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Author(s): Dani Rodrik and Richard Zeckhauser

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The Dilemma of Government Responsiveness

**Dani Rodrik and
Richard Zeckhauser**

Abstract

The expectation that the government will respond to future circumstances, say bailing out a dictator to avoid a bloodbath, or raising taxes on immovable capital investments, often hinders the establishment of appropriate incentives for efficient behavior. The government's dilemma, simply, is that it may be unable to commit future governments not to be responsive. Contracts and constitutional provisions are mechanisms to limit responsiveness. So too are arrangements that increase the cost of being responsive, or build reputations for adhering to certain patterns of behavior. A promising strategy for being responsive is to base government actions on variables not under the control of individuals, such as unalterable characteristics or aggregate outcomes. These are at best palliative measures: Informed policy making must recognize the tension between providing appropriate incentives and permitting government to be responsive.

INTRODUCTION

The masses are on the verge of overthrowing a tyrannical third world regime. To avert a bloodbath, a powerful Western government grants asylum to the dictator. Meanwhile, in a country nearby, an up-and-coming autocrat observes the proceedings with interest. There is little reason to restrain his excesses, he concludes, because the worst possible outcome will be a comfortable exile abroad.¹

This little vignette—we wish it were merely hypothetical—illustrates the dilemma of a government that responds to the needs of the moment. To encourage democracy, it speaks sternly to budding tyrants, threatening to withhold support from their regimes unless improvements are made. But canny dictators realize that when push comes to shove, the Western government will not be willing to stand by its earlier statements. It has the power to act as if it had never made those threats and promises—so why should

anyone believe it? The government's credibility is undercut by its capacity to shift direction as new pressures arise. It cannot commit itself not to respond.

By their statements and actions, governments engage in negotiations with other parties whose behavior they hope to influence. But once the other party has acted, the government's incentives may change.² Once the ruler has become tyrannous, the consequences of abandoning him may seem worse than the alternative of offering him a safe haven. Tolerating a violent overthrow might send a forceful message to future dictators that they will not be rescued when their turn comes. But the present administration will not reap most of the benefits of establishing a tough precedent. Even if the government would prefer the long-term consequences of the no-assistance policy to those of a rescue operation, it will be under great pressure from various constituencies to respond to the immediate emergency.

In this respect the government's problem may differ significantly from that of a truly independent, long-lived entity in an interactive situation. Governments, whether democratic or otherwise, are generally expected, even pushed, to react to particular circumstances—to the macroeconomic conditions of the day, the situations of particular individuals, or evolving foreign policy contexts—and they may have substantially less ability than individuals or firms to commit themselves not to respond. Though it may seem paradoxical, this very flexibility restricts the current strategies available to a government. The problem arises in a wide variety of contexts. Consider two additional examples.

Tax Amnesty

A government is considering ways of raising revenue. One option is to institute a program of tax amnesty, under which individuals will be exempt from paying penalties on previously undeclared income if they now come forward and pay the taxes due. A number of states have raised substantial monies with such programs.³ On the surface, they seem like excellent revenue raisers. But are they? What if taxpayers come to believe that such a program is likely to be repeated in the future? They may then have an increased incentive for tax evasion, so that the government's immediate revenue windfall comes at the expense of reduced revenues later.

Inducing Investment

The government of a developing nation is negotiating with a multinational corporation over an investment project. Eager to have the foreign firm undertake the project, it is prepared to offer handsome incentives over the life cycle of the investment. The firm remains reluctant. It realizes that once its investment is made and the capital is sunk, its bargaining strength diminishes rapidly. The host government would then be in a position—and have the incentive—to impose new requirements (costs) on the firm, which might more than offset the original incentives. Under the circumstances, the multinational will undertake the investment only if it receives substantially larger benefits at the outset.⁴ Even then, it will be hesitant to increase the scale of the enterprise, even if it is successful, without further inducements. The host government is perplexed: It would like to promise that no onerous requirements will be imposed in the future, but has no way to commit itself (or its successor) credibly.

The reader who follows current events will immediately recognize the dictator and tax amnesty cases. The last one may be less familiar, but it is encountered with great frequency in the developing world.⁵ Each of these cases has led to substantial policy debate, with little agreement on the “appropriate” policy. We want to show that these cases, and many others to follow, share a common logical core and are symptomatic of a fundamental difficulty in public policy making. What they illustrate is a widespread dilemma inherent in government responsiveness: Inappropriate incentives are created because the government cannot commit itself not to take the action that is best for itself in the future. We may want foreign autocrats to believe they will bear the full consequence of their actions if they are deposed, but the prospect of civil war may eventually make the alternative option of providing a safe haven more attractive. In the tax-forgiveness example, the government has the incentive to prosecute cheaters. But when revenue needs are particularly acute, the motive of raising revenue may predominate. The host government has one set of incentives before the multinational invests, and another set afterward. From the government’s viewpoint, this divergence between *ex ante* and *ex post* incentives is a problem only because it induces an undesirable change in what other actors do. Dictators are encouraged to behave irresponsibly, taxpayers to cheat, and foreign firms refuse to invest unless they receive large payments up front.

Our purpose in this article is not to argue for a general solution, or even a different solution for each case. In fact, our argument is that there are *no* “solutions” to such problems, only ways to cope. On a more hopeful note, however, we identify a class of palliative measures.

CONCEPTUAL FORMULATION

Policy makers confront the following dilemma: The ability to achieve desirable outcomes is often compromised by the government’s ability to respond to particular future circumstances. The costs of not being able to constrain one’s behavior are well known in other circumstances. To qualify for training, a worker would like to promise to stay on the job; to win a contract, a supplier would like to assure the customer that he will take pains to provide quality even on dimensions not yet specified. Both worker and supplier are hurt if they are unable to make a credible commitment. This phenomenon is well known from the principal-agent literature; both parties are likely to suffer if the agent is unable to assure strict fidelity to the principal’s well being.⁶

For governmental agencies and their executives, the problem is even worse than it is for individuals in their private capacity. Often somewhat different standards of morality apply when the “public” or “national” interest is at stake, standards that push toward responsiveness in immediate circumstances. Under pressure from consumer activists, a utility commission may renege on a promise to grant a utility rate increase; recognizing that risk, the utility will be reluctant to construct a plant in the first place. Once a nation has become the victim of a nuclear first strike, it may stand to lose more than it gains by retaliating; hence its policy of deterrence is less credible. Once a child has been born, our society is reluctant to see it malnourished; hence it is difficult to create incentives that will discourage pregnancies among women who as single mothers will be eligible for

government assistance. While cultural norms provide some restraint against breaking commitments in interpersonal relationships, fewer such restraints may apply to governments. We expect the finance minister to dissemble about a devaluation, but we are disturbed if the head of a bank makes misleading public statements. The “national interest” provides room for many excuses. The transience of government officials reinforces this difficulty: the newly elected governor can take a high moral tone as he refuses to be bound by the pronouncements of the incumbent he defeated.

In the political science literature on the state, a frequent undercurrent is the belief that “autonomous” states, i.e., those with a relatively greater freedom to maneuver independently of pressure groups, can have better control over the outcomes of policy.⁷ While this may sometimes help, as in the example above with regard to the utility commission, such autonomy also has its costs precisely because it increases the ability to respond to future contingencies. As in most interactive situations, the inability of the agent to make binding commitments about his own behavior tends to hurt the agent, and not necessarily the other party in a negotiation.⁸ As we remarked earlier, the government’s inability to restrict its own future strategy actually reduces its current strategy options.

The interaction between a government and another entity in such circumstances can be conceived in terms of a game, and analyzed using game-theoretic tools. We present such an analysis in the appendix. The interested reader can turn there for a more formal discussion of the differences between a fully responsive government and one that can constrain its future behavior. But the central point is simple and transparent: A committed government can achieve better outcomes than a responsive government whenever anticipation of the government’s reaction may have adverse incentive effects.

More often than not, governmental commitments are neither practical nor fully credible if made. Typically, the government that makes binding commitments will incur costs on other dimensions. But since full responsiveness creates its own special category of costs, the government ought to be willing to pay a price in order to achieve some degree of commitment. The larger the difference between the payoffs in the committed and responsive cases, respectively, the higher the price that is worth paying. In sum, the government suffers by being responsive in the normal fashion.

This fundamental dilemma of responsiveness subsumes many others that have almost become clichés by now. As an important example, consider the much-discussed tradeoff between equity and efficiency, where appropriate incentives are required for efficiency.⁹ Economists have a pleasing hypothetical solution to this tradeoff: Employ lump-sum transfers.¹⁰ By definition, such transfers are independent of individual actions and therefore do not alter incentives, which would induce efficiency losses. Lump-sum transfers require that the government be completely unresponsive to outcomes that depend at least in part on his *actions*. Such transfers do an excellent job when all misfortunes are due solely to nature. In practice, however, human beings play some role in bringing on their own misfortunes, such as ill health or unemployment. As a result, lump-sum transfers are not a policy instrument that governments can readily employ to meet most of their responsibilities.

In the income-distribution domain, taxation is one tool available to government. But because taxation makes government policy responsive to a

variable—income—that is under the control of individuals, it leads to familiar incentive distortions. Income redistribution can be achieved only at some cost in efficiency. Notice that the internal logic of this well-known problem is similar to that in the autocrat, amnesty, and foreign-investment examples given above. The government would like individuals to behave *as if* their actions would not call forth a government response. It cannot make them act that way, however, because it also places weight on other objectives, such as reducing bloodshed, raising revenues, and exploiting foreigners to the benefit of one's own citizens. Those objectives will lead government to respond on the basis of the conditions that prevail after the other actors make their choices.

Moral hazard underlies many of the incentive problems created by responsiveness, as these examples would suggest. Individuals may take actions that are socially detrimental yet privately beneficial once the expectation of governmental response is factored in. Households will too readily accept the lures of insecure banks when they expect the government to step in to rescue those that fail; homeowners will build too close to the river or the sea when they expect that the authorities will come to their assistance in case of flood. These special instances of moral hazard arise when individuals understand that governmental incentives can change systematically over time, and that intentions expressed early on—to let ailing banks go under or to limit assistance in case of flood—will likely be revised in light of events later.

The potential conflict between efficiency and responsiveness can be blunted in a number of ways, and we will discuss several alternatives below. None of them, however, provides a total solution. The best we can hope for is to ameliorate the problem by a judicious combination of the various possible remedies.

MAKING COMMITMENTS

One important element in the examples discussed so far is a problem of credibility. The host government, for example, wants the multinational firm to believe its promises of favorable treatment in the future. But such promises are inherently not credible because the government will have the incentive to renege on them somehow once the investment is made.

Contract

Can the firm and the government negotiate a binding contract to ensure that promises are fulfilled? If they could, then there are contracts that make both parties better off: the host country would be getting the investment and the firm the favorable treatment. Hence, extracting a commitment from the government via a binding contract seems to be one way out of the dilemma. Such a contract in effect eliminates the responsiveness of the government. Two problems present themselves, however.

First, no contract can specify all possible contingencies and actions, a point well known in the law.¹¹ A party to a contract may be committed to undertake—or not to undertake—a set of particular actions, but it will still have potential courses of action not specified as such. This problem is not serious in many commercial contracts, because the matters that can be

specified are overwhelmingly more important than those that cannot. Moreover, many set of circumstances repeat themselves. Individuals may become expert in drafting appropriate protections on both sides. Finally, as we will discuss below, reputations become important. IBM takes back and replaces its flimsy PC Jr. keyboard, not for contractual reasons, but rather to maintain its good name.

Yet many important government actions arise in unique and unfamiliar situations in which pre-specification and contracting are more difficult. (Even in familiar situations, low probability outcomes for which no provision was made or unforeseen contingencies may arise.) Moreover, because governments come and go, there is less incentive to build and maintain reputations. Even if the host government can contractually commit not to increase the tax rates on the operation of the foreign firm, it can choose from a vast range of future policies that will impose similar burdens on the firm to the benefit of the country: reducing trade protection in the domestic market, restricting the use of foreign executives, imposing export requirements, and so on.

Even if contracts could be fully specified, a second, more serious problem of enforceability arises. Contracts are not readily enforceable on *sovereign* states, particularly when the other party to the contract is a foreign national. If disputes do arise, then the foreign government's courts will generally have jurisdiction, and sufficient latitude to achieve outcomes favorable to its government. Acts of State are not subject to our courts. The Foreign Sovereign Immunities Act makes commercial transactions with a foreign government enforceable in the United States, but such a government may have no assets here to be claimed, certainly not sufficient for the scale of claims that might be associated with an expropriation. Individuals and firms cannot sue states in the World Court. (Some contracts between private actors and foreign states specify that disputes will be arbitrated in third jurisdictions. Colleagues in international law tell us that the record of adherence to arbitrated awards has been good.)

Take the example of sovereign lending by commercial banks. Through loan contracts between a government and a group of banks, the government "commits" itself to interest payments and amortization on a particular schedule. If banks regard such contracts as completely binding on the government, in the sense that the debt would have seniority over other uses of the nation's taxes, then they would not cut off their lending, at least not at present debt levels. Any increased demand for loans would be accommodated by raising the interest-rate spread. In practice, of course, banks ration or curtail their loans—reflecting the implicit unenforceability of loan contracts with sovereign borrowers.¹² Citibank has no incentive to increase lending to Brazil, no matter how high a spread Brazilians are willing to accept. Indeed, the higher the spread, the more incentive Brazil has to repudiate its debt—abrogate the contract—when the time comes for repaying the principal.¹³ (Any nation abrogating in this manner typically finds more genteel words to describe its actions.) This divergence between Brazil's *ex ante* and *ex post* incentives is only partially reduced by the existence of a contract, because banks have very limited means with which to enforce such contracts on sovereign states.¹⁴ Seizing some of the debtor government's assets overseas, even if authorized by the courts, would be unlikely to provide adequate compensation.

Laws

In the domestic context, legal rules restricting future government actions offer a limited means of making commitments. Such rules are often proposed as a way of eliminating inefficiencies caused by “excessive” government responsiveness to private or other demands. A traditional law, passed by majority legislative vote, creates a more credible commitment than sweet promises. But if legislators can pass a law, they can repeal it as well. The prospect of embarrassment inhibits this tendency, as does the desire to avoid establishing a precedent for reversal whenever it becomes convenient. Moreover, in contrast to a mere promise, a law requires a distinctive action to be reversed. In political contexts with fluid legislative coalitions and rapid governmental turnover, the passage of a law in itself is unlikely to make a substantial difference. But in more stable political environments, it may well do so.

Constitutions

Nations frame constitutions to establish promises that are intended to be more fundamental or enduring than mere provisions of laws, yet might be threatened. Were it not for the First Amendment to the U.S. Constitution, for example, the government might have been tempted to inhibit free speech at various crisis periods. The constitutional guarantee provides a strong moral counterweight as well as legal protection. Moreover, this protection cannot be removed without the lengthy and difficult process of constitutional amendment, which requires that two thirds of each house of Congress or two thirds of the state legislatures propose an amendment and that three fourths of the states, through either their legislatures or constitutional conventions, ratify it.¹⁵ It seems unlikely that even the prospect of extending the tenure of a very popular president would induce legislators to reverse our comparatively recent constitutional amendment limiting a president to two terms. A provision of the Massachusetts constitution has thus far prevented a change to progressivity in the state income tax, a move that would have otherwise been very likely in that liberal state. We would expect amendments to be reversed only rarely, mainly when new perceptions of a problem arise, such as, for example, when the failure of Prohibition became evident.¹⁶

Institutional Constraints

A government may impose institutional constraints on itself. To signal that it will continue supporting a certain class of endeavor, it can create a “permanent” funding agency to that purpose. Presumably bureaucratic inertia and the difficulty of killing an organization assure continued attention to the task in question.

The institution need not consist of a building and personnel. Any arrangement whose change will be costly to the decision maker may prove helpful. Consider, for example, current discussions on international monetary reform. Proponents of a return to a less-flexible exchange-rate system argue that the effect of too many governments “doing their own thing” in fiscal and monetary affairs has been excessive volatility in exchange rates. With fixed exchange rates, or target zones, governments would be “committed” to maintaining the values of their exchange rates at a particular level, and this

would naturally limit the range of fiscal and monetary policies they could pursue—that is, it would reduce their responsiveness to macroeconomic contingencies. The international monetary system would be more stable, the argument goes, and every nation would benefit. Fixed or banded exchange rates do get adjusted, of course, when the costs of defending them become too high. Even though they are not a foolproof commitment to maintain currencies within the prescribed range, they will increase the costs of not doing so. Macroeconomic flexibility may be sacrificed to avoid the significant embarrassment of changing one's fixed exchange rate. With flexible exchange rates, by contrast, there is no clear line of shame to step over.

These examples illustrate both the use and shortcomings of contracts, constitutional rules, and institutions for restricting the responsiveness of governments. Contracts cannot specify all contingencies and may be unenforceable against governments. Rules and institutions can be changed, albeit at cost, by those who make them. But while *full* commitment may be impossible (and perhaps not even desirable), *some* commitment may be both feasible and better than none. Many of the mechanisms cited above commit the government only imperfectly, but they still play a useful role by raising the cost of *ex post* responsiveness.

REDUCING PAYOFFS TO PROMOTE COMMITMENT

So far, we have covered only the most direct ways in which governments can (seemingly) commit themselves to future responsiveness. In addition, there are potentially an infinite variety of what we might call “unorthodox” commitments—arrangements explicitly designed to increase the cost of responsiveness in rather indirect ways, thereby rendering it less worthwhile *ex post*. This can often be accomplished by undertaking appropriate actions *ex ante*.¹⁷ Such actions reduce responsiveness to contingencies, limit the policy makers' freedom of action, and occasionally reduce payoffs directly.

Creation of Hostages

Various kinds of arrangement secure commitment by involving the government in an ongoing deal. Joint ventures between multinationals and local state-owned firms involve a restructuring of the host government's incentives vis-a-vis the investment project. With such ventures, the foreign firm may come to believe that the government will be less likely to try to extract a surplus from the enterprise, because the health of the (partially) state-owned firm itself would be threatened. Because joint ventures in effect provide foreign investors with a limited guarantee against ill treatment in the future, they have proved quite attractive to multinationals.¹⁸ A similar purpose is also served when state-owned firms invest in the downstream activities of the multinational partner elsewhere.

Diminishing Payoffs to Improve Incentives

Creating credible commitments by altering the government's *ex post* incentives is a good way of getting around the responsiveness problem, and one that we suspect might be appropriately used more often. There are only two ways to change incentives: raising or lowering the payoffs for certain actions.

It is rarely possible to raise one's payoffs unilaterally. Therefore, what the government must do to change its future incentives is reduce the return it will earn by taking certain "responsive" actions. That will make nonresponsive actions comparatively more attractive.¹⁹ Such strategies are adopted relatively seldom, since the type of behavior they call for—namely, lowering one's payoffs in certain circumstances—appears patently unreasonable unless one is fully aware of the nature of the dilemma. Moreover, the self-damaging provision must be justified in a political context.

Direct foreign investment in Germany by the Venezuelan state-owned petroleum company might appear to be a wasteful deployment of resources that could be put to better use (i.e., earn a higher return) domestically. But the strategy might be the only way of establishing a credible commitment—if it confiscates, its own resources may be taken elsewhere—and thus achieving the intangible benefits of cooperation by foreign oil firms. As we have seen, less choice in the future can be better than more: Reducing the government's responsiveness may help achieve superior arrangements.

THE CHALLENGE OF UNCERTAINTY

In a mythical world with no unforeseen contingencies, hence no uncertainty, limiting one's responsiveness entails no costs. But the job of a real-world government is not only to guard against foreseen contingencies but also to react to unforeseen developments. Consider a constitutional amendment that requires balanced federal budgets. Assume that the constitutional rule does create a binding commitment and that under "normal circumstances" a balanced budget is indeed a good thing for the economy. If the economy falls unexpectedly into a depression, then we may legitimately wonder whether *ex ante* the commitment was actually a wise choice. Hindsight may reveal the foolishness of a rigid rule that makes no allowance for exceptional circumstances. Unfortunately, given the many contexts in which governments make policy and their need to mobilize support for their decisions, it is not feasible to focus on the circumstances in which the policy is likely to be disastrous (e.g., it turns out we have substantially misestimated farmers' response to our new crop-payments policy); nor is it possible to make the policy contingent.

More generally, uncertainty rules out any easy way of distinguishing the incentive distortions caused by responsiveness from desirable responses to bad luck or exceptional circumstance. In more technical language, it is not always possible for the government to determine whether a particular behavior is the consequence of "moral hazard" or simply a "bad state of nature." Therefore, it will generally not be possible to gear government commitments solely toward avoiding moral hazard.²⁰ What we need is a way of making the tradeoffs explicit and balancing the costs and benefits of commitment and responsiveness. The appropriate mix will naturally depend on the issue concerned, and the way we trade off the certain benefits of commitments against the uncertain risks of future unresponsiveness.

Sluggishness and Unpredictability

So far our discussion has focused on cases where future governmental responses are predictable and will evoke offsetting behavior on the part of

private agents. The predictability of government behavior is linked to the predictability of its incentives *ex post*. But governments are not single agents and do not act as such. Governments are made up of a multitude of agencies, departments, and branches, each of which in turn is a collection of individuals. At least as important, the people who run these organizations change from time to time themselves. These factors result in a certain amount of sluggishness and unpredictability in the formulation and implementation of government policies. Ironically, this structural “weakness” of the state may help resolve the dilemma discussed here. For all of its obvious disadvantages, this weakness has the advantage of encouraging muddling through, incrementalism, and a generalized bias toward the status quo, reducing the likelihood of responsiveness.²¹

Consider the following example. Many countries where terrorists are active have experimented with programs that offer reduced sentences to activists who give themselves up and provide evidence against their associates. In Italy, for example, such a program appears to have been quite successful in crushing the Red Brigade. We would hardly worry about the theoretical incentive problems caused by this policy, which in practice is very unlikely to aggravate future terrorism by reducing the costs to the participants. Programs of this sort typically require such complicated and intricate legislative maneuvers for their implementation that it would be foolhardy to rely on them with any degree of certainty. For much the same reason, we do not worry too much about the incentive problems of the government witness-protection program in the United States. An eventual bailout in the form of a reduced sentence is too unpredictable a possibility to be taken very seriously, and is therefore unlikely to affect individual behavior.

In such cases, the natural sluggishness and unpredictability of policy making alleviate incentive problems as a byproduct, enabling more desirable outcomes. Can such unpredictability actually be exploited to achieve certain ends? In most cases, the answer depends on the skill and abilities of the individual public officials concerned. In general, appearing sluggish has costs, namely one must *be* somewhat sluggish.

STRATEGIES FOR BEING UNRESPONSIVE

Creation of Countervailing Constituencies

One famous example of institutional design explicitly geared toward reducing harmful responsiveness deserves special mention. This is the institutional structure of the U.S. governmental system itself. As Madison *et al.* argued in the *Federalist Papers*, the most effective way to offset the undesirable influence of individual “factions” on government behavior is to make sure that there are a large number of factions and that the republic is large enough.

The influence of factious leaders may kindle a flame within their particular States, but will be unable to spread a general conflagration through the other States. . . . A rage for paper money, for an abolition of debts, for an equal division of property, or for any other improper or wicked project, will be less apt to pervade the whole body of

the Union than a particular member of it; in the same proportion as such a malady is more likely to taint a particular country or district, than an entire State.²²

A government responsive to a multitude of factions would be truly responsive to none. This result could be achieved by designing a “large” republic with an intricate system of balance of powers.

This example points out the radical nature of measures that may be needed to limit the responsiveness of government. Madison and his associates were creating a governmental structure from scratch. Most policy makers have to act within the boundaries created by existing institutions. Nonetheless, the creation of countervailing constituencies is a useful strategy to bear in mind when new government agencies are being created or existing ones can be tinkered with.

For example, the government may recognize that an intense interest group will be able to push it towards responsiveness at some future juncture. If the government’s spine cannot be strengthened, it may try to establish arenas where dissenting voices can be heard. Thus, local hearings on regulatory issues help diminish the power of Washington big boys.

Sometimes it may be possible to create a group or constituency to push on the other side of an issue. For example, if a government is going to be pressured to subsidize a good heavily, thus engendering an inefficiency, it may allocate the revenues from the tax or sale to some specified purpose, thus creating a constituency for higher revenues.²³ For similar reasons, taxes are sometimes earmarked to counteract pressures to reduce them. The counterbalance in forces also tends to control the earmarked expenditure.

Unresponsive Responsiveness

It is possible to design policies that eliminate responsiveness to individuals’ actions without giving up responsiveness to aggregate outcomes. For example, income can be redistributed through lump-sum taxes or transfers. As long as these transfers are based on innate characteristics that cannot be altered at will, no incentive problems are posed, and efficiency is not compromised. Such is the case with programs that provide financial or other assistance to handicapped people with birth defects. Similarly if aid is given on the basis of conditions in a town, a region, or indeed a country, then no single person will have the incentive to alter his or her behavior—though the municipal, regional, or country authorities do face incentives to alter behavior.

Governmental welfare programs typically depend on individual actions, however. For example, President Reagan has recently complained about current policy governing welfare payments to teenage mothers:

Under existing welfare rules, a teen-age girl who becomes pregnant can make herself eligible for welfare benefits that will set her up in an apartment of her own, provide medical care, and feed and clothe her. She has to fulfill only one condition—no marry or identify the father.²⁴

The undesirable incentive effects of the program are apparently twofold: it encourages both teenage pregnancy and single-parent families. In practice these problems are partially alleviated by the unpredictability of government policies. As the *New York Times* comments editorially, “. . . a pregnant

teenager can indeed go to a local welfare office and ask for a place of her own. Chances are she won't get it. New York City rejects two of every three such requests."²⁵ It could also be that many teenagers have only the vaguest grasp of the precise nature of the available benefits.

In the absence of such unpredictability, is there any way of eliminating incentive distortions from such welfare programs? We suspect that the general answer is no. We would not wish to distribute cash awards to teenagers on the basis of income characteristics, race, and location that might be common among teenage mothers. But we may be willing to institute such schemes, if we can blur the notion of benefit. Urban enterprise zones favor businesses and what are hoped to be local workers, say by forgoing certain taxes, independently of the prosperity of the actual business. Likewise, affirmative action promotes employment and promotion on the basis of race, an unalterable characteristic, as opposed say to income; there is no distortion of behavior to secure eligibility. Because no individual has a perceptible effect on the average circumstances of his recipient group, the benefits one receives are unrelated to the actions one takes.

This approach solves the incentive problems, but creates new difficulties of its own. Most importantly, the target population may not be reached very efficiently, unless it is very homogeneous. Thus middle-income blacks may end up as the principal beneficiaries of affirmative-action programs, whereas poor blacks and whites, more appropriate beneficiaries, may remain untouched. Such target inefficiencies would not be tolerated, we suspect, were race not such a salient factor in terms of its association with injustice in American society. And even that lesson cannot be extended in many domains. However successful our statistical models might be in predicting teenage pregnancy, we doubt whether race could be a basis of transfers to deal with this problem. We have a general social norm that government actions should be blind with respect to such innate characteristics as race and ethnic background. Once again, therefore, no clear solution presents itself. Instead, we are left with a number of tradeoffs to be made—preferably consciously—between efficiency and responsiveness.

Building Reputations

In many situations, as we have seen, all parties would be better off if the government could credibly commit itself to a particular course of action. But truly credible commitments are hard to come by. The structure of the problem here is similar to the prisoners' dilemma: given the *ex post* incentive to defect, the prisoners would be better off if they could simultaneously commit themselves *ex ante* not to defect. Presumably, if a prisoners' dilemma style game were being played by two individuals from the same community, such a commitment would be effective, even on a single trial, for one's reputation in the community would be at stake. This analogy with the prisoners' dilemma suggests an additional mechanism by which undesirable responsiveness could be minimized.

Suppose that the prisoners' dilemma game is repeated over and over. Both the theory of supergames and actual experiments suggest that a wide range of cooperative outcomes can now be attained—unlike in the one-shot version.²⁶ Cooperation in the present round of the game now has a potential benefit it did not have before, namely, that of extracting cooperation from the

other party in the *future* repetitions of the game. Such a motive comes into play in repeated games of this sort when either the number of repetitions is infinite, or it is uncertain when the final round of the game will take place.²⁷ It is also important in cases where the payoff structure faced by the players, and hence their incentives, are uncertain. Loosely speaking, all these cases provide incentives to build "reputations" of one sort or another. In our particular context, governments that remain unresponsive on enough occasions may build a beneficial reputation for nonresponsiveness.

Take the case of a European government trying to bring down the inflation rate. Each time it negotiates with a trade union it may have the incentive to grant wage concessions to maintain social peace. Because all unions realize this, they do not accept (disinflationary) policies as credible, but base their nominal wage demands on expectations of continued inflation. Consider now the benefits of developing a reputation for being "tough" on unions, as has Mrs. Thatcher in general and President Reagan with respect to the air-traffic controllers. The value of the reputation is tied to the repeated nature of the bargaining process with unions. (Presumably President Reagan was attempting to preempt subsequent labor strife by creating a tough-man image.) Communicating toughness may take considerable political skill, but in the end probably nothing demonstrates a willingness to act tough better than having done so already. The transience of leaders and governments, however, inhibits reputation building. There is less incentive to take present losses to build a reputation that will be most beneficial to your successors.

Israel's stance vis-à-vis terrorists illustrates a reputation built by successive governments, one that is now so valuable that a regime takes grave risks in diminishing it. The nation has established a reputation for not yielding to terrorist demands and for retaliating whenever possible. Most people would argue that the frequency of attacks against Israel made this the obvious rational strategy. Other countries have taken a much more flexible (responsive) attitude to terrorist attacks against their population or facilities; they have been willing to ransom hostages, for example. Not surprisingly, such countries are typically the ones that have less reason to fear future repetitions. For them, the situation is much closer to the one-shot game, and the *ex post* incentives of responsiveness dominates.

Reputations are useful, of course, when commitments themselves are useful. Governments aiming to maintain their freedom of action against unforeseen contingencies may find their reputations tarnished unless other actors can clearly discriminate legitimate surprises from developments that were merely unlikely. And as we have argued above, eliminating discretionary behavior altogether may prove to be a cure worse than the disease.

CONCLUDING REMARKS

We have argued here that a wide variety of policy problems, which are usually discussed separately, have a common conceptual core. The governmental temptation to respond to contingencies has adverse incentive consequences insofar as rational people can anticipate it. The inability to make credible commitments, therefore, is likely to be costly to a government. Policy makers often choose, or are forced, to react to circumstances in a way that fosters such incentive distortions. Indeed, one of the most important

tenets of contemporary political economy is that the government ought to be *responsive* to social outcomes perceived as undesirable. Hence, the conflict between government responsiveness and the provision of appropriate incentives is pervasive in modern society.

Even when government officials recognize this dilemma, however, generally there are no easy ways of limiting future responsiveness. A government unresponsive to outcomes would be no government at all. It is the nature of government that policies are reconsidered when the underlying interests demand it. An important implication is that government policy cannot provide appropriate incentives; therefore, full efficiency must be sacrificed. The tradeoff between responsiveness and efficiency is inherent to the formulation of public policy.

APPENDIX

Figure 1 illustrates the interaction between a government and another entity. Formalizing the interaction in the form of a game enables us to consider the differences between a responsive government and one that can constrain its future behavior.

Responsive Government

At move one, the actor takes an action a . At move two the government responds with g . It is assumed that both the actor's and the government's utility functions depend on both a and g . Denote them $U(a, g)$ and $V(a, g)$, respectively; both functions are known to both parties. (This formulation is consistent, of course, with the possibility that the government internalizes the utility of the actor; still, if the utilities of other agents also enter, two different functions are required.) Assuming no prior commitments on the part of the government (i.e., it is fully responsive to current circumstances), g is chosen to maximize V . This maximizing response is indicated, $g^* = G(a)$, where $G(a)$ maximizes $V(a, G(a))$. The actor, when going first, will select a^* to maximize $U(a^*, G(a^*))$. Drawing the parallel to traditional reaction function theory, the actor behaves as a leader, selecting the most favored point on the responsive government's reaction function.

For concreteness, we can apply the model to the interaction between a multinational firm and the host government. In this case, action a may refer

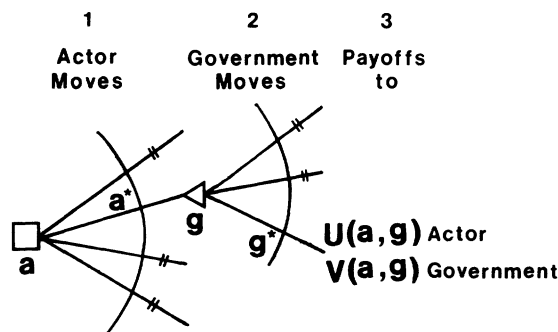


Figure 1. The Framework of the Game

to the level of investment undertaken by the firm and g to the tax imposed by the government. $U(\cdot)$ has an interior maximum in a and is a decreasing function of g . $V(\cdot)$ is an increasing function of both a and g . This situation is illustrated in Figure 2. The isoutility curves of the government define a reaction function for the government, $G(a)$. The northeasterly slope indicates that the larger the investment, the more the government can extract in taxation without causing the firm to collapse, refuse to maintain its factories, contract employment, etc. (The arrows indicate the direction of increase in utility.) The actor chooses a^* , which corresponds to the highest point of utility it can attain on the government's reaction function. The equilibrium with a responsive government is therefore at S . Note that the government's responsiveness turns the actor into a "Stackelberg leader."

Our discussion in the main body of the article considers this to be the normal case, but we also mention two possible alternatives.

Committed Government

In some circumstances the government may be able to commit to its action in advance—that is, to select (commit to) a g^* before a is chosen. In effect the leader-follower relationship is reversed. In this case $a^* = A(g)$, where $A(g)$ maximizes $U(A(g), g)$. The government selects g^* to maximize $V(A(g^*), g^*)$.

In terms of our specific example involving the multinational firm, the relevant equilibrium is depicted in Figure 3. A commitment to any level of g such that $g < g^* < \bar{g}$ will leave the government better off than at the previous equilibrium (S). As drawn, the optimal commitment level is at g^* . The equilibrium is at point C . The government gets a higher level of investment in return for a lower level of taxation. But it is clear from the geometry that a *higher* level of taxation could also be a possible equilibrium, in which case the government would achieve not only higher levels of investment, but also

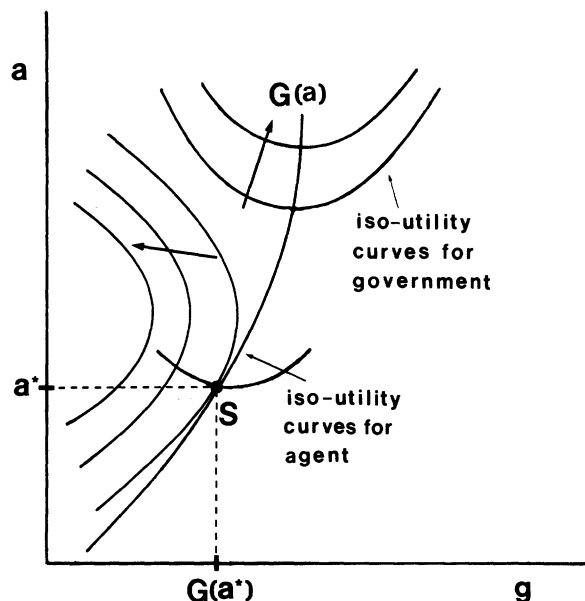


Figure 2. Responsive Government

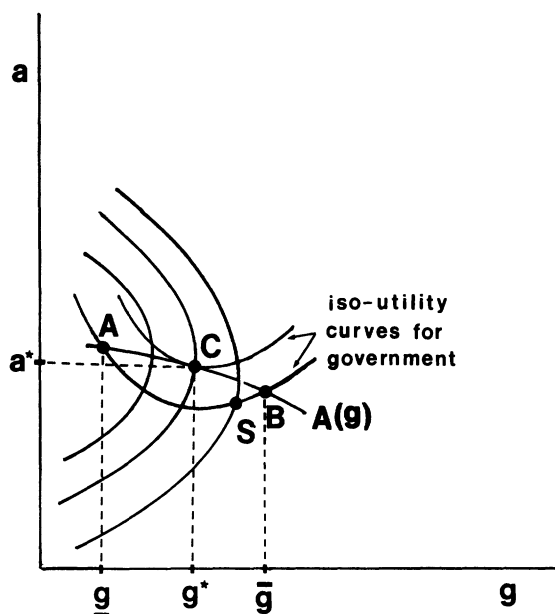


Figure 3. Committed Government

a greater squeeze on the foreign firms. Hence payoffs to the government are always at least as high with commitment as without.

Government Committed to a Function

The government may also be able to make a more complicated commitment to respond in a particular fashion, say choosing $H(a)$, which is a function or schedule. Thus, $a^* = A(H(a))$, where a^* maximizes $U(a^*, H(a^*))$. The government commits to $H(a)$ in advance to maximize $V(a^*, H(a))$.

Such a schedule allows the government to “punish” the actor for undesirable actions and to “reward” it for desirable ones. It allows the actor to be squeezed completely, down to his reservation level of utility. This is illustrated in Figure 4. The multinational firm’s reservation level of utility is represented by the isoutility surface that goes through the origin—that is, no investment and no taxation. The government seeks to locate the point on this surface that maximizes its own payoff. As drawn, the choice of an appropriate $H(a)$ schedule allows it to do just that. The equilibrium outcome is at N . Notice the negative slope of the $H(a)$ schedule, which is suggestive of the “carrot-and-stick” approach of this case.²⁸

Represent the government’s payoffs under the three scenarios discussed above as V^R , V^C , and V^F . As our example indicates, the following inequalities will then pertain:

$$\begin{aligned} V^R &\leq V^F, \\ \text{and} \\ V^C &\leq V^F. \end{aligned}$$

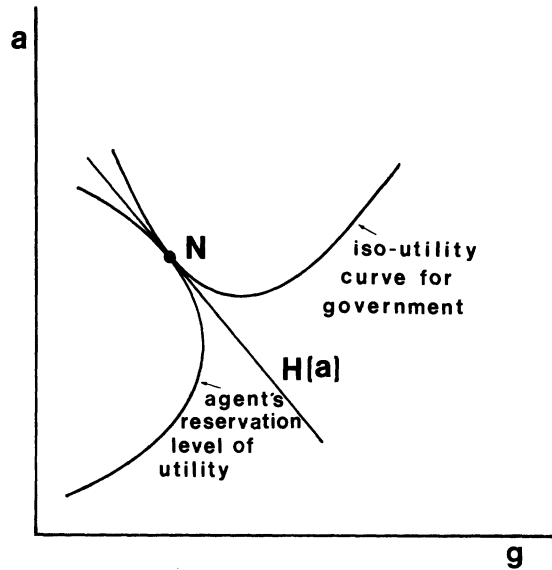


Figure 4. Government Committed to a Schedule

This can be easily seen if we recognize that the government could always reproduce the responsive case by choosing its reaction function as its committed function. The committed case is reproduced by having the chosen function as a constant. Barring exceptional cases, the inequalities will be strict.

A committed government is better off than a responsive government,

$$V^R \leq V^C,$$

whenever participation of the government's reaction has adverse incentive effects, which is the case that is the focus of this analysis. (If anticipation of the government's reaction has beneficial incentive effects, however, the inequality is reversed. This would happen, for example, if the government were choosing a tax rate in response to a multinational's level of investment, and if, given revenue needs, its rate diminished with the magnitude of investment.)

Uncertainty about Agent

When the actor's utility function is not known by the government, the government may not know what it should do in advance. Given this uncertainty, information is gained when the actor chooses. The ability to act with enhanced information provides an advantage to responsiveness that does not arise in the certainty case. This advantage may outweigh the incentive-related efficiency gains from being unresponsive: it is possible for V^C to be inferior to V^R .²⁹

Even under conditions of uncertainty, V^F can replicate V^R . Only in rare circumstances will it be desirable to replicate in this fashion.³⁰ Normally it

will be desirable to take advantage of the greater flexibility of V^F , in which case the inequality $V^R \leq V^F$ will be strict.

DANI RODRIK is Assistant Professor of Public Policy and RICHARD ZECKHAUSER is Frank P. Ramsey Professor of Political Economy, both at the John F. Kennedy School of Government, Harvard University.

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NOTES

1. William Safire asks rhetorically: "Do you suppose Jean Claude (Baby Doc) Duvalier would have stepped aboard a U.S. Air Force jet to Paris, rather than ordering his Tonton Macoute bully-boys to fight it out, if he knew he was destined to become in effect a stateless person?" (*New York Times*, March 7, 1986.)
2. In the economics literature, this is known as the "dynamic inconsistency" problem. See Finn E. Kydland and Edward C. Prescott, "Rules Rather than Discretion: The Inconsistency of Optimal Plans," *Journal of Political Economy*, 85 (1977): 473–91. A related problem, applied at the individual level, is discussed in Thomas Schelling, "Self-Command in Practice, in Policy, and in a Theory of Rational Choice," *American Economic Review Papers and Proceedings*, 74, (May 1984): 1–11. Schelling is primarily concerned with situations where an individual's preferences shift over time—say the resolute dieter who loses willpower in the kitchen at midnight. In the government situations we discuss there is no shift in preference. As with Schelling's analysis, however, the inability to commit to future action is harmful.
3. See Herman B. Leonard and Richard Zeckhauser, "Amnesty, Enforcement and Tax Policy," in Lawrence Summers, Ed., *Tax Policy and the Economy* (Cambridge, MA: M.I.T. Press, 1987), pp. 55–85.
4. Hence the common practice of tax holidays and other practices that skew the stream of benefits to the foreign firm toward the present.
5. See, for example, Raymond Vernon and Louis T. Wells, Jr., *The Economic Environment of International Business*, 4th ed. (Englewood Cliffs, NJ: Prentice-Hall, 1986), pp. 111–117.
6. See John W. Pratt and Richard J. Zeckhauser, "Principals and Agents: An Overview," in John W. Pratt and Richard J. Zeckhauser, *Principals and Agents, The Structure of Business* (Boston: Harvard Business School Press, 1985), p. 6.
7. See the discussion on weak and strong states in Stephen Krasner, *Defending the National Interest* (Princeton, NJ: Princeton University Press, 1978), pp. 55–61.
8. The classic work in this field is Thomas Schelling, *The Strategy of Conflict* (Cambridge, MA: Harvard University Press, 1960). See in particular his discussion of the role of promises, pp. 43–46 and 131–137. If the other party has a fixed reservation price (as would a worker in a competitive labor market), the agent (an employer in this instance) bears all of the costs. In a one-on-one bargaining situation, the inability of the agent to commit draws in the Pareto frontier. How the loss will be shared is a subtle question of bargaining theory.
9. See Arthur M. Okun, *Equality and Efficiency, the Big Tradeoff* (Washington: The Brookings Institution, 1975). We are using the term "efficiency" in the sense of Pareto optimality. Efficient arrangements are those that could not be changed to make some people better off without making some others worse off. This is of

course a very weak notion of optimality, for there are many Pareto-optimal points and the concept makes no attempt to choose among them. A more biting definition, say imposing a benefit-cost test for efficiency, would create even more problems of the sort discussed in the article.

10. Under the second fundamental theorem of welfare economics, any Pareto-optimal allocation in the economy can be attained as a competitive (market) equilibrium provided the appropriate lump-sum transfers can be made.
11. See Steven Shavell, "The Design of Contracts and Remedies for Breach," *The Quarterly Journal of Economics*, 97 (February 1984): 121–148.
12. See Jonathan Eaton and Mark Gersovitz, "Debt with Potential Repudiation: Theoretical and Empirical Analysis," *Review of Economic Studies*, 48 (April 1981): 289–310; and Jeffrey Sachs, *Theoretical Issues in International Borrowing*, Princeton Studies in International Finance, No. 54, July 1984.
13. This problem arises in domestic lending as well when loans cannot be fully collateralized. See Joseph Stiglitz and Andrew Weiss, "Credit Rationing in Markets with Imperfect Information," *American Economic Review*, 71 (June 1981): 393–410. In sovereign lending the contract is unenforceable *even* when collateral is offered.
14. See Anatole Kaletsky, *The Costs of Default* (New York: Priority Press for the Twentieth Century Fund, 1985).
15. The Gramm-Rudman Act, which requires the United States to balance its budget, is almost certain to be violated or removed from the books. That is why strong proponents of a balanced budget seek to make this requirement an amendment to the Constitution.
16. If constitutional amendments create commitments so effectively, why not use them more widely? First, because the process is costly and the required supermajorities to pass the amendment may not be there. Second, many people believe that amendments should relate to fundamental issues. The moral standing of the constitution would be undermined if it became a principal means of making government commitments.
17. See Schelling, "Self-Command in Practice, in Policy and in a Theory of Rational Choice." In the industrial organization literature, a common theme is the way incumbent firms build excessive capacity to deter subsequent entry by new competitors. See Michael Spence, "Entry, Capacity, Investment, and Oligopolistic Pricing," *Bell Journal of Economics*, 8(2) (Fall 1977): 534–44, and Avinash Dixit, "The Role of Investment in Entry Deterrence," *Economic Journal*, 90(357) (March 1980): 95–106.
18. While this may have been the common perception at the outset, however, the operation of joint ventures has displayed in practice an important countervailing force: the joint venture increases the speed at which the host government accumulates managerial and technical talent, and reduces the future costs of nationalization. We thank Ray Vernon for bringing this point to our attention.
19. See Thomas Schelling, *The Strategy of Conflict*, pp. 150–158, for the seminal discussion of the possible strategic advantages of lowering one's own returns from some outcomes.
20. Notice that we have to distinguish between the costs that arise from the inability of the government to limit its responsiveness and the costs that arise due to moral hazard *even when* the government is committed to an optimal response function. Our concern here is with the former kind of problem. We are grateful to Tom Schelling for emphasizing this difference.
21. If the government is equally responsive on average, just more unpredictable, then the incentive effects could go either way. We should be cautious before we embrace purposeful unpredictability as a policy. The optimizing–rational-actor literature recognizes a few exceptional circumstances (e.g. the random taxation

literature). We suspect that the major gains from unpredictable government may come if the confusion surrounding unpredictability reduces incentive losses more than an expected utility model would indicate.

22. James Madison, "The Federalist No. 10," in Alexander Hamilton, John Jay, and James Madison, *The Federalist*, The Modern Library College Edition (New York: Random House, 1937), pp. 61 and 62.
23. George Horwich and David Weimer, in *Oil Price Shocks, Market Responses, and Contingency Planning* (Washington: American Enterprise Institute, 1984), present an intriguing proposal with respect to sales from the strategic petroleum reserve. They observe that if the government sold oil from the stockpile during an emergency it would receive extraordinary revenues. "The ideal program would distribute revenue from the very onset of the price shock, not only to maximize the relief of hardship but also to defuse political pressure for market interventions." Their specific proposal calls for distributing revenues during a drawdown to the states on a weekly basis. "The support of the states would help Congress resist the pleas for special access to the SPR that will undoubtedly be made during the next disruption" (pp. 143–146).
24. *New York Times*, February 23, 1986, p. 20E.
25. *Ibid.*
26. See James Friedman, *Game Theory with Applications to Economics* (New York: Oxford University Press, 1986), pp. 69–70, and Robert Axelrod, *The Evolution of Cooperation* (New York: Basic Books, 1984).
27. In finitely repeated games with no uncertainty, the one-shot solution remains the only possible outcome, unless there are multiple equilibria. On the latter point see Jean-Pierre Benoit and Vijay Krishna, "Finitely Repeated Games," *Econometrica*, 53 (1985): 905–922.
28. This function need not be smooth or continuous unless that is required by external rules or considerations. Absent such constraints, the government can select $g = y$ if $a = x$, and otherwise set $g = z$, some very unfavorable value for A. The payoff to A for $U(x, y)$ can be kept just sufficient to get him to play the game. In effect his choice is pinned.
29. Consider, for example, a situation where a state government will train workers for a new firm. The larger the investment (i.e., the more potential workers), the larger the pool the government would like to train. Rather than commit to any number, it may be better to wait to learn what the firm does.
30. More formally, rare circumstances in this analysis means a set of measure zero.