

	1960	1970	1980	1990	2000
Low & middle income	535	725	999	1129	1356
Least developed countries (UN classification)	n.a.	n.a.	n.a.	264	293
East Asia & Pacific	194	256	396	705	1252
South Asia	186	221	236	332	456
Latin America & Caribbean	1983	2549	3548	3275	3856
Sub-Saharan Africa	473	609	658	587	564

Source: World Development Indicators (2002), World Bank.

There is a considerable body of literature stressing the importance of institutions and the governance structure in promoting economic development. For example, two countries may have similar endowments of labour, physical and human capital. But in one country a flawed system of governance and an incomplete set of institutions or the paucity of social infrastructure might make these factors of production less productive. A good governance structure implies minimal corruption and wasteful rent-seeking, along with efficient regulation. According to Hall and Jones (1999) these institutions prevent the diversion of the output of an economy into wasteful activities. See also Murphy, Shleifer and Vishny (1991, 1993). For example, if an entrepreneur has to pay a lot of bribes to establish production it adds to fixed costs and lowers the profitability of investment. Similarly, seeking bribes is a wasteful rent-seeking activity, constituting a diversion of output and productive resources. Corrupt regulators defeat the purpose of regulation. The inability, by government, to credibly pre-commit to a policy regime can deter investment. Thus, a nation's institutional capital stock includes mechanisms that facilitate economic transactions and enforce contracts such as an accounting system, and a legal system where disputes regarding contractual obligations can be settled.

Furthermore, a newer literature emphasises that economic outcomes depend upon the institutional setting. Geographical location, endowments and economic policy impact on the economy via its institutional and governance superstructure (see Easterly and Levine, 2003 for example). Specifically policy changes, including the adoption of superior and more sensible policies, will not work unless there are good institutions of governance in place. In other words, it is insufficient to adopt a good policy without first altering the institutional setting in which the new policy will be implemented.

The importance of institutions, traditionally neglected in mainstream economic theory, was originally emphasised in the seminal work of North (1990):

the growth of economies has occurred within the institutional framework of well-developed coercive policies', --economic history is overwhelmingly a story of economies that failed to produce a set of economic rules of the game that induce sustained economic growth. [North, 1990, pp14, 98].

Then there is the notion of transaction-cost politics (Dixit, 2001 and 1996). This view emphasises that all economic policy made by the state is an endogenous-equilibrium outcome of a political process. This political process is related to the nation's institutional superstructure. More importantly, the institutional framework and the political system generate "costs" in the sense of the difficulties of arriving at, and then sustaining, optimal economic policies. This is mainly due to opportunistic behaviour, the danger of not honouring commitments and defecting from agreements. The political system is inherently opportunistic, and much more so than markets. Even the most well functioning political systems in "successful" countries have a costly and intricate system of checks and balances; something that would be unnecessary in the absence of opportunistic acts of defection.

Institutional design and reform has to be a major priority in the development policy agenda. In a less complicated world, one that is not as impersonal as ours, and in the absence of globalisation and industrialisation, institutional design and political processes need not have merited so much of our attention. As Platteau (1994) has indicated, in smaller, technologically less advanced and rural societies compliance with the rules of the game is built upon the bed-rock of "generalised morality" and is very much part of a social fabric where individuals closely monitor each other. This is no longer possible in more urban and industrialised situations, and in the context of greater integration with world markets.

Consequently institutions do matter, as far as the formulation and operation of economic policy is concerned. Institutional design and reform is at two levels, as pointed out by Dixit (2001). The first level concerns the construction of the *constitution*: the very rules of the game. This idea, among economists, is due originally to the work of Buchanan (1987, for example) and is closely related to the manner in which policies are formulated. Of course, constitutional design cannot take into account all future eventualities, but can consider and address foreseeable problems. At the second level, we have to consider the operation of the rules of the game, issues of governance. Here a variety of the familiar problems of agency associated with asymmetrical information (adverse selection and moral hazard arise). It is worth bearing in mind that interventions that alter the rules of the game are called deep interventions, and policies geared to manipulating the existing rules are described as shallow, Dixit (2001). In this paper I shall be concerned with first set of issues related to the design of the rules of the game.^[1]

This paper addresses the issues of commitment, compromise and rent-seeking, all of which are relevant to institutional design and the formulation of optimal policies. This also applies to regulatory capacity of privatised utilities and industries, an important aspect of good governance. The models that follow are within the genre of endogenous policy formation, transaction-cost politics, and models of rent-seeking. In section 2, I address the difficulties of credibly committing to optimal policies that involve no rent-seeking by individuals associated with the state, given their temptation to do so, and the general expectation that individuals associated with the government are rent-seeking. Here reputation matters, following on from the seminal work on commitment in monetary policy (Barro and Gordon, 1983).

Section 3 constructs a rent-seeking game in the form of a contest between different individuals striving to obtain a non-divisible prize. Engaging in this contest entails a cost, which in aggregate detracts from economic production and the best use of entrepreneurial talent. Section 4 examines the sustainability of a political compromise between competing groups; one that is aimed at reducing rent-seeking. Finally, section 5 concludes with some policy recommendations.

2 CREDIBILITY, REPUTATION AND COMMITMENT^[2]

The basic set up of the model involves two sides whom we refer to as government and the “public”. By the government we mean the group that is in power. The government is able to conduct a set of policies, w , that implies rent-seeking income for itself and the associated political group. By public, I refer to the general population who does not benefit from political patronage. They derive no benefit from this vector of policies, w . Consider the utility function of the government (U^G) :

$$U^G = -(1/2)c_1 w^2 + \theta c_2 (w - w^e) \quad (1)$$

The first term on the right-hand side of equation (1) is the direct cost of rent-seeking activities by the government, drawn from a vector of policies or activities, w , in quadratic form, and c_1 is the parameter measuring this direct cost. The second term on the right hand side of (1) indicates the gains to the government from renegeing on an announced set of policies, or the benefit from a policy “surprise”, where the level of the actual policy vector (w) exceeds the level *expected* in advance (w^e).^[3] The parameter c_2 captures the magnitude of this effect, the higher is c_2 the greater is the gain from feigning to stick to “ w ” first and renegeing later. It may also be viewed as a subjective measure of the government party’s *greed*. In addition to this the greater the abundance of lootable resources, or rents to be extracted, the higher is the gain from this surprise. This is measured by the parameter θ , which could captures the rent from contestable natural resource rents, say.

As far as the gains from the policy surprises are concerned, it is part of a process of income generation for the government (y^G) described as:

$$y^G = y^N + \theta (w - w^e) \quad (2)$$

Here the income of government is equal to some fixed or natural rate (y^N) plus an additional component arising from policy surprises. The process described in (2) is similar to the Lucas aggregate supply relationship. The income associated with the natural rate is guaranteed and received with certainty. In contrast, the gains from the surprise element are based upon driving a wedge between actual and expected

levels of the rent-seeking policy vector, w . It also means that if y^G is to be augmented above the natural rate, it has to come via surprises. Hence, only the second term in the right hand side of (2) is incorporated in (1)

The government maximises its utility in (1) subject to w , which leads to:

$$w = \theta c_2 / c_1$$

(3)

This result can be interpreted in the following manner: the equilibrium choice of w is greater the higher is the element of pure avarice, c_2 , the greater the availability of rents from rent-seeking activities, θ , and the smaller the direct cost of renegeing, c_1 .

As far as the public (P) is concerned, a simple version of their utility function could look like:

$$U^P = -(w - w^e)^2 \quad \forall w \geq w^e$$

$$and = (w - w^e)^2 \quad \forall w < w^e$$

(4)

The public's utility is declining in surprise w , when actual w is greater than expected; however, it is the opposite when actual levels of w fall strictly below expectations. We will focus attention on cases applicable to the former, as the second line pertaining to instances where the actual levels of w are below expectations (pleasant surprises) are largely irrelevant. Maximising (4) with respect to w^e yields:

$$w = w^e$$

(5)

The public reacts at the same time as the government. Substituting (3) into (1) for the government, and (5) in to (4) for the public gives us:

$$U^G = -(\theta c_2)^2 / 2c_1$$

$$U^P = 0$$

(6)

This is the outcome when the government has an incentive to renege on an announcement of $w = 0$, but it does not have a first mover advantage. Both announcements by the government and expectations formation by the public take place simultaneously. With $w = 0$:

$$U^G_P = 0$$

$$U^P_P = 0$$

(7)

This is the Pareto optimal outcome and superior to the result in (6). In the socially optimal state there is no rent-seeking, and $y^G = y^N$.

Now if we assume that the government enjoy a first mover advantage and can announce $w = 0$, and then engage in surprise rent-seeking (w). In this case the actual and expected levels of w would diverge, $w = \theta c_2 / c_1$ and $w^e = 0$ in equation (1). This involves cheating on a pre-announced commitment:

$$U^G_c = (\theta c_2)^2 / 2c_1$$

(8)

Note that the government' utility is greater in this case than under (6).

At this juncture we introduce reputation. Following Barro and Gordon (1983) the reputation of the government is all or nothing, and it hinges on its behaviour in the past. Consider the following rule. The public believes the announcement if the government' acted honestly in the previous period and kept its commitments. Otherwise it is not believed, and its actions are predicted to be that of a rogue group. This implies that there exists a future cost of cheating. The cost is equal to the loss of reputation and the inability to create surprises, but in the future. This cost (C) is:

$$C = -((\theta c_2)^2 / 2c_1)$$

(9)

Hence the penalty for cheating which is the loss of reputation appears to exactly equal the gain from cheating in (8). But the punishment comes in some future period. If the government group discounts this *future* loss, the cost of cheating is always less than the gain from renegeing on a fixed commitment. Typically in many low-income developing countries the future is heavily discounted. The upshot is that the socially optimal policy of zero rent-seeking ($w = 0$) is *time inconsistent* or incentive incompatible, and thus will not be a possible outcome. The optimal policy of no rent-seeking is infeasible, as it is not consistent with the incentives and expectations of the parties to the game. More particularly, the public knows it is in the interests of the government to renege on a pre-announced policy of $w = 0$, and thus will not find any zero rent-seeking commitment credible. Even groups with the best intentions in the world may be unable to convince the world at large about its good intentions.

Furthermore, there will be a range of possible rent-seeking intensities that are feasible equilibrium outcomes. Thus multiple equilibria are possible. The results are depicted in figure 1 in y^G and w space. The upward sloping linear aggregate supply curve has a slope exactly equal to θ , from equation (2), and is steeper the greater the availability of largesse. The government's preferences are shown by the concave indifference curves with a slope = $\theta c_2 / c_1$, obtained from (1). The greedier the government party (the greater is θc_2), the steeper is the indifference curve. The government could announce zero rent-seeking at point A. It could then cheat on its

commitment and try to move to point B. The aggregate supply curve schedule would shift leftwards because of the process of expectations formation. The vertical distance between B and C gives the range of multiple equilibria depending on the time horizon of the game and the discount rate used to obtain the present value of future reputation losses. The point B defines the lowest feasible level of rent-seeking. Following Barro and Gordon (1983), it is described as the *best enforceable outcome*, given the objectives of the government and the expectations of the public. To reiterate, a zero rent-seeking equilibrium (point A) is simply not incentive compatible for the government, or credible to the public.

An increase in the returns to rent-seeking, θ , shifts the aggregate supply function leftwards and makes the indifference curves steeper pointing to an expansion in the range of rent-seeking.

We now move on to policies to reduce rent-seeking behaviour. Consider a reformulated version of the government utility function, where we embed an additional cost component associated with an implicit or explicit constitutional restraint:

$$U^G = -(1/2)c_1 w^2 + \theta c_2 (A)(w - w^e) - c_3 (S)(w - w^e) \quad (10)$$

Aid (A) may be utilised by a foreign power to reduce greedy attitudes, c_2 . The indifference curve in figure 1 will flatten out, and lower equilibrium ranges of rent-seeking will emerge. The last term in (10) represents a *commitment technology* or *delegation*, and c_3 measures the costs of renegeing on this commitment as a function of sanctions (S) imposed through an effective constitutional restraint.

Maximising (10) with respect to w yields:

$$w = (\theta c_2 - c_3) / c_1 \quad (11)$$

This leads to a lower level of rent-seeking (w) when compared to (3). There is a direct effect of the constitutional sanctions, or the commitment technology, c_3 . This may be described as a deep policy intervention as it fundamentally alters the political system or constitution (see, Dixit, 2001). Then we have the indirect effects emanating from the manipulation of the behaviour of the government via aid, a more shallow intervention. It is shallow because it is conducted within the framework of the existing political system; within given constraints, aimed at improving the efficiency and enforceability of the existing policy mechanisms.

A corollary of the above result is that the temptation to engage in w could even be completely eliminated ($w = 0$) if the “largesse”, θ , is redistributed to become part of the natural rate of output in (2). Then the gains from capture and surprise w will vanish in government utility functions, as $\theta = 0$. It also means the policy innovations in (10) become unnecessary, especially the last term ($c_3 = 0$). Such a redistribution of θ is more likely to be possible in cases where resource rents are more diffuse (agricultural wealth), rather than point-sourced like diamonds or oil

(see Addison, Le Billon and Murshed, 2002; Murshed, 2003b). Egalitarian and pro-poor economic strategies might succeed in reducing corruption and rent-seeking. But this statement has to be accompanied with a *caveat*; rent-seeking is motivated both by greed and necessity, in the general societal context of low incomes. Consequently, redistribution without growth that brings about a modest level of prosperity is no panacea against rent-seeking.

We now extend the period of analysis to involve more than a single time period. The reputation associated with the government may not be (0, 1), but something that evolves. Perceptions about reputation will be inherited from the past and updated using Bayes' rule. We now have two types of government. There will be honest (H) and dishonest (D) types, where the former is more dependable in keeping its commitments. A central finding will be that even dishonest groups, operating over a multi-period time horizon, may not renege on agreements at early stages of the game so as to leave their reputation intact for manipulation at later stages. This is similar to Backus and Driffill (1985) result in the context of inflation control. But unlike in that model the discount rate, or the impatience to consume at present, could act against future reputational considerations. A common objective function for both government types can take the following form:

$$U^{H,D} = -(1/2)c_1 w^2 + \theta c_2 (w - w^e) + \delta [-(1/2)c_1 w^2 + \theta c_2 (w - w^e)] \quad (12)$$

Here we have extended the single period utility in (1) to two periods applying a discount factor, δ to weight the future period. We do not include the policy extensions considered in (10) to avoid algebraic complexity. Note that the discount factor, $\delta = (1/1 + r)$, where r is an indicator of time preference. Thus the higher the discount factor the lower is the rate of discount. In other words, a higher value of δ implies a greater concern for the future. Observe that we have reduced a multi-period game to a two-period problem.

It is instructive to examine decision making by the two types in the final period of analysis. A dishonest (D) type group in the second and final period of the game will simply choose the level of surprise w indicated by (3) in the previous section. This is because no discounting is involved in the last period, and the second term on the right hand side of (12) vanishes with $\delta = 0$.

The honest-type maximises utility (first-term on the right hand side of equation 12) with respect to two constraints (see Cukierman, 2000). The first is a dependability constraint; the honest type wants to appear to be true to its word:

$$w^H(2) = w^A(2) \quad (13)$$

where the superscript H stands for the dependable or honest type, H's announcements or offers are indicated by the superscript A, while the 2 in parenthesis indicates the second period. This constraint states that actual outcome equals the announcement.

The other constraint concerns the public's beliefs about the type of government group. The public will assign a probability, γ that the other side is the honest type and a probability $1 - \gamma$, that it is the dishonest type. Its expectation (indicated by the superscript e) of the level of rent-seeking in period 2 will be a linear combination of the two strategies weighted by the corresponding probabilities:

$$w^e(2) = \gamma(2)w^A(2) + (1 - \gamma(2))[\theta_2 / c_1] \quad (14)$$

Substituting (14) in (12), using (13), $\delta = 0$, maximising with respect to w^H , yields:

$$w^H(2) = w^A(2) = (1 - \gamma(2))[\theta_2 / c_1] \quad (15)$$

Note that the level of rent-seeking picked by the H-type in (15) is lower than that chosen by the D-type in (3). Observe, however, that even the "better" type of group engenders rent-seeking, as it is also non-altruistic. Knowing the group to be non-altruistic, the public will not regard over-optimistic levels of honesty as a credible offer even from an honest type of group. Levels of w chosen in (15) vary proportionately with the poorness of equilibrium reputation, $(1 - \gamma(2))$. The result in (15) is akin to classic adverse selection problems in insurance markets, where the high risk type exerts a negative externality on the pooled (non-separated) contract offered to both the high and low risk categories (Rothschild and Stiglitz, 1976). Uncertainty about the type of government leads to positive equilibrium levels of rent-seeking even from the more honest or better type of government group. This can be seen from (15), if $\gamma(2) = 1$, $w^H(2) = w^A(2) = 0$.

If there was full separation of the two types of government, implying no uncertainty about the H or D-type, then $\gamma(2) = 1$ or 0. Otherwise in the presence of uncertainty, the public will use Bayes' law to update its prior beliefs about the government-type. See Cukierman (2000) for an exposition on how Bayes' law operates.^[4] In this case, in period 2, we will have:

$$\gamma(2) = \frac{\gamma(1)}{\gamma(1) + (1 - \gamma(1))p_1} \quad (16)$$

This is the equilibrium value of the probability of the government being of the honest type in the second and final period of the game. It therefore captures reputational equilibrium. It also states that reputation in the second period is higher the greater it was in the first period and the lower is the probability of type D pretending to be H (p_1). Intuitively, this means a degree of path dependence or hysteresis. Thus some groups might wish to invest in a very good reputation in the initial period. This would lower their income drastically. Point D in figure 1 would illustrate such an outcome.

The higher is δ , the discount factor, the more important is the future, and less rent-seeking is chosen by both types of government. When the discount factor is low implying heavy discounting of the future even an honest government will engage in high levels of rent-seeking and corruption in the current period. In low-income

countries where poverty is endemic, the future will be heavily discounted. Moreover, the political group associated with the government may be even more impatient to consume and gather up largesse while in power than the average citizen. These factors will make the policy interventions associated with (10) above, particularly the shallow ones, more difficult to implement.

3 RENT SEEKING CONTESTS^[5]

In this section we consider a model of socially wasteful rent-seeking contests. The competitive game of rent-seeking considered below stems from the work of Tullock (1967). In this framework, several (or a few) agents compete for rents that originate from some source, say the right to a privatised monopoly franchise. These agents may, or may not, be associated with the government of the day. The competition for these rents entail a cost, be that bribery, lobbying expenditure and so on. In turn, these expenditures, aimed at capturing rents, are wasteful and lead to the dissipation of productive capital and entrepreneurial talent. Let P represent the prize that each rent-seeking agent is attempting to seize, say the monopoly rents of running a privatised utility. This prize is non-divisible amongst various agents. Each agent's probability of success will depend on his rent-seeking expenditure relative to all others. The expected utility (E) of an agent (i) in a symmetrical setting will take the form:

$$E_i = \gamma_i P - c_i \quad (17)$$

gamma is the probability of winning and c represents lobbying costs or expenditures.

$$\gamma_i(c_i, c_j, s) = \frac{c_i^s}{c_i^s + c_j^s}; i = 1, 2; j \neq i \quad (18)$$

In this example there are 2 agents, $i = 1, 2$. The parameter s represents the "efficiency" of lobbying expenditure or bribery, if $s > 1$, there is increasing returns to scale in such expenditure. Substituting (18) into (17) and maximising with respect to c_i we find :

$$c_i = \frac{sP}{4}; i = 1, 2. \quad (19)$$

Equation (19) gives us the Cournot-Nash equilibrium level of lobbying spending by each agent. The substitution of (19) into (17) will yield the following level of expected utility:

$$E_i = \frac{P}{2} - \frac{sP}{4} \quad (20)$$

The above expression becomes negative if $s > 2$. If this is so, it will lead to an even more socially wasteful war of attrition game, where the object is to make one's

opponents exit the rent-seeking game. The opponent's presence in this type of game yields a negative expected utility.

But the important point is that with increasing returns to rent-seeking expenditure outlay there is an excess of socially wasteful non-productive expenditure. It is not only wasteful, but leads to regulatory failure and ultimately detracts from production and productivity in the real economy. Eventually, it could contribute to growth failures as the productivity of capital declines, and also because talent is diverted towards rent-seeking rather than production (Murshed, 2003b).

Rent-seeking expenditure may be greater in some circumstances, such as in economies endowed with point source mineral wealth such as oil or with a vast amount of enterprises to privatise. In these circumstances the polity may be more predatory and oligarchic, as there is more to fight over and contest. In other situations, where natural resource revenues are more diffuse, the prize (P) in (17)-(20) could be considerably smaller (say P/n , the population being given by n). Also, in societies where many agents enter the rent-seeking contest, the benefit to each of lobbying expenditure is smaller. [6]

Increasing returns to rent-seeking outlays will be more likely to emerge in the context of soft laws and regulation that are honoured more in the breach than in the keeping (see Murphy, Shleifer and Vishny, 1993). Hence the institutional framework matters. If institutional reform and constitutional re-design improved governance, then the parameter s in (17-20) above would become less than unity, implying reduced returns to rent-seeking expenditure and outlays.

Murphy, Shleifer and Vishny (1991) have emphasised the importance of the positive allocation of talent towards promoting growth. In situations where the gains from rent-seeking or predation are greater than the returns from production, entrepreneurial talent is more likely to engage in rent-seeking and corruption. To reiterate, this is more likely in societies with poor governance, and where there is more to loot due to the presence of natural resource revenues, privatised enterprises, or where great transformation is in train as in the former Soviet bloc. In countries where more talent is allocated to rent-seeking rather than production, growth and regulatory failure will eventually ensue. See Murshed (2003b) for empirical evidence regarding the experience of point-source natural resource endowed economies.

A developmental state that is democratic or benevolent would reduce lobbying and rent-seeking expenditure, (Auty and Gelb, 2001; Lane and Tornell, 1996). Such a state would promote a more egalitarian income distribution, where individual gains to rent-seeking relative to production could be significantly reduced. Entrepreneurial activity in production would yield sufficient profit so as to reduce rent-seeking. The corruption that remains would also be more positively channelled towards domestic investment rather than wasteful consumption and capital flight. This is perhaps the lesson that can be drawn from the growth and development success in East Asia. In the aftermath of the Second World War, political imperatives, chiefly the fear of the spread of communism caused governments in

North-East Asia (Taiwan, South Korea and Japan) to pursue policies of asset redistribution. This also selectively occurred in South-East Asia, Malaysia for example. The contribution of such egalitarian policies towards the more productive allocation of talent cannot be overemphasised.

4 SUSTAINING POLITICAL COMPROMISE [\[7\]](#)

In this section we are concerned with problems in sustaining compromise between competing political groups or factions. The rationale for this line of analysis lies in the fact that very often the problems of credible commitment to good policies, as well as the emergence of wasteful rent-seeking contests are at least partially related to the inability to form compromises between different groups. These groups, political parties or factions may be organised along religious or ethnolinguistic lines, especially in Africa. In the context of African growth failure, Easterly and Levine (1997) argue that the bulk of ethnolinguistic fractionalisation manifests itself in poor public policies, which is also correlated with corruption, Mauro (1995).

More generally, we can imagine situations where each party, when in office, attempts to grab as much as rents as possible, as it feels that when not in power it will be totally denied access to patronage by its opponents. This leads to excess and wasteful rent-seeking which may be partially mitigated by a power sharing agreement. Power sharing also leads to the avoidance of civil war in fractured societies.

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^A in the next period, and be out of power with probability $1 - \gamma^A$. A similar line of reasoning applies to group B, if it is in power. The economic benefits that any side can reap are 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:

$$\begin{aligned} V^A_P &= U^A(1) + \delta^A [\gamma^A V^A_P + (1 - \gamma^A) V^A_O] \\ V^A_O &= U^A(0) + \delta^A [\gamma^B V^A_O + (1 - \gamma^B) V^A_P] \end{aligned}$$

In (21) 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 (21) refers to the discounted value of expected utility in the next period. Solving for V^A_P :

$$V^A_p = \frac{(1 - \delta^A \gamma^B)U^A(1) + \delta^A(1 - \gamma^A)U^A(0)}{(1 - \delta^A)[1 - \delta^A(\gamma^A + \gamma^B - 1)]}$$

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 (22) above reduces to:

$$V^A_s = \frac{U^A(1/2)}{1 - \delta^A}, \text{ as } \gamma^A = \gamma^B = 1/2 \text{ in (22)}$$

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 23 and 22):

Similar expressions can be derived for group B. The agreement is likely to be self-enforcing when: (a) the greater is the patience of both sides represented by high values of the discount factor (low discount rate); (b) the higher is risk aversion or dislike of variations in income (this will make the right-hand side of the inequality

$$V^A_s \geq V^A_p \dots \text{or:}$$

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

in equation 24

smaller); and, (c) 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 acquiring income 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. It will also help reduce, but perhaps not eliminate rent-seeking.

5 SUMMARY AND CONCLUSIONS

Let us conclude briefly. I have addressed the issues of commitment, compromise and rent-seeking, all of which are related to institutional design and the formulation of optimal or good economic policies. The models outlined above lie within the literature of endogenous policy formation and transaction-cost politics. This view maintains that all policies are an outcome of an endogenous political process. I first addressed the difficulties of credibly committing to an optimal policy vector that involves no rent-seeking by the government. But given their temptation to do so, and renege on a pre-announced commitment to zero rent-seeking, policy sets involving announcements of zero rent-seeking are just not credible. A multiple range of rent-seeking equilibria appears. In multiple time periods uncertainty regarding the government's intentions and its true type create problems, as does the possible impatience by the government to engage in rent-seeking activities. Policies

to grapple with problems of credible commitment can be either deep or shallow. The former alters the institutional framework or constitution. The latter works within existing rules, manipulating the behavioural parameters of the agents in question.

I then construct a Tullock type rent-seeking game. This takes the form of a contest between different individuals striving to obtain a non-divisible prize, say a privatised monopoly. Engaging in this contest entails a cost, which in aggregate detracts from economic production and the best use of entrepreneurial talent. Consequently, excessive rent-seeking can lead not only to regulatory failure but also to growth collapses over time. Policies that deal with this problem have to be designed to lower the attractiveness or return from rent-seeking expenditure. This essentially involves deep intervention to modify the legal system, the regulatory framework and mechanisms of law enforcement. A developmental state, and a society with a more egalitarian income distribution, will be more likely to achieve these objectives.

Finally, I examine the sustainability of a political compromise between competing groups; one that is ultimately aimed at reducing rent-seeking. This political compromise is likely to be more sustainable if no party is excessively impatient, dislikes swings in income, and does not perceive itself to be likely to hold on to power for ever. These characteristics are more commonplace in democracies.

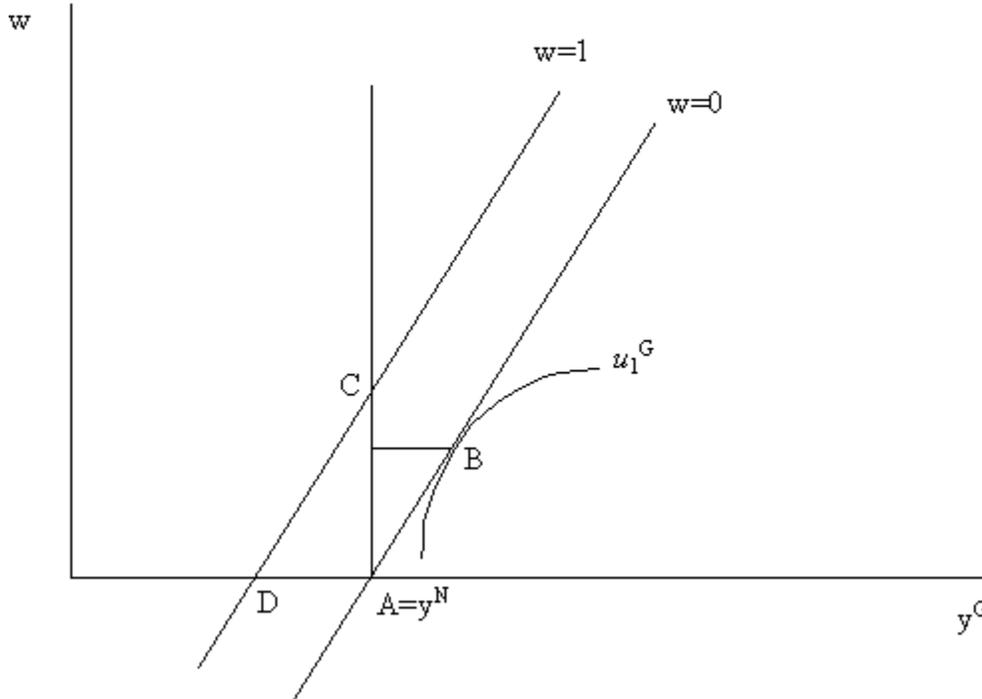
Credible commitments to good policies are found in effective constitutional restraints and delegation. These commitment technologies require institution building, something that is notoriously difficult to achieve because of the persistence of vested interests, and informal but powerful social networks. In the final analysis democracy and an egalitarian income distribution provide excellent foundations for good institutional design. We, therefore, have a strong institutional argument in favour of pro-poor and egalitarian economic strategies.

REFERENCES

- Addison T, and S M Murshed (2002) 'Credibility and Reputation in Peace Making', *Journal of Peace Research*, 39, 487-501.
- Addison T, P Le Billon and S M Murshed (2002) 'Conflict in Africa: The Cost of Peaceful Behaviour', *Journal of African Economies*, 11, 365-86.
- Auty, R M and A G Gelb (2001) 'Political Economy of Resource Abundant States' in R M Auty (ed) *Resource Abundance and Economic Development*, forthcoming, Oxford: University Press.
- Backus, D and J Driffill (1985) 'Inflation and Reputation', *American Economic Review*, 75, 530-8.
- Barro, R and D Gordon (1983) 'Rules, Discretion and Reputation in a Model of Monetary Policy', *Journal of Monetary Economics*, 12, 101-21.
- Buchanan, J M (1987) 'The Constitution of Economic Policy', *American Economic Review*, 77, 243-50.
- Cukierman, A (2000) 'Establishing a Reputation for Dependability by Means of Inflation Targets', *Economics of Governance*, 1(1), 53-76.
- Dixit, A K (2001) 'Some Lessons from Transaction-Cost Politics for Less-Developed Countries', unpublished manuscript, Princeton University, www.princeton.edu.
- Dixit, A K (1996) *The Making of Economic Policy: A Transaction-Cost Politics Perspective*, Cambridge, MA: MIT Press.
- Easterly, W and R Levine (2003) 'Tropics, Germs and Crops: How Endowments Influence Economic Development', *Journal of Monetary Economics*, 50, 3-39.
- Easterly, W and R Levine (1997) 'Africa's Growth Tragedy: Policies and Ethnic Divisions', *Quarterly Journal of Economics*, 112, 1203-50.
- Hall, R E and C I Jones (1999). 'Why do Some Countries Produce So Much More Output Per Worker Than Others', *Quarterly Journal of Economics*, 114, 83-116.
- Lane, P and A Tornell (1996) 'Power, Growth and the Voracity Effect', *Journal of Economic Growth*, 1, 213-41.
- Mauro, P (1995) 'Corruption and Growth', *Quarterly Journal of Economics*, 110, 681-712.

- Murphy, K, A Shleifer and R Vishny (1993) ‘’ *American Economic Review*, 83,
- Murphy, K, A Shleifer and R Vishny (1991) ‘The Allocation of Talent: Implications for Growth’, *Quarterly Journal of Economics*, 106, 503-30.
- Murshed, S M (2003a) ‘Strategic Interaction, Aid Effectiveness and the Formation of Aid Policies in Donor Nations’, *Journal of Economic Development*, 28, 189-203.
- Murshed, S M (2003b) ‘When Does Natural Resource Abundance Lead to a Resource Curse’, mimeo.
- North, D.C. (1990) *Institutions, Institutional Change and Economic Performance*. Cambridge: Cambridge University Press.
- Platteau, J.-P. (1994) Behind the Market Stage where Real Societies Exist (in 2 parts). *Journal of Development Studies*, 30, 3, 533-577 and 4, 753-817.
- Rothschild, M and J Stiglitz (1976) ‘Equilibrium in Competitive Insurance Markets: An Essay on the Economics of Imperfect Information’, *Quarterly Journal of Economics*, 90, 629-50.
- Tullock, G (1967) ‘The Welfare Costs of Tariffs, Monopolies and Theft’, *Western Economic Journal*, 5, 224-32.

Figure 1: Credibility and Reputation



[1] I am not concerned with issues of conflict, see Addison, Le Billon and Murshed (2002): and Addison and Murshed (2002) on this. Nor do I directly address the ubiquitous problem of corruption that bedevils both the developed and developing world.

[2] This section is based on Addison and Murshed (2002).

[3] Note that I postulate w to be a vector of policies implying rent seeking by the government group. So an excess of w over the agreed or announced levels causes problems. So w is akin to inflation.

[4] Equation (16) is the probability that the government is the H type times the probability that it will play H (equal to 1); over the same *plus* the probability that it is the D type times the probability of its having played H to conceal his type ($p_1 < 1$).

[5] This section draws on Murshed (2003b).

[6] In the n person case, the right hand side of (19) is $((n-1)sP)/n^2$, which is smaller than the expression in (19).

[7] This section is based on Murshed (2003a).