sensitive to policy and governance. Note, however, that multilateral donors using the PBA rule also have special programs and procedures for the so-called 'fragile' countries, i.e. less well governed countries that are strongly penalized by the allocation rule.[29] The corresponding budget has increased substantially over the last decade or so and it is allocated largely on a case by

---

[28] The A_i's must be proportionally adjusted so that they sum to the total budget available.
[29] For more detail see Guillaumont and Wagner (2015) who came to ask whether these fragile countries were not simply making the PBA rule obsolete.

case basis. It follows that the actual allocation of aid by multilateral donors may differ substantially from the PBA rule. This also applies to the numerous bilateral donors that implicitly or explicitly apply rules comparable to the PBA.

Another possible explanation for the apparent governance bias of the PBA rule is that it is meant to be an incentive for recipient countries to adopt satisfactory policies and promote good institutions. In other words, the aid allocation rule would include ipso facto a kind of conditionality. Unlike what was discussed earlier, that conditionality may work better and the risk of Samaritan dilemma might be reduced in the context of several recipient countries. This is because breaking the allocation rule in favour of one recipient country would mean less aid being given to other countries, which would then complain about this special treatment. Yet, whether the PBA rule actually has any positive effect on the governance of receiving countries does not seem to have been thoroughly investigated.

2.3. Final remarks on aid allocation

The implicit conditionality in the PBA rule is extremely general and by definition homogeneous among recipient countries, whereas it would seem a priori that, to have a chance to be effective, conditionality should be country specific. However, taking into account such specificity would clearly lead to extraordinarily complex and opaque allocation rules. Think for instance of the Collier-Dollar model above with the growth-aid-policy equation (2.8) having different coefficients B_1 and B_2 across countries. Then the selectivity of the allocation of aid would not bear anymore on a GAN criterion (2.10) that would be the same for all countries. Out of two countries with the same average income, the same poverty rate and the same quality of governance, one would receive some aid and the other not. By construction, country specific conditionality is incompatible with the application of general and transparent aid allocation rule.

This conclusion does not necessarily apply to the case if the donor is able to influence the effectiveness of aid through monitoring and sanctioning in case of too much aid being diverted from its intended use. In the first model above, if the donor can spend some resources in increasing the aid efficiency ratio, x_i, then the optimal allocation of aid will differ from (2.3) or (2.5). The selectivity associated with the governance parameter, x_i, will be greatly diminished, as, precisely, the donor has the possibility of increasing the effectiveness of aid above x_i, although of course this will cost resources.[30] In terms of a formal allocation rule of the PBA type, this would mean that the rule, and in particular the role of governance, should depend on the monitoring exerted by the donor and the possibility to cut the aid flow to a recipient country on the strong presumption of aid embezzlement. It is not clear that this aspect of aid is taken into account in the elaboration of the rule.

A last issue to consider is how the presence of several donors may modify the allocation rule chosen by each donor. This is the same issue as the one discussed in the first part of this paper, except for the fact that, in the present framework, what may vary is the share of a fixed amount of aid going to a specific recipient country. This case does not seem to have been studied in the literature, even though it is clearly interesting to know whether the multiplicity of donors is bound to make each donor more or less selective in terms of the

---

[30] Bourguignon and Platteau (2015b) explore this case through the simulation of an hypothetical case.

governance of recipient countries in comparison to the case where it is isolated and also to what would be optimal is all donors were to coordinate.

To summarize the discussion in this part of the paper, it is fair to recognize that both on theoretical and empirical grounds, governance and institutions appear as key factors in the geographical allocation of aid by donors, and therefore in the aid received by a particular country.

The theoretical justification of such dependency relies on the presumption that the quality of institutions improves the effectiveness of aid in promoting development and reducing poverty. There would be little justification for this factor to affect the allocation of aid in the absence of such relationship. Yet, it must be stressed that, empirically, the mere existence or the strength of that relationship are still severely debated.

The evidence shows that bilateral donors do take into account some elements of governance, possibly along other criteria, when allocating their aid among developing countries. This has not always been the case. Multilateral donors have explicit allocation rules that presently give a rather heavy weight to governance versus need factors, although special care is taken on a case by case basis of these 'fragile' countries that would be excluded from aid because of their weak governance. Yet, the emphasis put by multilateral donors, often imitated by bilateral agencies, on governance factors in their allocation rule raises the issue of the nature of the tradeoff they are willing to make between governance and the needs of recipient countries, or more precisely their actual degree of poverty aversion.

In rationalizing the observed aid allocation behavior of donors, three important points should be kept in mind. First, as far as allocation rules are concerned, the approximate nature of the governance and institutional indicators has to be stressed. This is problematic for the allocation itself but also for the estimation of the growth-governance relationship presumably behind this rule. Second, the delivery of aid should matter for its allocation. A donor able to monitor better the projects and programs it finances should rely less on the actual governance in the recipient country. As a matter of fact, the aid provided to the so-called fragile countries is not managed as the aid given to other countries. Third, the argument in this section relies on the implicit assumption that the total aid budget of donors is fixed and what matters is its allocation across recipient countries. But the governance in those countries or at least the way it is perceived in donor countries should presumably affect aid budgets. Little evidence is available on this point, though.[31]

---

[31] Fuchs *et al.* (2014) find no impact of their proxy for the 'quality of aid' on donors' aid budget in a panel regression on 20 DAC donors.

3. Aid as 'reform': the effect of aid on institutions and governance

In accordance with the theoretical model sketched at the beginning of this paper, aid may also be intended by the donors to force recipient countries to adopt policy reforms, which may sometimes amount simply to cash or in kind transfers to poor people. Aid as 'reform' could thus be seen as synonymous of aid conditionality and somewhat in opposition to aid as 'finance'. This would correspond to what indeed donors would like to see achieved in recipient countries. A crucial point about aid, however, is that it may also have 'unintended' consequences on the institutions in, and the policies pursued by recipient countries. These consequences, most often ignored in the theoretical modelling of the aid donor-recipient relationship, are generally negative and able to more than offset the potentially favourable effects of aid on governance and policies. They are central in the debate about the effectiveness of aid.

In this section we thus focus on *all* the channels through which aid can affect institutions, aid for 'reform' (conditionality) being only one of them, even though possibly a major one. Evidence on the effectiveness of aid in modifying institutions through these channels is discussed in the next section.

The theoretical literature has identified many ways in which aid can have a negative effect on the welfare of the recipient country. One possibility for such a counterintuitive "aid curse" (e.g. Moss *et al.*, 2006) is the transfer paradox: the direct beneficial effect of the transfer of resources through aid is more than offset by a deterioration in the country's external terms of trade as a result of the transfer (Chichilnisky, 1980, 1983; Bhagwati *et al.*, 1983).[32]

The transfer paradox once attracted much interest but has now virtually disappeared from the aid literature, mainly because the terms of trade effect of aid is likely to be negligible at both the national and global levels. Nowadays the term aid curse is typically used in analogy with the resource curse. The channels identified in the resource curse literature (van der Ploeg, 2011) have also become prominent in the aid curse literature as potential explanations for an adverse effect of aid. These channels are relevant in our context since they typically (but not always) involve an adverse effect on institutions. There is, however, an important analytical difference between the two literatures. In the resource curse literature only the responses of domestic agents (the government, opposition groups, private entrepreneurs, rent seekers, and so on) to a resource boom need to be considered. But in the case of the aid curse there are also external agents to consider: donors can take the responses of domestic agents to aid into account when deciding on the amount of aid and the type of conditionality to be imposed. Hence, the consequences of, for example, elite capture differ between resource and aid curses because a donor will attempt to limit elite capture, as illustrated for instance in section 1.2 above.

In this section we discuss six possible channels:

1. Dutch Disease

---

[32] The pre-existing distortion which causes this immiserising effect of the transfer is the absence of an optimal tariff.

2. Accountability

3. The Cost of Taxation

4. Government Survival

5. Rent Seeking and Corruption

6. Conditionality

While all these channels are prominent in the policy literature only some are taken into account, in a highly simplified way, in the theoretical literature on aid.

We do no treat "elite capture" as a separate channel in this section but it is an issue very much in the background of the entire discussion.

Aid and Dutch Disease

One of the effects of a resource boom (an improvement in the terms of trade or a discovery of a tradable resource such as oil) is Dutch Disease: an increase in the relative price of non-tradables as a result of increased boom-financed domestic spending. Such "real appreciation" is accompanied by an expansion of the production of non-tradables at the expense of tradables. This is, of course, in itself not welfare reducing and in that sense the Dutch Disease is not a disease. However, if the production of tradables, e.g. manufacturing, involves learning-by-doing then a temporary resource boom could lead to a permanent loss of productivity as a result of foregone learning.

The effect of an aid inflow is analytically identical. This Dutch Disease effect of aid has generated an extensive literature (notably Rajan and Subramanian, 2005, 2011). Much of this literature is concerned with the negative effect of aid on the production of tradables and thereby on the scope for export-led growth rather than with an effect of aid on institutions. To that extent it is not relevant in our context, but it should be noted that the empirical literature usually cannot make this distinction.

Aid and accountability

Access to aid may induce the recipient government to reduce its reliance on domestic taxation, as seen in the simple model of section 1.1.[33] Government expenditure then increases by less than the amount of aid, even though donors might expect otherwise, since part of the aid is used to reduce tax revenue. This has two effects.

The effect which has received most attention in the literature is a negative one (Jones and Tarp, 2015; Moyo 2009; Deaton, 2013). The more public expenditure can be financed by aid the less the recipient will need to "buy" the consent of taxpayers. Accountability to citizens (e.g. through parliaments) over central expenditure is thereby undermined: governments

---

[33] Aid can be used both to reduce taxation and increase public expenditure. When donors have the latter in mind, the relative size of these effects is the focus of the literature on fungibility. It is worth noting that donors have often insisted that aid recipients should increase their tax efforts. But, as shown in the simple model of section 1.1 a reduction of taxation may be an optimal response to aid: substituting aid for taxes avoids the cost of taxation.

become accountable to donors rather than to their citizens.[34] Aid therefore undermines political institutions and thereby makes collective action difficult (Booth, 2011). This will reduce welfare if the government pursues its own objectives rather than taking the interest of its citizens into account. In this case aid benefits the recipient government and the interest group it represents (a particular class, region or ethnic group), at the expense of aggregate welfare.[35]

The same argument has been used to explain the resource curse. However, as Frankel (2010) points out, while the need for taxation may indeed lead to democracy ("no taxation without representation") it is not democracy per se but institutions such as the rule of law and a market economy that promote economic growth. In other words, while aid may indeed promote autocracy by undermining accountability the effect on development need not be negative.[36]

In addition, note that the analogy of the aid and resource curses may fail: aid is likely to be less fungible than resource rents as a result of conditionality and donor-initiated public expenditure reviews.

Aid and the cost of taxation

The second effect of an aid-induced reduction in taxation aid is a change in the cost of taxation. This has received much less attention; a notable exception is the Adam and O'Connell (1999) paper, already discussed at length earlier in this paper. In their model of clientelism - and unlike in the more general specification of model A.1 - the sole objective of the government is to use the state to maximize the income of a favoured group through transfers, which can be financed either by aid or by tax revenue.

The government sets a tax rate as Stackelberg leader and entrepreneurs subsequently decide how much to invest in a high-return activity that is taxed and in an untaxed, low-return activity. The nature of the equilibrium in this model depends on the relative size of the favoured group. If this group is relatively small then it bears only a small part of the cost of the transfer (the increase in the cost of taxation which lowers the income of all groups) whereas the benefits are high since the transfer is divided amongst a small number of claimants. This gives the government an incentive to set high tax rates. The result will be low growth and high incomes of the favoured group. Conversely, if the relative size of the group exceeds a certain critical level then the favoured group will have to bear so much of the cost of taxation that the costs of a high transfer outweigh its benefits. The result will be an equilibrium that Adam and O'Connell call a developmental state. In that equilibrium tax rates are low, taxation is used only to finance a given level of public expenditure and there are no transfers. The economy grows rapidly (through investment in the sector that is taxed) and the favoured group benefits from this growth through taxes (low rates applied to a high tax base) rather than through transfers.

---

[34] In European history the case of Habsburg Spain (which under Philip II could use Latin American gold rather than taxes to finance the state) can be contrasted with that of England and the Dutch republic where democratic institutions developed as concessions to taxpayers. See also North and Weingast (1998).

[35] In terms of the models of section 1.1 and 1.2, this argument would be equivalent to assuming that the θ 'governance' parameter is affected by aid - or by the tax rate, instead of being exogenous.

[36] Besides, democracy may itself be the consequence of development, as abundantly discussed in the political science and political economy literature, rather than taxation needs.

These two equilibria have radically different implications for the effect of aid. In the former case (when the government has a narrow power base) unconditional aid will under the assumptions of the model be used entirely to increase the transfer to the favoured group. If the donor is aware of this he may decide to give no aid. By contrast, in the developmental state aid will be used to reduce tax rates. This will raise welfare by reducing the cost of taxation.[37] That aid reduces the tax rate in the developmental state may be seen as an important institutional change caused by aid.

Two points should be noted. First, when aid affects institutions by undermining accountability the effect is unambiguously negative: aid enables the government to deviate from the interests of its citizens by reducing the need to seek their consent for taxation. When, however, the effect works through the cost of taxation channel then the sign of the effect depends on the nature of the political regime: the effect is negative if the government has a narrow base, but beyond a critical point, in the developmental state, it is positive.[38] Secondly, aid in this model works by reinforcing pre-existing institutional arrangements which affect the distribution of income between the favoured group and the rest of the population. In the developmental state the non-favoured group benefits from aid in spite of the government caring only about the welfare of the other group. This assumption is clearly extreme and the model of the first section of this paper has shown how it could be extended to a less purely autocratic context.

Aid and government survival

Aid can also affect the government's tenure and thereby cause or prevent changes in institutions. In the Adam-O'Connell model the government cannot be challenged and what it spends (other than on transfers) is given. Once this is relaxed aid can keep the regime in power by financing repression and defence against a coup or secession attempt. The sign of this political survival mechanism is ambiguous since aid may be channelled to the opposition or to civil society groups. Even if such support does not directly threaten the regime's survival, it may force the regime to introduce institutional reforms.

Aid can also affect government survival through political conditionality. In Africa donors have sometimes made aid conditional on multi-party elections and have on occasion blocked attempts by incumbent presidents to exceed constitutional tenure limits.

Aid, rent seeking and corruption

As in the case of the resource curse aid can increase the incentives to engage in rent seeking. This may explain a negative effect of aid on growth as entrepreneurs shift from production to rent seeking (Krueger, 1974) and can undermine institutional quality through corruption, much as in the case of the resource curse (Djankov *et al.*, 2008). On the other

---

[37]The difference between Adam and O'Connell and the model in section 1.1 is that the 'development state' where no transfer is made to the favored group can be obtained in the latter through various combinations of the size of that group and the pro-poor bias of the government. It is worth stressing again that in the model of Azam and Laffont (2003), unconditional aid is always ineffective. The reason is that in the Azam-Laffont model the government of the recipient country directly controls the consumption levels of the rich (the favoured group) and the poor, without an intervening taxation technology.

[38] This is an obvious case for selectivity in aid allocation.

hand, aid can reduce corruption, either directly through institutional reforms or increases in civil service salaries (Menard and Weill, no date) or indirectly through successful conditionality. The indirect effect implies an effect of corruption on aid, as extensively analysed in section 2, rather than the other way around. (The possibility of a two-way interaction was until recently ignored in much of the empirical literature.)

In modern versions of budget support where conditionality is kept to a minimum, corruption is seen as a "game stopper": while donors have committed themselves to disburse aid with minimal interference, it is understood that aid will be stopped in case of a corruption scandal (Adam and Gunning, 2002).

Conditionality

Conditionality can play two quite different roles depending on whether or not the donor and the recipient government fundamentally agree in terms of objectives (Collier *et al.*, 1997).

When there is agreement on objectives the donor can offer the government a commitment device and thereby make its policies credible in a context of time inconsistency. If the government would reverse its policy (not because it wants to do so but because it cannot resist demands to that effect from the opposition) the donor would be committed to cut off aid. This would be sufficiently damaging for those who would otherwise succeed in making the government reverse its policy to desist.

Clearly, this will work only if the donor's action is credible. This has been problematic: donors have been reluctant to commit to cutting off aid even if it was clear that this would help a reforming government (Collier and Gunning, 1995; Adam and O'Connell, 1999). This reluctance reflects not only the interests of donor bureaucracies but also the political problem of having to explain to citizens in donor countries that aid to a deserving country must be stopped.

Much more common has been the second type of conditionality where there is a conflict of interest between the donor and the government. Conditionality then does not work as a commitment device but as a means or aligning recipient interests with those of the donor.

In the canonical model analysed in the first section of this paper, the donor can use conditionality to increase the share of the non-favoured group in the benefits of aid: aid would then be conditional on a reduction in tax rates - as in (1.7). What conditionality can achieve in this model (nothing, gains from aid or a Pareto-efficient outcome) depends on the nature of the political equilibrium and the non-transfer level of government expenditure. Except for particular cases where differences between the principal and the agent do not matter because the government already assists the non-favoured group) there is a role for conditionality.

In practice conditionality has been used extensively by donors to effect institutional reform, particularly in the 1980s and 1990s when donor-financed structural adjustment programs in developing countries, notably in Africa, were festooned with conditions on institutional changes.[39] These were often poorly designed. Since structural adjustment aid was supposed

---

[39] This type of conditionality differs from that considered in part B, which is not aimed at institutional change, but at greater effectiveness of project aid or less leakage of aid to non-intended uses.

to be temporary a frequent problem was time inconsistency. A government might be induced by the offer of conditional aid to adopt a reform favoured by the donors (e.g. trade liberalization) but would have an incentive to reverse the reform once the aid stopped.[40]

As noted earlier, this type of conditionality is often called *ex ante* conditionality: the conditions apply not to the outcomes in which the donor is interested (e.g. poverty reduction) but to policies which are supposed to lead to these outcomes. Since the donor disburses the aid when the recipient *promises* to implement the desired policy change, this type of conditionality is fundamentally flawed: the recipient may not implement or maintain the reform and the expected outcome may not materialize. In a repeated game failure to implement and maintain the reform would be punished by stopping new disbursements. In practice donor bureaucracies, and/or the donor's social preferences as in the Samaritan dilemma, have strong incentives to continue aid in such circumstances so that the threat of stopping aid is not credible.[41]

The theoretical literature usually assumes that conditionality is of the *ex post* type. Azam and Laffont (2003), for example, assume initially that the donor's commitment is credible and that the contract between the principal (the donor) and the agent (the government) can be written in terms of the outcome of interest to the principal: the consumption level of the poor. When information is incomplete, specifically when the donor does not know to what extent the government cares about the poor then aid is less effective: as a result of the incomplete information the optimal aid contract allows the government an information rent. Compared to the full information case aid is partly "wasted" to pay this rent. However, in this case of informational asymmetry Azam and Laffont continue to assume that the contract can be written in terms of the consumption of the poor.

The obvious failures of *ex ante* conditionality have frequently led to proposals to replace it by *ex post* conditionality (sometimes referred to a payment for results or performance-based aid), that is by a contract in terms of the donor's ultimate objectives. In this case aid would be disbursed when proof was submitted of changes in, say, poverty, health or learning outcomes.[42] Alternatively, the donor would commit to aid for a group of countries with the share of each country determined ex post on the basis of its actual performance (Svensson, 2003).

With the notable exception of EU budget support this type of conditionality has rarely been implemented. This drives a wedge between the theoretical and the empirical literature: the evidence is from a world in which the *ex post* conditionality of the theoretical literature is the exception rather than the rule.

---

[40] Clearly, in a two-period model with aid in the first, but not in the second period, the reform will be implemented initially and then reversed in the second period. Actual practice involved multiple structural adjustment aid packages so that the sequence of policy reform and reversal was repeated. A notorious example is the Kenyan experience with trade liberalization, a reform which was repeatedly "sold" to the donors, implemented and then reversed (Collier *et al.*, 1999).

[41] See Collier *et al.* (1997), Adam and Gunning (2002), Svensson (2003). Azam and Laffont (2003) acknowledge the problem of lack of donor credibility at the very end of their paper (p. 52), but do not address it.

[42] Note that these outcomes need not be the result of the prospect of aid so that there will be type I and II errors in the sense that governments may be rewarded or punished for outcomes which were outside their control.

4. Evidence on the effect of aid on institutions[43]

Much of the empirical literature investigates the effect of aid on particular measures of institutional quality without identifying the channel. We consider these studies first and then the papers with evidence on the six channels identified in the previous section.

4.1. Evidence not limited to particular channels: econometric studies

The early literature has used cross-country regressions to estimate the effect of aid on macro-economic outcomes such as the level or growth of GDP (Boone, 1996; Burnside and Dollar, 2000; Rajan and Subramanian, 2008). It is often suggested (e.g. Deaton, 2013) that this literature has reached a consensus that this macroeconomic effect is either insignificant or negative.

In fact recent studies (notably those by Finn Tarp and his co-authors) typically find a positive and significant effect and in many studies this effect is sizable (Arndt *et al.*, 2010, 2015a, 2015b; Clemens *et al.*, 2012; Juselius *et al.*, 2014). "The weighted average result from these studies indicates that a sustained inflow of foreign aid equivalent to 10 percent of GDP is expected to raise growth rates per capita by about one percentage point on average." (Arndt *et al.*, 2015b) This implies a 10% rate of return, very much higher than what was suggested in the earlier literature.

There is a vast empirical literature on the effects of aid on the quality of policies and institutions in developing countries and on the reverse effect: of governance in recipient countries on the amount of aid. This literature is plagued by endogeneity issues and many of the results are therefore controversial.

The modern literature starts with Burnside and Dollar (2000) who estimated the effect of aid on economic growth. To take into account the endogeneity of aid in the growth equation they estimated a system of two equations (using 2SLS), one for growth, the other for aid. In the growth equation aid entered twice: as an explanatory variable on its own and also interacted with a variable for the quality of policies. This specification led to the key Burnside-Dollar conclusion: aid has a positive (and significant) impact on growth, but only in an environment of "good" policies. (Only fiscal, monetary and trade policies were considered; microeconomic policies played no role in the governance indicator.) As extensively discussed in section 2, this conclusion had an obvious policy implication: aid should be "selective", i.e. concentrated on countries with "good" policies. (Under such an aid allocation better governance leads to higher growth both directly and indirectly, by attracting more aid.) Conversely, aid should not be given to countries which do not yet have the right institutions: without a good policy environment such aid would be wasted. This finding attracted enormous attention, in particular since it deviated so much from donor practice at the time: donors tended to focus aid on countries with poor policies and, generally, high poverty.[44]

The Burnside-Dollar approach was adopted in a large number of subsequent papers. It quickly became clear that the original results were not robust to minor changes in

---

[43] In this section we do not consider experimental evidence. This will be covered in the white paper for RA3.
[44] See e.g. Collier and Gunning (1999).

specification or in the period covered and, notably, not to changes in the treatment of outliers. The essential role of the interaction term was questioned: many authors claimed to show that aid was good for growth even in a poor policy environment. If true, there would then be no basis for selectivity in the allocation of aid.

These (somewhat counterintuitive) results themselves came under attack. Rajan and Subramanian (2008) argued that the evidence showed that aid had no effect on growth, irrespective of the quality of governance or the type of aid. Their paper quickly acquired a canonical status.[45] This is somewhat surprising since Arndt, Jones and Tarp (2010) showed that these results were not robust. This important paper remains somewhat in the periphery of the literature and the Rajan-Subramanian findings continue to be cited by many as the definitive result on aid effectiveness.

Arndt *et al.* started from a replication of the Rajan-Subramanian analysis. They then introduced a different (better) estimator and some changes in the specification (essentially including more regional fixed effects, some indicators of initial human capital and of geographic conditions). Most importantly they used a different set of instruments, correcting a number of errors in the original paper. These changes led to radically different outcomes. Rajan-Subramanian used growth theory to derive a prior for the effect of aid on growth, concluding that aid of 10% of GDP should raise the growth rate (permanently) by about 1%. Arndt *et al.* (2010) in fact find an effect that is slightly *higher* than this theoretical prediction, a dramatic reversal of the earlier finding that there was no effect. These results that aid has a substantial impact on growth, in accordance with what theory suggests, have been confirmed in a series of subsequent papers.

4.2. Evidence not limited to particular channels: case studies

Aid effectiveness has also been investigated in case studies. These studies (e.g. Collier and Reinikka, 2001, for Uganda) confirm that donors practiced selectivity: countries perceived as good policy environments attracted much more aid ("donor darlings"). There is similar evidence for Ghana, Vietnam and Rwanda. This is important since some of the econometric evidence on this point is methodologically suspect: where the World Bank's CPIA was used as an indicator of the quality of governance reverse causality may well have played a role. The Bank staff who came up with the CPIA scores, may well have given high scores to countries that performed well in terms of growth, because of these outcomes. Obviously, this makes the CPIA score endogenous in a growth regression. The case studies are not immune to this problem, but they are probably less vulnerable, giving detailed accounts of institutional arrangements.

There are also numerous case studies on the effect of aid on institutional quality through policy conditionality (e.g. Devarajan *et al.*, 2000; Botchwey *et al.*, 1998; Collier and Reinikka, 2001; Gunning, 2001). Devarajan *et al.* studied aid and policy reform in 15 African countries and find that in spite of large amounts of aid only 3 (Mali, Ghana and Uganda) reformed successfully. The key issue in this literature is of course the counterfactual. If a country

---

[45] It is, for example, revealing that Deaton (2013) discusses these results as if they are virtually beyond dispute.

adopted policies which the donor had made a condition for aid it does not follow that those policy changes were caused by the aid. The case study evidence is useful since it often describes the way policy changes were arrived at in great detail. In many cases it seems plausible that the domestic political process would have led to the donor-favoured changes even in the absence of aid. Uganda and Vietnam are examples of this. In such cases aid may have been effective because policies were "good", but the good policy environment was not the result of aid. Aid effectiveness then reflects "aid as finance" rather than "aid for reform".

4.3. The paradox of aid effectiveness

Intuition suggests that good governance makes aid more effective. The Burnside-Dollar results confirmed this. Not surprisingly, the policy conclusion of aid selectivity therefore survived the early critiques of the Burnside-Dollar econometric procedures: because their results seemed so very plausible they were accepted in spite of methodological criticisms.

This survival was not short-lived. The Rajan and Subramanian papers (2005, 2007, 2008, 2011), notably their 2008 paper, came to be accepted as the final proof that aid (at least as practiced) had no effect on growth.

This is sometimes described as a paradox: what seems plausible turns out not to be true and what seems counterintuitive: that aid has no effect is apparently empirically true. The recent papers, notably those by Finn Tarp and his colleagues (Arndt *et al.*, 2010, 2015a, 2015b; Jones and Tarp, 2015; Juselius *et al.*, 2014) show that there is no paradox: aid in fact has a positive impact of a sizable (and theoretically) plausible magnitude. However, this conclusion is not (yet) widely accepted.

The evidence on the effect of aid on institutions is quite mixed (Jones and Tarp, 2015). Djankov *et al.* (2008) and Busse and Gröning (2009) find a negative effect, but Alesina and Weder (2002) and Knack (2004) find no effect while Tavares (2003) finds a positive effect: aid reduces corruption (but the effect is quite weak). Menard and Weill (no date) investigate the two-way interaction between aid and corruption with Granger-causality tests. They find no evidence of a significant effect in either direction: there is no clear evidence that changes in aid precede changes in corruption or vice versa. While it has often suggested that multilateral aid might be more effective than bilateral aid in reducing corruption: the Granger-causality evidence does not support this view: the Menard-Weill results (no significant effect in either direction) is robust to this disaggregation.

While the theoretical view is sharply divided on the sign of the effect of aid on (political) institutions Dutta *et al.* (2013) argue that the sign depends on the initial situation: aid makes democracies more democratic and autocracies more autocratic. They find evidence in support of this "amplification" hypothesis. This is reminiscent of the Burnside-Dollar result that aid works, but only in favourable policy environments.

A problem which plagues this literature is the heterogeneity of aid, both in terms of its objectives and its volatility. Clearly, long-term aid in support of democratic reforms will have effects quite different from, say, short-run capacity building projects. The focus in the empirical literature on the effects of *total* aid is therefore misguided.

We consider the Jones and Tarp (2015) paper in some detail because it explicitly deals with these two types of heterogeneity. This paper uses both a cross-sectional approach and dynamic panel estimators (with panels of different duration: 2, 4 or 6 years): systems GMM and a random effects model or bias corrected fixed effects. The authors use five different measures of political institutions as well as a synthetic measure.

Jones and Tarp find a positive effect of aggregate aid on this synthetic measure of institutional quality. This aggregate effect is small, but there is clear evidence of heterogeneity: when aid is given for governance purposes and when aid is relatively stable it has a substantial positive effect.[46] The difference is enormous, e.g. the effect of stable aid in these estimates is four times as large as that of volatile aid.

In the theory section we noted an ambiguity: aid may affect some aspects of institutional quality (e.g. democracy) but not others (e.g. the rule of law) and it may be the latter which are more important for growth. The Jones-Tarp paper resolves this issue since they find similar positive effects of aid on a wide range of indicators of institutional quality: measures of democracy, "checks" (i.e. the number of players who can veto political decisions), executive constraints, political terror, and judicial independence.

4.4. Evidence for particular channels

A point to note is that the Jones-Tarp paper provides evidence of a positive effect of aid on governance, but it does not indicate the channels through which this effect runs. This is a general characteristic of the econometric literature. Similarly, the Arndt *et al.* (2015b) study disaggregates the macroeconomic effect of aid in effects due to induced changes in consumption, physical and human capital and direct changes in productivity. But here again there is no indication of the effect of aid on institutions. In this sense there is disconnect between the theoretical and the empirical literature. This is a gap which the EDI project aims to fill.

There is however some evidence on the six channels we distinguished in section 3.

Aid and Dutch Disease

A large number of developing countries have received very high inflows for very long periods: some three dozen countries received more than 10% of GDP in aid for at least two decades (Moss *et al.*, 2006). This has spawned a series of econometric papers investigating the Dutch Disease effects of aid.

Rajan and Subramanian (2005) find strong evidence of aid-induced Dutch Disease: aid undermines competitiveness by reducing growth, wages and productivity in the manufacturing and export sectors. This may explain, as the authors suggest, why aid has been less effective in raising growth than expected. (Recall, however, that the recent evidence shows a substantial positive effect of aid on growth contrary to the consensus a decade ago.) The question whether Dutch Disease has detrimental institutional effects is not

---

[46] Disaggregation by time period shows that the effect is stronger in the post-Cold War period.

addressed in the empirical literature. This would be the case, for example, if the aid-induced shift from tradables to non-tradables stifled competition and stimulated rent seeking.

Aid, accountability and the cost of taxation

In much of the theoretical literature aid has a negative effect on the government's tax effort. This affects institutional quality through two channels: reduced accountability (a negative effect) and lower cost of taxation (a positive effect). However, there appears to be no clear support for the proposition that aid reduces taxation.

Morrissey *et al.* (2007) find no evidence of a negative effect of aid on tax effort and McGillivray and Morrissey (2004) find that expenditure actually increases by *more* than the amount of aid: hence taxes are crowded in rather than out. When loans and grants are distinguished the early studies (summarized in Moss *et al.*, 2006) find a clear difference: loans do not affect taxation (presumably because the government has an incentive to raise taxes to service the debt) but grants reduce it.

Clist and Morrissey (2011) revisited this issue. They find that until the mid-1980s loans indeed had a positive, but grants a negative effect on tax effort (as measured by the tax/GDP ratio). However, they also find evidence of a structural break in 1985: post-1985 grants also *increase* tax effort. They suggest that this reflects successful conditionality: donors exhorted the poorest countries (where grants were concentrated) to raise more taxes.[47]

There is case study evidence (Brautigam and Knack, 2004; Moss *et al.*, 2006) that aid not only affects tax revenue but the budget process itself. Under aid budget constraints become weak as governments come to feel that they can appeal to donors to make up any deficit: there are no longer hard budget constraints.

In much of the empirical literature there is a presumption that the effect of aid on institutions through the two tax channels must be negative although, as we have seen, the sign of the effect is ambiguous in the theoretical literature. Jones and Tarp (2015) in fact find a positive effect of aid on political institutions.

Aid and Government Survival

Ahmed (2012) presents evidence that aid, as expected, is partly diverted to patronage and through that channel aid reduces government turnover in autocratic regimes.

Anecdotal evidence suggests that donors have been successful in using aid to achieve changes in electoral processes. Whether this contributed to donors' ultimate objectives remains, however, in doubt. In many African countries multi-party elections appear to have intensified ethnic conflicts (since parties were organised along ethnic or regional lines) while failing to establish democratic control over government spending. Hence aid brought the appearance of democracy: elections, but not the substance: accountability (Collier, 2008). The empirical evidence is devastating. As noted above, Knack (2008) finds no evidence whatsoever of aid on democracy, measured in a number of different ways.

---

[47] This is a good thing to the extent it improves accountability, but a bad thing in that it raises the cost of taxation.

Aid, Rent Seeking and Corruption

Okada and Samreth (2012) present evidence that aid deters corruption using panel data for 120 developing countries. Asongu (2012), however, using data for 52 African countries reaches the opposite conclusion: aid increases corruption.

Aid and Conditionality

The empirical literature on the effectiveness of conditionality starts with the famous but controversial Burnside and Dollar (2000) paper which concluded that donors were incapable of changing policies in developing countries through conditionality. While other conclusions of that paper turned out not to be robust this one has been confirmed in most subsequent econometric work.

Svensson (2003) analysed data for some 200 structural adjustment efforts and found "no link between a country's reform effort, or fulfillment [sic] of ''conditionality'', and the disbursement rate". In addition there have been numerous country case studies of the effectiveness of conditionality in effecting policy reform, usually in the context of structural adjustment programs (e.g. Botchwey *et al.*, 1998; Devarajan *et al.*, 2000).

Both types of studies face a serious methodological problem (Gunning, 2001). In many cases the failure of conditionality was fairly obvious since the reforms desired by donors were not maintained or not even implemented. But in other cases they were and it is a judgment call whether this reflected successful conditionality or whether the reforms, as has for example been argued for the case of Vietnam, would also have been implemented in the counterfactual case as a result of a domestic political process (with donors afterwards claiming credit for the successful outcome). Devarajan *et al.* (2000) study conditionality and reform in 15 African countries. Only in three cases (Uganda, Mali and Ghana) do they conclude that donors were successful in achieving economic reform through conditionality.

Recall that many of the papers in the theoretical literature assume that donors can credibly commit. The empirical literature makes clear that this assumption is not realistic. The resulting time inconsistency has undermined the effectiveness of conditionality (Collier *et al.*, 1999). Kilby (2009) finds evidence that non-enforcement of World Bank conditions reflects politically motivated pressure by powerful donors, notably the US. Hence internal bureaucratic incentives in donor agencies (the reason usually given for lack of donor credibility and hence time inconsistency) need not be the only reason for the failure of (*ex ante*) conditionality.

Aid and Elite Capture

We have not treated elite capture as a separate channel since it is involved in virtually all channels. However, some papers focus on the role of aid in elite capture. Platteau (2004) reports case study evidence of elite capture of aid in Africa. Villagers were well aware of this but continued to support (and even re-elect) the responsible local leader. The reason was that they realised they would be worse off without his giving them access to part of the aid, however small. The fundamental problem in this case was lack of donor coordination. A threat of an individual donor to cut off aid if elite capture continued would not be credible since the leader would be able to continue the aid-relationship with another donor.

In a regression study Bjørnskov (2010) finds evidence that aid changes the distribution of income in favour of the rich in democratic countries but (somewhat puzzlingly) does not affect the distribution of income in autocracies.

Conclusion

The literature on the effect of aid on institutions constitutes an important subset of the more general literature on the effectiveness of aid. We have emphasized the distinction between two roles of aid: aid as finance and aid as reform. In the former case aid is simply a resource transfer that enables a government to implement projects or policy reforms it intended to undertake anyway. In the latter case the way resources are provided changes what the government does, in ways either intended by the donor (as envisaged under conditionality) or not (as when aid induces rent seeking or keeps a kleptocracy in power).

This literature is enormous but has not arrived at a clear consensus on the way aid (whether as finance or as reform) affects institutions and thereby poverty and other development outcomes. There are at least four reasons for this unsatisfactory state of affairs.

First, to the extent there is empirical evidence on the various channels identified in the theoretical literature (and we have indicated that the coverage is patchy), this is often regression-based and therefore usually subject to endogeneity concerns. There are many studies that use RCTs and natural experiments but these can address only some components of the effect of aid and institutions; many other aspects do not lend themselves to an experimental approach.

Secondly, to a surprising extent this is a tale of two literatures: the theoretical and empirical literature are very imperfectly integrated. There is limited evidence on issues which are central in theory (for example the effect of aid on accountability, rent seeking or the cost of taxation). Conversely, we have noted that where the two literatures do address the same issues the empirical evidence sometimes suggests that concerns in the theoretical literature are misplaced.

Thirdly, many studies use measures of aid which aggregate over flows which are likely to have very different effects: emergency assistance versus multiyear programs, tied and untied aid, aid given for political reasons versus development projects. Such aggregate measures are popular in the aid effectiveness literature but, as shown in recent papers, can be quite misleading.

Fourthly, empirical papers use measures of governance or policies that may not be appropriate. The indicators used range from the CPIA of the World Bank and the Competitiveness Indicators of the World Economic Forum to the Worldwide Governance Indicators (WGI), themselves ingeniously constructed aggregates of a large number of individual indicators. The number of measures used in empirical papers is bewildering: the largest compilation, that of the University of Gothenburg, comprises as many as 2067 items. Some of these indicators focus on quite specific aspects of governance, institutions or policies which may be too detailed to really infer from them the impact of aid. Aggregating them, as done for instance by the WGI, into measures of 'control of corruption', 'government effectiveness' or the 'rule of law' can be problematic: such aggregations are rather arbitrary and do not necessarily capture what is essential in the effect of aid on institutions. As the theoretical analysis in this survey suggests, what really matters is the 'pro-poor' stance of the recipient government rather than specific policies or institutions. It might thus be an interesting direction of research to explore new ways of aggregating existing individual indicators along such lines.

The conventional wisdom holds that the effect of aid (through whatever channel) on growth and other outcomes of interest is negative or at best only very weakly positive. The recent literature shows that this is incorrect: the evidence is that aid has a substantial positive effect and that this works through changes in institutions. This is important but probably to some extent simply reflects successful selectivity: when aid is allocated to 'pro-poor' governments then it will have the effect of improving institutions. (Note that this does not invoke conditionality: aid succeeds in the `aid as finance' role rather than `aid as reform'.) This is different from the earlier focus on "good policy environments" as the basis for allocating aid: [48] what matters is the nature of the regime (in particular the likelihood of "leakage" or elite capture), rather than the current policy environment.

If it is accepted that, in this sense, the scope for aid to modify institutions is limited, there are in principle two alternative routes: different agents or different policies. In the first case donors circumvent governments by working with local or international NGOs. While this appears attractive it suffers two obvious major limitations: NGOs are themselves vulnerable to elite capture and a government which uses the state to serve the interests of narrow factions is unlikely to tolerate NGOs that threaten that objective.

This leaves non-aid policies as instruments for changing institutions. There is much anecdotal evidence that this can work. Examples are the use of trade restrictions to eradicate child labor; transparency and labelling initiatives to expose the sale of "blood diamonds"; media exposure of the use of tax havens; travel and banking restrictions aimed at members of a kleptocratic elite. There is, however, as yet little evidence beyond anecdotes. This seems a promising direction for future research.

The literature on aid effectiveness implicitly classifies aid as either good or bad. In our view this binary approach is not appropriate. In many situations aid can improve institutions and achieve development objectives while at the same time having adverse effects: elite capture, weakening accountability and so on. The question is not whether such "taxation" should be eliminated but rather what the maximum rate of such taxation is that is acceptable to the donor.

---

[48] As in the famous *Assessing Aid* report, World Bank (1998).

Acemoglu, D. and J. Robinson (2001), A Theory of Political Transitions, *American Economic Review*, 91(4), 938-963.

Acemoglu, D. and J. Robinson (2012), *Why Nations Fail: the Origins of Power, Prosperity and Poverty*, New York, Crown Business.

Adam, C. S and S. A. O'Connell (1999), Aid, Taxation and Development in Sub-Saharan Africa, *Economics and Politics*, 11(3), 225-253.

Adam, C. S. and J.W. Gunning (2002), Redesigning the Aid Contract: Donors' Use of Performance Indicators in Uganda, *Word Development*, 30(12), 2045–2056.

Adam, C. S., G. Chambas, P. Guillaumont, S. Guillaumont Jeanneney, J.W. Gunning (2004), Performance-Based Conditionality: A European Perspective, *World Development*, 32(6), 1059–1070.

Alesina A. and D. Dollar (2000), Who gives foreign aid to whom and why?, *Journal of Economic Growth* 5(1): 33-63.

Alesina, A. and B. Weder (2002), Do corrupt governments receive less foreign aid?, *American Economic Review*, 92, 1126-1137.

Arndt, C., Jones, S. and Tarp, F. (2010), `Aid, Growth, and Development: Have We Come Full Circle?', *Journal of Globalization and Development*, vol. 1(2): article 5.

Arndt, C., Jones, S. and Tarp, F. (2015a), `Assessing Foreign Aid's Long Run Contribution to Growth and Development', World *Development*, vol. 69, pp. 6–18.

Arndt, C., Jones, S. and Tarp, F. (2015b), `What is the aggregate economic rate of return to foreign aid?', *World Bank Economic Review*, forthcoming.

Asongu, S.A. (2012), `On the Effects of Foreign Aid on Corruption', AGDI Working Paper 12/031.

Auriol, E. and J. Miquel-Forensa (2015), Taxing Fragmented Aid to Improve Aid Efficiency, CEPR Discussion Paper No. DP10802.

Azam, J.-P. and J.-J. Laffont (2003), Contracting for aid Contracting for aid, *Journal of Development Economics*, 70 (1), p. 25–58.

Berthélémy, J-C and A. Tichit (2004), Bilateral donors' aid allocation decisions--a three-dimensional panel analysis, *International Review of Economics & Finance*, 13(3), p. 253-274.

Besley, T. (1997), Political economy of alleviating poverty: theory and institutions. Annual World Bank Conference on Development Economics 1996, World Bank, Washington, D.C.

Beynon, J. (2003), Poverty Efficient Aid Allocations – Collier/Dollar Revisited, ESAU Working paper 2, Overseas Development Institute, London.

Bhagwati, J.N., R.A. Brecher and T. Hatta (1983), `The Generalized Theory of Transfers and Welfare: Bilateral Transfers in a Multilateral World', *American Economic Review*, vol. 73, pp. 606-618.

Bjørnskov, C. (2010), `Do Elites Benefit from Democracy and Foreign Aid in Developing Countries?',

Journal of Development Economics, vol. 92, pp. 115-124.

Booth, D. (2011),`Aid, institutions and governance: What have we learned?', *Development Policy Review*, vol. 29 (s1), pp. s5–s26.

Botchwey, K., P. Collier, J.W. Gunning and K. Hamada (1998) *External Evaluation of the ESAF: Report by a Group of Independent Persons*, Washington, DC: IMF.

Birdsall, N., S. Claessens and I. Diwan (2003), Policy Selectivity Forgone: Debt and Donor Behavior in Africa, *World Bank Economic Review*, 17, 409 - 435.

Bourguignon F. and J.P. Platteau (2015a), Optimal Discipline in Donor-Recipient Relationships -Reframing the Aid Effectiveness Debate, Working Paper, Paris School of Economics.

Bourguignon F. and J.P. Platteau (2015b), Aid effectiveness revisited: the trade-off between needs and governance, Working Paper, Paris School of Economics.

Bourguignon F. and J-P Platteau (2015c), The Hard Challenge of Aid Coordination, *World Development*, 69(C), 86-97.

Burnside, C. and D. Dollar (2000), Aid, policies and growth, *American Economic Review*, 90, 847-868

Burnside, C. and D. Dollar (2004), Aid, Policies, and Growth: Reply, *American Economic Review*, 94(3), 781-784.

Busse, M. and Gröning, S. (2009), `Does foreign aid improve governance?', *Economics Letters*, vol. 104, pp. 76–78.

Chenery, H and A. Strout (1966), Foreign assistance and development, *American Economic Review*, 56, 679-733.

Chichilnisky, G. (1980), `Basic goods, the effects of commodity transfers and the international economic order', *Journal of Development Economics*, vol. 7, pp. 505-519.

Chichilnisky, G. (1983), `The transfer problem with three agents once again: characterization, uniqueness and stability', *Journal of Development Economics*, vol. 13, pp. 237-247.

Clemens, M.A., Radelet, S., Bhavnani, R.R. and Bazzi, S. (2012), `Counting chickens when they hatch: Timing and the effects of aid on growth', *Economic Journal*, vol. 122, pp. 590–617.

Clist, P. and O. Morrissey (2011), `Aid and tax revenue: signs of a positive effect since the 1980s ', *Journal of International Development*, vol. 23, pp. 165-180.

Collier, P. (2008), *The Bottom Billion. Why the poorest countries are failing and what can be done about it*, Oxford: Oxford University Press.

Collier, P., P. Guillaumont, S. Guillaumont and J.W. Gunning (1997), `Redesigning Conditionality', *World Development*, vol. 25, pp. 1399-1407.

Collier, P. and J.W. Gunning (1995), `Trade Policy and Regional Integration: Implications for the Relations between Europe and Africa', *The World Economy*, vol. 18, pp. 387-410.

Cogneau, D. and J.-D. Naudet (2007), Who deserves aid ? Equality of opportunity, international aid, and poverty reduction, *World Development*, 35 (1), p. 104-120.

Collier, P. and D. Dollar (2002), Aid allocation and poverty reduction, *European Economic Review*, 46(8), 1475-1500.

Deaton, A. (2013), *The Great Escape: Health, Wealth, and the Origins of Inequality*, Princeton: Princeton University Press.

de la Croix, D. and C. Delavallade (2014), Why corrupt governments may receive more foreign aid, *Oxford Economic Papers*, 66, 51 - 66.

Devarajan, S., D. Dollar, T. Holmgren (eds.) (2000), *Aid and Reform in Africa*, Washington, DC: World Bank.

Djankov, S., Montalvo, J.G. and Reynal-Querol, M. (2009), `Aid with multiple personalities', *Journal of Comparative Economics*, vol. 37, pp. 217–229.

Dutta, N., P.T. Leeson and C.R. Williamson (2013), `The Amplification Effect: Foreign Aid's Impact on Political Institutions', *Kyklos*, vol. 66, pp. 208-228.

Dreher, A., P. Nunnenkamp and R. Thiele (2011), Are 'New' Donors Different? Comparing the Allocation of Bilateral Aid Between non DAC and DAC Donor Countries, *World Development*, 39(11), 1950-1968.

Dudley, L. and C. Montmarquette (1976), A Model of the supply of bilateral foreign aid, *American Economic Review*, 66(1), 132-142.

Easterly, W. (2006), The white man's burden: why the West's efforts to aid the rest have done so much ill and so little good, Oxford University Press.

Easterly, W. and T. Pfutze (2008), Where Does the Money Go? Best and Worst Practices in Foreign Aid, *Journal of Economic Perspectives*, 22(2), 29-52.

Easterly, W., R. Levine and D. Roodman (2004), Aid, Policies, and Growth: Comment, *American Economic Review*, 94(3), 774-780.

Frankel, J.A. (2012), `The Natural Resource Curse: A Survey of Diagnoses and Some Prescriptions', Harvard, Kennedy School, Working Paper 12-014.

Feeny, S. and M. McGillivray (2008), What determines bilateral aid allocations? Evidence from time series data, *Review of Development Economics*, 12(3), 515-529.

Fuchs, A., A. Dreher and P. Nunnenkamp (2014), Determinants of Donor Generosity: A Survey of the Aid Budget Literature, *World Development*, 56, 172–199.

Guillaumont, P. and L. Wagner (2015), Performance based allocation (PBAZ) of foreign aid: still alive? , in B. M. Arvin and B. Lew, *Handbook on the economics of foreign aid*, Edward Elgar.

Gunning, J. W. (2001), Rethinking aid, in B. Pleskovic and N. Stern (eds.), *Annual Bank Conference on Development Economics: 2000,* The World Bank, Washington DC.

Hoeffler, A. and V. Outram (2008), Need, merit or self-interest - what determines the allocation of aid? , Centre for the Study of African Economies, Working paper 2008-19, University of Oxford.

Jones, S. and F. Tarp (2015), `Does Foreign Aid Harm Political institutions?', forthcoming in the *Journal of Development Economics*.

Juselius, K., Møller, N.F. and Tarp, F. (2014), `The long-run impact of foreign aid in 36 African countries: Insights from multivariate time series analysis', *Oxford Bulletin of Economics and Statistics*, vol. 76, pp. 153–184.

Kilby, C. (2009), `The Political Economy of Conditionality: an Empirical Analysis of Wold bank Loan Disbursements', *Journal of Development Economics*, vol. 89, pp. 51-61.

Kilby, C. and Dreher, A. (2010), The impact of aid on growth revisited: Do donor motives matter?, *Economics Letters*, 107(3), pages 338-340

Knack, S. (2004), `Does foreign aid promote democracy?', *International Studies Quarterly*, vol. 48, pp. 251– 266.

Knack S. and A. Rahman (2007), Donor fragmentation and bureaucratic quality in aid recipients, *Journal of Development Economics*, 83(1), 176–197

Krueger, A.O. (1974), `The Political Economy of the Rent-Seeking Society', *American Economic Review,* vol. 64, pp. 291-303.

Kumar, A. (2015), Samaritan's Dilemma, Time-Inconsistency and Foreign Aid: A Review of theoretical models, in B. M. Arvin and B. Lew, *Handbook on the economics of foreign aid*, Edward Elgar.

Llavador, H. G., & Roemer, J. E. (2001). An equal opportunity approach to the allocation of international aid, *Journal of Development Economics*, 64(1), 147–171.

Łukasz, M. (2015), *The Impact of Aid on Total Government Expenditures*, PhD Thesis, Tinbergen Institute Amsterdam/Rotterdam.

McGillivray (2004), Descriptive and prescriptive analyses of aid allocation: approaches, issues and consequences, *International Review of Economics and Finance*, 13, 275-92.

Menard, A.-R. and L. Weill (no date), `Understanding the Link between Aid and Corruption, a Causality Analysis', mimeo, University of Strasbourg.

Moss, T., G. Pettersson and N. van de Walle (2006), `An Aid-Institutions Paradox? A Review Essay on Aid Dependency and State Building in Sub-Saharan Africa', Center for Global Development, Working Paper 74.

Moyo, D. (2009). *Dead Aid. Why aid is not working and how there is another way for Africa*, London: Allen Lane.

Okada, K. and Samreth, S. (2012), `The effect of foreign aid on corruption: a quantile regression approach', *Economic Letters*, vol. 11, pp.240-243.

Pfeiffer, C. and C. Boussalis (2015), Determining aid allocation decision-making: towards a comparative sectored approach, in B. M. Arvin and B. Lew, *Handbook on the economics of foreign aid*, Edward Elgar.

Platteau, J.-P. (2003), Decentralized development as a strategy to reduce poverty?, in *Poverty, Inequality and Growth*, Proceedings of the AFD-EUDN Conference, Agence Française de Développement, Paris, pp. 253-330.

Platteau, J.-P. (2004), `Monitoring Elite Capture in Community Driven Development', *Development and Change*, vol. 35, pp. 243-256.

Platteau, J.-P. and F. Gaspart (2003), `The Risk of Resource Misappropriation in Community-Driven Development', *World Development*, vol. 31, pp. 1687–1703.

Rajan, R. and A. Subramanian (2005), `What Undermines Aid's Impact on Growth?', NBER Working Paper 11657.

Rajan, R. and A. Subramanian (2007), `Does aid affect governance?' *American Economic Review*, vol. 97, pp. 322–327.

Rajan, R. and A. Subramanian (2008), `Aid and growth: what does the cross-country evidence really show?' *Review of Economics and Statistics*, vol. 90, pp. 643-665.

Rajan, R.G. and A. Subramanian (2011), `Aid, Dutch Disease, and Manufacturing Growth', *Journal of Development Economics*, vol. 94, pp. 106-118.

Roemer, J. (1998), *Equality of opportunity*, Harvard University Press.

Schraeder, Hook and Taylor (1998), Clarifying the foreign aid puzzle: a comparison of American, Japanese, French and Swedish Aid flows, *World Politics*, 50(2), 294-323.

Svensson, J. (2000), When is foreign aid policy credible? aid dependence and conditionality, *Journal of Development Economics*, 61 (1), 61 – 84.

Svensson, J. (2003), Why conditional aid does not work and what can be done about it?, *Journal of Development Economics*, 70(2), 381–402.

Svensson, J. (2003), `Why conditional aid does not work and what can be done about it?, *Journal of Development Economics*', vol. 70, pp. 381-402.

Torsvik, G. (2005), Foreign economic aid: should donors cooperate?*, Journal of Development Economics*, p. 503-515.

Trumbull, W. and H. Wall (1994), Estimating aid-allocation criteria with panel data, *The Economic Journal*, 104, 876-882.

van der Ploeg, F. (2011), `Natural resources: curse or blessing?', *Journal of Economic Literature*, vol. 49, pp. 366-420.

Wood, A. (2007), Looking ahead optimally in allocating aid, Working Paper Number 137, Queen Elizabeth House, University of Oxford.

World Bank (1998), *Assessing Aid: what works, what doesn't and why*, World Bank Policy Research Report.