JURNAL OF ECONOMIC DEVELOPMENT 189
Volume 28, Number 1, June 2003

# STRATEGIC INTERACTION, AID EFFECTIVENESS AND THE FORMATION OF AID POLICIES IN DONOR NATIONS

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This paper examines some of the issues associated with the aid donor process arising from the theory of agency or principal-agent models and endogenous policy determination. The principals may be viewed as legislators and the agents as the aid agency. In addition to adverse selection and moral hazard the paper considers intrinsic sources of motivation for agents and the trade-off between adverse selection and moral hazard. It also considers multiple task agents, and situations where there are many principals with divergent objectives. The principals might be better off by making the tasks more complementary and trading in their differing objectives. The paper also considers the determinants of sustaining compromise over aid policies when different political factions in donor nations have competing interests with regard to recipients or overall aid strategy.

*Keywords*: Aid Effectiveness, Political Processes, Endogenous Policy Formation
*JEL classification*: H60, O11, O12, O19

## 1. INTRODUCTION

The rationale behind the granting of aid to developing countries is complex. Strategic, humanitarian, human rights and developmental goals enter into this matrix of motivation. See Hopkins (2000) on the political economy behind the donor process. Different donors (multilateral and bilateral) have diverse and even competing reasons for giving aid. Consequently, the aid effectiveness literature is voluminous. It can range from the contribution of aid to growth (Burnside and Dollar 2000 is one example) to the rent-seeking aspects of aid in recipient countries (Svensson (2000), for instance).

This paper examines some of the issues associated with the aid donor process arising from the theory of 'agency' and endogenous policy determination. It is concerned with aid donors and not donor-recipient interaction. In a sense, the analysis is about designing good policies in donor agencies.

By the theory of agency, I refer to principal-agent interaction as exemplified by

adverse selection and moral hazard. The first arises because of information that is private to the agent, and the second is due to the non-verifiable nature of the agent's effort in carrying out his task. Endogenous policy formation refers to the explicit game-theoretic analysis of the political processes underlying equilibrium policy outcomes.

In this paper, the principal is ultimately the electorate or society at large in the donor country. In an indirect democracy, this job of determining policies is delegated to the legislature. Legislators may be viewed as intermediate principals acting as the guardians of the people. For the purposes of this paper this distinction is immaterial, except when there are several principals with differing objectives, all of who may not be legislators. The agent is the executive; specifically that part of the executive tasked to execute aid policies.[1] These differences arise not only in constitutional systems, such as in the USA, with a sharp separation of powers, but in other systems as well.

Section 2 is concerned with motivating agents in the aid agency to exercise optimal effort. In areas of government and academia, intrinsic motivation is as important as extrinsic (financial) rewards, as are inter-temporal considerations regarding future promotion and continued employment. Section 3 examines the trade-off between moral hazard and adverse selection in contract design. Reducing one problem can exacerbate the other. Section 4 is concerned with the difficulties that arise when agents have multiple tasks originating from several principals. The aid agency may be subject to scrutiny, not only from the government, but also other stakeholders such as development non-governmental organizations (NGOs). They will have varying objectives and demand different types of tasks of the agent. Alternatively, even within the legislature there may be different interests. Examples of these are the conflict between commercial and strategic interests on the one hand, and developmental concerns associated with good governance on the other hand. Section 5 goes on to demonstrate that these different tendencies represented by various principals can gain from coordinating their policies and trading off their diverging objectives. Section 6 moves on to consider the determinants of sustaining compromise over aid policies when different political factions in donor nations have competing interests with regard to recipients or overall aid strategy. Finally, Section 7 summarizes the findings of the paper.

## 2. MORAL HAZARD AND AID EFFECTIVENESS

Moral hazard is said to occur when a task undertaken by the agent requires an unverifiable effort that is costly and/or disliked by the agent. Unverifiable effort implies that even if effort can be observed, it cannot be proved in the sense of disciplinary action or other forms of intervention. But the outcome of the agent's effort in terms of the

[1] Without loss of generality, the agent in sections 2-5 of this paper could be the aid recipient.

tangible product that arises from effort is verifiable. The principal-agent literature is concerned with designing optimal contracts that minimize moral hazard, and maximize effort levels. Generally speaking, a fixed wage contract, without any outcome-based incentives, generates the most moral hazard and can drive effort levels to zero.

But in addition to financial or extrinsic motivation, there are also intrinsic factors that drive agents to exercise effort. Peer group approval, reputation and concern for future career prospects are examples of intrinsic motivation.[2] Innate ability also acts in a similar way, making effort more productive. The important point is that in academia and the public sector, intrinsic motivation may be more important. But even then, moral hazard remains relevant. In terms of aid policy, the agent's role in making aid effective in terms of outcomes such as poverty reduction, growth or demilitarization requires effort and this needs to be monitored by principals.

The model that follows is based on Holmström (1982) and Tirole (1994). Let us say that an agent's performance or output ($x$) depends on effort ($e$) and a parameter denoting intrinsic motivation and ability ($\theta$). Both $e$ and $\theta$ are unobservable and unverifiable. Total output, following Tirole (1994) can be shown to be:

$$x = \theta + e \,. \tag{1}$$

As with most of the public sector, the agent is paid a fixed wage ($w_1$). But there is a future as well and the agent may be judged by his verifiable performance ($x$) in the first period. Specifically, let his wage in the second period ($w_2$) be dependent on the expectation ($E$) of his intrinsic motivation ($\theta$) conditional on first period performance ($x$):

$$w_2(x) = E(\theta \mid x) \,. \tag{2}$$

The agent's inter-temporal utility function ($U$) will take the form:

$$U(w,e) = w_1 - g(e) + \delta w_2(\theta + e) \,, \tag{3}$$

where $g$ represents the cost of effort function and $\delta$ is a discount factor. Maximization of (3) with respect to effort, setting wage rates at unity will give us the equilibrium effort level:

$$g'(e^*) = \delta \,. \tag{4}$$

In other words, the optimal level of effort is chosen at present only if the current

[2] The novelist E M Forster when once asked why he wrote replied (*sic*): I write for the money and to earn the respect of those whom I respect.

period and the future are treated equally by the agent ($\delta = 1$). If the present is more important ($\delta < 1$), less or sub-optimal effort is exercised. Moreover, if principals or the agent's managers pay no attention to verifiable performance ($x$) as an indicator of ability ($\theta$), assuming instead a uniform average level of ability, then optimal effort levels are driven to zero. Such an outcome may be described as an unfocussed equilibrium, following Tirole (1994), but is not an outcome of Equation (3) above. The important point is that moral hazard will still be present even when we factor in intrinsic motivation. The policy challenge is to strengthen the environment for intrinsic motivation, so that greater effort becomes a sign of ability and motivation, which is well rewarded in the future.

## 3. COMBINING MORAL HAZARD AND ADVERSE SELECTION

Adverse selection occurs when the agent's type is private information to himself and not known widely, especially to the principal. The agent may be good at carrying out the task or he may be average or poor. Moral hazard refers to sub-optimal effort levels. In reality, especially in the public sector, the two can occur simultaneously. In what follows I construct, following McMillan (1992), an example of mixed moral hazard and adverse selection to demonstrate some of the trade-offs in reducing them.

Let there be two types of agents: good ($g$) and poor ($p$). The good type is better off at carrying out the task, but the principal does not know their type *a priori*. For the sake of tractability, she assigns an equal probability to the agent being of the good and poor type. Expected utility for the principal ($V$) from the task undertaken by the agent takes the form:

$$V = 0.5\left[1 + e_g - \frac{e_g^2}{2D} - n_g\right] + 0.5\left[e_p - \frac{e_p^2}{2D} - n_p\right]. \tag{5}$$

The squared (quadratic) terms refer to the costs to the agent of carrying out the task, where $D$ is part of the cost of effort. Output for the principal is related to effort, that is higher, $1 + e_g$ for the good type, and lower, $e_p$ for the inferior category of agent. Let $e_g = q_g$ and $e_p = q_p$ referring to effort/output relations. The terms $n_g = 1 + q_p$ and $n_p = 1$ refer to the incentive payments to the two types of agents. These are designed so as to make agents truthfully reveal their type, therefore the payment to the good type exceeds the compensation for the bad variety of agent, in terms of the poor type's output. Payments take on a pecuniary value and could include prospects of future employment or promotion as in the previous section. Note that the incentive payments are related to output, and the bad type of agent cannot squeeze a greater incentive payment by falsifying his type. But the good type may want to falsify his type to lower his effort level and the required output by the principal. Therefore, he has to be given an incentive,

related to his output, to make him truthfully reveal his type.

Making these appropriate substitutions into (5) and maximizing with respect to $q_g$ and $q_p$ and solving for output levels, we obtain:

$$q_g = 1 \tag{6}$$

and

$$q_p = \frac{D-1}{D} < 1 \quad . \tag{7}$$

The per unit compensation for declaring that you are good is greater than if a poor quality is indicated. But a problem of incentives in the public sector remains, as rewards are not always related to output except when the reward is intrinsic or comes in the future.[3] But even when incentives make the good type truthfully reveal his type, problems of moral hazard associated with the poor type remain. As Equation (7) shows, his incentive to exercise effort declines further in the event of greater payments to the good type.

## 4. MULTIPLE PRINCIPALS AND MULTIPLE TASKS

We have seen that when the effort by the agent is unobservable or unverifiable, there is the standard problem of moral hazard. These difficulties can be further exacerbated when there are many principals or donors dealing with the same agent or government (the common agency problem). An additional problem can arise when the agent carries out multiple tasks implying a variety of unverifiable effort levels. The presence of a multiple-task agent, as demonstrated by Holmström and Milgrom (1991), in general yields low-powered incentives to perform any one task, when the various activities of the agent are substitutes as far as the principal's interests are concerned. It might even pay the principal to forbid one or more activities that negatively impact on the principal's objectives. The Holmström and Milgrom (1991) model considers a situation where a single principal deals with an agent carrying out multiple functions.

Wilson (1989) characterizes a typical government bureaucracy as answering to many masters and stakeholders, as well as carrying out several functions simultaneously. There are many instances where several principals deal with a single agent or government agency carrying out several tasks. For example, they could all be interacting with a single government agency, which consequently has several jobs.

Following the set-up in Dixit (2001), we specify a multiple principal, multi-task

[3] Fixed wage contracts are more common in the public sector.

framework. Let the two tasks to be done be denoted by $x_1$ and $x_2$ corresponding to commissions made by principal 1 and 2, respectively. The first job might correspond to monitoring the utilization of aid for development purposes. The second task could be associated with promoting the strategic and commercial interests of the donor nation. The first principal could be an NGO. Each job entails symmetric costly effort levels, *e*. I ignore uncertain variations in the agent's efforts (the influence of luck or simply better organized effort), and intrinsic motivation.

Principal 1 derives a benefit, B for task 1 but none from job 2, and the same in reverse applies to principal 2. Both principals will need to satisfy the participation constraint of the agent. The first principal's profit function ($V_1$) takes the following form:

$$V^1 = Bx_1 - w\left[x_1 + ex_1^2 + ex_2^2 + 2kx_1x_2\right] \ . \tag{8}$$

The terms inside the square brackets indicate the costs of exerting effort by the agent, which the principal must meet in order to satisfy the agent's participation constraint. Observe the jointness of effort, because the agent must simultaneously carry out both tasks $x_1$ and $x_2$. The payment made to the agent is indicated by *w*, and the payment schedule is linear. The last term refers to how carrying out one task affects effort levels in the other. If *k* is positive, then the two tasks are substitutes: more effort in one direction implies less effort elsewhere. If *k* is negative, the two jobs are complements.

The second principal's profit function by symmetry is:

$$V^2 = Bx_2 - w\left[x_2 + ex_1^2 + ex_2^2 + 2kx_1x_2\right] \ . \tag{9}$$

Note that both principals must take into account the two types of effort exercised by the agent, even if it does not directly concern them.

Maximization of (8) with respect to $x_1$ will lead to:

$$w = \frac{B}{1 + 2x(e+k)} \ , \tag{10}$$

where $x_1 = x_2 = x$ by symmetry. An identical expression can also be obtained for principal 2. Due to the symmetry property, there will have to be some cost-sharing agreement amongst the principals, which is not modelled here.

Note the following:

a) The outcome in (10) is in a situation when effort is unverifiable, but output can be observed. Incentive payments to the agent decline (or are less high-powered) if the

two tasks conducted by the agent are substitutes, as efforts in one direction detract from the other function. This is not the case if the jobs are complements.

b) Incentive payments related to effort and output to the agent increase if the principals act together in a cooperative or collusive manner. Thus, incentives to the agent to exert optimal effort become stronger. This can be demonstrated by summing (8) and (9) and then jointly maximizing for $x$. In the resultant expression for $w$ in (10), the term 2 will vanish. Thus

$$w = \frac{B}{1 + x(e + k)} \quad .$$

c) Equation (10) states that incentive payments to a multi-task agent decline as the number of principals, stakeholders or masters increases, as the magnitude of the term 2 in the denominator of (10) rises with the number of principals.

There are at least two clear policy implications here. One is that principals should try to make the various efforts that they jointly require of the agency more 'complementary'. In other words, they should go together. The second is that principals should cooperate more with one another. We examine this in the next section.

## 5. ADVERSE SELECTION AND COMMON AGENCY

Here, once again, we have several principals dealing with the same agent, the common agency problem. The agent's innate type is unknown to the principals, and therefore there is the potential for adverse selection. Consider, for example, two types of principals or legislators deciding on the allocation and amount of aid. One group (type 1) is more concerned about the use of aid for development, poverty reduction and good governance. The other set (type 2) is less motivated by the recipient's developmental considerations and more by strategic and trade promotion considerations.[4] The agent is the overseas development agency, whose type is uncertain, with the first type being more efficient than the second variety. Following Murshed and Sen (1995), I will demonstrate that principals can be better off coordinating their objectives at an earlier stage of dealings with the agent.

[4] Recently in the UK there has been some disagreement within the cabinet about the use of aid to Tanzania for the purchase of air traffic control equipment. At least one cabinet member (Clare Short) felt that this aid could have been used for better purposes. She is like the type 1 principal. Another group of cabinet members was more swayed by strategic considerations and the interests of British companies, and are more like type 2 principals.

Both the principals and the agent posses information private to themselves. Let $\alpha^i$ denote the principal where $i = 1, 2$ similarly let $\beta_j$, where $j = 1, 2$ denote the agent. Let $p^1$ and $p^2$ denote the probability of the principal being of type 1 and 2, respectively ($p^1 + p^2 = 1$). Let $\pi_1$, and $\pi_2$ indicate the probability of the type of agent being of type 1 and 2 respectively, $\pi_1 + \pi_2 = 1$.[5] $V$ stands for the utility of the principal.

$$V = V(A, G, \alpha), \tag{11}$$

where $G$ stands for the pecuniary value of the activities of the agent, promoting good governance in aid-recipient nations. $A$ stands for the transfer made by the principal to the agent - the aid budget. The principal's utility is increasing in $G$, she feels better because aid money is being properly used, and decreasing in $A$. Let $U$ indicate the utility of the agent:

$$U = U(A, G, \beta). \tag{12}$$

The agent's utility is increasing in $A$ and decreasing in $G$, because promoting good governance is costly in terms of effort. Utility is also decreasing in the type of the agent, i.e., the type 1 agent derives higher utility for all values of $A$ and $G$. One could therefore say that the type 1 agent is the 'better' type. The type 2 agent can be described as the worse type as he would require a higher level of $A$ and lower $G$ to obtain the same utility levels as the type 1 agent.

The principal-agent relationship follows a three-stage game. In the first stage the principal proposes a contract or an aid package with transfers and conditionality about monitoring governance. In our model the principal, too, has private information about her type. She can make an announcement about her type 1 in stage 1, either explicitly, or implicitly via the type of contract she proposes. In the second stage of the game the agent either accepts or rejects the proposed contract. If he accepts, the game proceeds to the third stage where the contract is executed; there is revelation of the type of the agent and principal (if not already known in stage 1); and the various payoffs $A$ and $G$ to the agent and principal materialize. The parties may choose a set of messages corresponding to strategies which, in turn, reflect a combination of $A$, $G$, at the various stages of the game. These strategies, or messages, will be Bayesian perfect - they maximize expected utility given beliefs about the other party's type. Beliefs (priors) are updated using Bayes' rule. The principal updates her prior about the agent at the end of the second stage, after the agent has accepted the contract. The agent updates his beliefs about the principal at the end of the first stage after the contract has been proposed.

The agent's decision to accept or reject the contract in stage 2 will depend upon

[5] Superscripts refer to the principal and subscripts to the agent.

whether his reservation utility has been met by the proposal - the familiar individual rationality (IR) contract. Since the type 2 agent derives less utility from every combination of *A* and *G*, it is his IR constraint which is binding:

$$U_2(A_2^i, G_2^i) \geq u \ , \tag{13}$$

where *u* is the reservation utility of the type 2 agent.

In the third (pay-off) stage of the game the principal pays out *A* and receives *G* from the agent. The type 1 agent gives more *G* for every level of *A*. The type 1 agent has to be given the correct incentives to truthfully reveal his type - the incentive compatibility (IC) constraint. This means his utility from telling the truth must be at least as high as from falsifying his type:

$$U_1(A_1^i, G_1^i) \geq U_1(A_2^i, G_2^i) \ . \tag{14}$$

The IC constraint of the type 2 agent will not be binding in the solution to our problem, as the type 2 agent derives no benefit from falsifying his type which would result in his receiving a lower net transfer. The principal in proposing the contract will guarantee her minimum reservation utility (IR constraint).

The full informational problem for the principal in stage 2 of the game is to maximize (for the type 1 principal, say)

$$\pi_1 V^1(A_1^1, G_1^1, r^1, c^1) + \pi_2 V^1(A_2^1, G_2^1, r^1, c^1)$$

$$s.t. \ \lambda^1\left[U_2^1(A_2^1, G_2^1) \geq u\right]$$

$$\text{and} \ \ \mu^1\left[U_1^1(A_1^1, G_1^1) \geq U_1^1(A_2^1, G_2^1)\right] . \tag{15}$$

$\lambda$ and $\mu$ are the Lagrange multipliers associated with the agent's IR and IC constraint respectively; *r* and *c* represent slack to (or the violation) of the IR and IC constraints respectively from which principals derive utility.

In the solution to the above full informational problem, the principal has revealed her type in stage 1; the agent knows the principal's type with probability 1. The implication of this is that the agent's IR and IC constraints have to bind for each principal (1 and 2) individually and they cannot trade *r* and *c*. There is a separating equilibrium for each type of principal. But (15) above suggests gains in utility to principals from violating constraints, which means gains from trade in constraints. For example if:

$$\lambda^1 / \mu^1 > \lambda^2 / \mu^2 \ .$$

$\lambda^{1,2}$ and $\mu^{1,2}$ can be viewed as the shadow prices of $r$ and $c$. This means that principal 1 would gain greater utility from more slack on the IR constraint ($r$) in exchange for less slack on the IC constraint ($c$); the opposite is true for principal 2. The implied trade and gains from it cannot take place with full information, as for each principal the constraints on IR and IC of the agent are fully binding and no violations or slack are allowed on these constraints.

If principals postpone the revelation of their type to the last stage of the game, they could gain from trading in IR and IC of the agents. To do this, they must pool their offer at the proposal stage, coordinate their proposals and in effect make a joint offer. Then the agent does not know their type for certain, has only priors with regard to their type. The upshot of this is that the IR and IC constraints of agent 2 and 1 respectively need hold in expectation and not individually for each principal. One principal can violate one constraint and the other another constraint subject to the condition that they hold in aggregate. Note that as we have only two principals, one principal's violation of a constraint has to be fully matched by the other. Principal 1, for example, maximizes:

$$\pi_1 V^1(A_1, G_1, r^1, c^1) + \pi_2 V^1(A_2, G_2, r^1, c^1),$$

$$s.t.\ \lambda^1\left[U_2(A_2, G) \geq u - r^1\right]$$

$$\text{and}\quad \mu^1\left[(U_1(A_1, G_1) \geq U_1(A_2, G_2) - c^1\right], \tag{16}$$

for prior, $p^1$ on the part of the agent.

Trade in slack on the constraints is possible if (13) and (14) become:

$$\sum_{i=1}^{2} \overline{p}^i\, U_2(A_2^i, G_2^i) \geq u - \sum_{i=1}^{2} \overline{p}^i\, r^i \tag{17}$$

$$\text{and}\quad \sum_{i=1}^{2} \overline{p}^i\, U_1(A_1^i, G_1^i) \geq \sum_{i=1}^{2} \overline{p}^i\, U_1(A_2^i, G) - \sum_{i=1}^{2} \overline{p}^i\, c^i\ . \tag{18}$$

Equations (17) and (18) imply that the constraints must hold only in expectation, where $p$ is the agent's prior about the principal's type. One principal can violate a constraint as long as they hold in aggregate. After solving (16) the principal will maximize an indirect utility function, $Z$

$$Z^i(r^i, c^i)\ \ s.t.\ \lambda\, r^i + \mu\, c^i\ \leq\ 0 \tag{19}$$

implying:

$$\frac{\partial Z^i / \partial r^i}{\partial Z^i / \partial c^i} = \frac{\lambda}{\mu}. \tag{20}$$

Let us return to the case where principal 1 found the IR constraint more costly than principal 2, for her $\lambda^1 / \mu^1 > \lambda^2 / \mu^2$, she wants to give up slack on the IC constraint for more slack on the IR constraint:

$$r^1 = u - U_2(A_2, G_2)$$

$$\text{and} \quad c^1 = U_1(A_2, G_2) - U_1(A_1, G_1) \ . \tag{21}$$

Principal 1 wants more $r^1$ in return for less $c^1$, and the converse is true for principal 2. It means that she would like to give the agent, if he is type 2, less than his reservation utility implying she dislikes type 2. She is also prepared to give the agent, if he is type 1, more utility than warranted by his incentive compatibility constraint. She has a preference for the type 1 agent and is more like the group of principals or legislators more deeply concerned about development and good governance. The other principal is the opposite implying that principal 2 is more concerned with national or strategic interests. By pooling their initial offer, the principals can jointly, instead of individually, satisfy the agent's two constraints. Following Maskin and Tirole (1990), it can be demonstrated that there is a competitive equilibrium in the above case of trades in *r* and *c*, derived from (17) and (18). This competitive equilibrium is also Pareto optimal and dominates the full informational outcome from (15) where, of course, trade in *r* and *c* is impossible. In this model, therefore, the principals are better off without making the agent worse off, provided there is donor cooperation.

## 6. SUSTAINING COMPROMISE OVER AID POLICIES

In this section I focus on the alternative and competing aid policies that may be pursued by different groups with respect to their favoured client groups or recipients. Lahiri and Raimondos-Møller (2000) present a model of aid allocation amongst recipient countries, where relatively more affluent developing countries (such as Israel) might gain at the expense of more deserving poorer nations, due to the lobbying activities of their national diasporas resident in donor countries. In this section I model the rivalry between two such groups reflected by the competition between alternative political parties, who also have competing aid policies. For example, conservative parties favour strategic allies and potential trade partners as aid recipients, socialists may prefer the truly poor.

The simple model that follows is based on Dixit (2001), and is concerned with sustaining, rather than designing, compromise. For the sake of tractability, let there only

be two groups labelled, *A* and *B*. If *A* is currently in power, it presumes that it will stay in power with probability γ in the next period, and be out of power with probability $1-\gamma$. A similar line of reasoning applies to group *B*, if it is in power. The aid policy that any side can direct towards their favoured recipient is 1 when in office, and 0 in opposition, corresponding to an all or nothing scenario. Therefore, the value (V) of power to group *A* in power (P) and opposition (O) is:

$$V_P^A = U^A(1) + \delta^A\left[\gamma^A V_P^A + (1-\gamma^A)V_O^A\right] ,$$

$$V_O^A = U^A(0) + \delta^A\left[\gamma^B V_O^A + (1-\gamma^B)V_P^A\right] . \qquad (22)$$

In (22) above the first line above refers to the value of being in office, and the second line to the value of opposition when *B* is in power. The parameter $\delta$ refers to the discount rate, utility is denoted by *U*. Observe that the second or last term on the right hand side of both lines in (22) refers to the discounted value of expected utility in the next period. Solving for $V_p^A$:

$$V_P^A = \frac{(1-\delta^A\gamma^B)U^A(1) + \delta^A(1-\gamma^A)U^A(0)}{(1-\delta^A)[1-\delta^A(\gamma^A+\gamma^B-1)]} \quad . \qquad (23)$$

A similar expression can be derived for group *B*. Now let us say that a compromise is successfully designed whereby, for the sake of argument, each side obtains an equal share of the fruits of office, whether in power or not. It amounts to an agreement to make side payments to whoever is in opposition. Proportional arrangements other than half-and-half can be thought of as well. In that case (23) above reduces to:

$$V_S^A = \frac{U^A(1/2)}{1-\delta^A}, \ as \ \ \gamma^A = \gamma^B = 1/2 \ V \text{ in (23).} \qquad (24)$$

For the agreement to be sustainable, that is to prevent any side from reneging on the agreement when in power and grabbing everything for itself, it needs to be self-enforcing. This occurs if (from comparing Equations (24) and (23)):

$V_S^A \geq V_P^A$, or

$$\frac{\delta^A(1-\gamma^A)}{1-\delta^A\gamma^B} \geq \frac{U^A(1)-U^A(1/2)}{U^A(1/2)-U^A(0)} \quad . \qquad (25)$$

Similar expressions can be derived for group *B*. The agreement is likely to be self-enforcing when: (i) the greater is the patience of both sides represented by high

values of the discount factor (low discount rate); (ii) the higher is risk aversion or dislike of variations in policy (this will make the right-hand side of the inequality in Equation (25) smaller); and, (iii) the more even are the probabilities of acquiring power by either side. This means that both groups should be far sighted, neither party should be excessively reckless about favouring their favourites while in power, and, no party should feel it has a much greater chance of retaining power in the future period compared to the other. The compromise or power sharing agreement is much more likely to be sustainable in a democracy.

## 7. SUMMARY

7.1. In motivating agents to exercise effort, attention needs to be focussed on intrinsic motivation as well as extrinsic financial payments. Outcomes will improve when effort is a signal of the agent's ability and motivation. This means that the principal has to be seen to take the agent's effort into account.

7.2. The public sector is notorious for fixed wage contracts leading to minimal effort levels by the agent. When the agent's type or quality is in doubt (adverse selection), incentive payments may be designed to make the agent reveal his true type. But even then a problem remains, as the inferior type agent will reduce effort, exacerbating moral hazard. This trade-off between moral hazard and adverse selection needs to be borne in mind even in principal-agent relationships involving legislature-aid agency relations.

7.3. Supposing the aid agency has to deal with several masters (principals), such as NGOs on the one hand, and the strategic interests of the donor country represented by the foreign ministry on the other hand, we will then have several principals or stakeholders and a single agent with multiple tasks. Principals are better off designing the agent's various efforts so as to make them more complementary rather than competing. This will ensure more effort from the agent. But it requires principals to cooperate or collude among themselves. Effort levels will also improve when there are fewer principals exerting pressure on the agent.

7.4. When a variety of principals with divergent interests interact with the same agent, they are not only better off colluding with each other, but pooling their influence on the agent at the initial stage of the principal-agent relationship. In a sense they will be trading in their concerns. Examples of varying objectives include the dilemmas posed by strategic and commercial interests on the one hand, and developmental concerns on the other hand. Certain principals will be more interested in the former, and others (including NGOs) in the latter.

7.5. When aid policy is strongly disputed by political parties, a compromise between these two competing objectives is sustainable when: the greater is the patience of both sides represented by high values of the discount factor; the higher is risk aversion or dislike of variations in policy; and, the more even are the probabilities of acquiring power by either side.

In conclusion, whether or not the granting of aid is motivated by foreign policy considerations or a concern for common humanity, there are worries about the optimal pursuit of the chosen policies by those tasked to carry them out. In many instances, it might be better to delegate the authority for carrying out aid policy management to international organizations rather than depend on national bodies. This certainly strengthens the case for a common pool approach to the funding of, and access to, development assistance. When aid is drawn from a common pool administered by an international agency, both policy ownership in developing countries and the transparency of the actual purpose of development assistance are strengthened.

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