IMF Staff Papers
Vo.. 49, Special Issue
© 2002 International Monetary Fund

Conditionality and Ownership in IMF Lending: A Political Economy Approach

ALLAN DRAZEN*

The relation between IMF conditionality and country ownership of assistance programs is considered from a political economy perspective, focusing on the question of why conditionality is needed if it is in a country's best interests to undertake the reform program. It is argued that heterogeneity of interests must form the basis of any discussion of conditionality and ownership. The paper stresses a conflict between a reformist government and domestic interest groups that oppose reform, leading to a distinction between government and country ownership of a program. After discussing conceptual issues, I present a model of lending and policy reform that illustrates the effects of unconditional and conditional assistance first without and then with political constraints. It is shown that conditionality can play a key role even when the IMF and authorities agree on the goals of an assistance program. [JEL F34, F35]

The IMF is currently engaged in a wide-ranging and comprehensive reexamination of the nature of its assistance programs. Many of the issues being discussed fall under the general heading of "conditionality" in lending, defined as the "explicit link between the approval or continuation of the IMF's financing and the implementation of certain specific aspects of the government's policy

*Professor of Economics, Tel-Aviv University and University of Maryland, NBER, and CEPR. I would like to thank my discussants, Jeffrey Frieden and Mohsin Khan, conference participants, and especially Jeromin Zettlemeyer for insightful comments. Shir Raz provided excellent research assistance. Some of the research for this paper was conducted during a visit to the IMF's Research Department, which I wish to thank for its hospitality. Financial support from the Yael Chair in Comparative Economics, Tel Aviv University, is gratefully acknowledged.

program." (IMF, 2001)[1] Conditionality is viewed as a central feature of IMF assistance programs, essential to the success of these programs.

The debate on conditionality has raised both pragmatic and conceptual questions. The key pragmatic questions are: how effective has conditionality been in helping IMF or World Bank assistance programs achieve their aims, and how can it be made more effective? On a very basic conceptual level, there is the question on the "proper" relation between the IMF and sovereign member countries that wish to borrow, with the nature of IMF conditionality indicating (or perhaps even defining) what that relation is in practice. There is the related question of the extent to which the IMF can or should take political factors into consideration in designing assistance programs, a question that touches on the IMF's institutional self image as technocratic and apolitical. The conceptual debate is very much tied to the more pragmatic issues, since questions of the proper role of IMF conditionality is motivated in no small part by the desire to improve its effectiveness. More concretely, program success depends on successful implementation, which in turn reflects the political constraints, raising the question of the extent to which program design should take these constraints into account.

Intricately tied up with the question of reform of conditionality is that of program "ownership" by a country that participates in an IMF or World Bank program. Ownership of a program, like most terms that sound unambiguously positive, means different things to different people, but may be roughly defined as the extent to which a country is interested in pursuing reforms independently of any incentives provided by multilateral lenders. Here too, conceptual and political dimensions are related to one another, with country ownership seen as fundamental to programs with which the IMF "should" be involved. There is also the pragmatic question of effectiveness. Ownership is widely seen not simply as greatly increasing the chances of program success but as crucial to success since, without ownership, programs are very likely to fail.

In short, reform of conditionality, even from a very pragmatic perspective, requires an understanding of the "politics" of conditionality in the various senses of that term set out two paragraphs above—the role of conditionality in the proper relation between the IMF and borrowing member countries; the effect of domestic political constraints on the design of conditionality; and the extent to which the IMF can and should take these political constraints into account in program design. Unfortunately, none of these questions has received as much discussion in the overall debate on conditionality as they deserve. Hence, it is worthwhile to address these questions in a more formal political economy framework.

The discussion of conditionality and ownership that has taken place is often unclear. It is argued that *both* conditionality *and* ownership are central to assistance programs, even though the latter would seem to negate the need for the former. There has been a significant amount of intellectual effort in IMF documents to argue that the two go "hand-in-hand," much of it striking an outside observer as displaying some extraordinary mental and verbal gymnastics.

[1] See the IMF website *http://www.imf.org* under "conditionality" for a number of papers on aspects of this debate.

Moreover, the tension between conditionality and ownership is only one of the points on which the debate on the reform of conditionality is often not clear.

The purpose of this paper is to shed light on some of these issues. It is not meant to be a comprehensive discussion of conditionality and how it may be reformed, but to focus on the relation between conditionality and ownership. Though it may sound as if the objectives of the paper are too narrowly defined, the question of how conditionality and ownership can be made consistent gets at the heart of the debate of what conditionality is trying to do, and why it may not be succeeding. Moreover, in addressing this specific question, the paper will discuss a much wider set of issues. I argue that a political economy perspective may be useful in better understanding the issues, in helping to clear up some points on which the debate has often been unclear and in providing a framework for discussion (and ultimately for analysis). The framework presented is meant to be general, so that it will illustrate some crucial points rather than serve as a vehicle for analysis of specific economic policies. As such, the model is more pedagogic than one aimed directly at policy analysis.

I have argued in Drazen (2000) that heterogeneity of interests is key to political economy; I will argue here that it also must form the basis of any sensible discussion of conditionality and ownership. A political economy perspective also makes clear the importance of distinguishing between economic and political constraints in understanding the limitations of conditionality and in helping to understand how these constraints may interact. It also suggests one way in which conditionality and ownership can be reconciled (or at least disentangled) by focusing on conflict of interests not between the IMF and the borrowing member country but *within* a recipient country. Such an argument has often been made verbally but never really formalized.

I. Conditionality and Its Discontents

Conditionality has been widely criticized on a number of grounds, but I concentrate on the specific question: *to what extent are conditionality and ownership consistent with one another?* I thus focus on the intellectual discontent with what may be taken as the "official" view on the interaction of conditionality and ownership, where by "official" I mean what can be gleaned from IMF documents on this question. This may be an official view that no IMF official holds any longer, but I think it helps to highlight what seems to be the essential stumbling block that has hindered much of the discussion.

The "Official" View

Conditionality is seen as central to IMF lending, meant to assure a borrowing country that if it takes certain well-specified actions, continued financing will be forthcoming. It is thus seen as allowing the country to "invest" in longer-term policy adjustment by assuring them that if they do so, IMF financing will not be cut off.[2]

[2]One could argue that conditionality is meant as a form of technical assistance: a country may agree with the overall program objectives set out by the IMF, but be unsure how to implement the program. This is not a really satisfactory answer, however, and is recognized as such. If this were the problem, the solution would be one of technical assistance rather than conditionality, a point widely recognized (see, for example, IMF, 2001).

To put this in perspective, one may argue that lenders regularly impose conditions on borrowers and monitor the use of loans to make sure that the funds are not used in a way that endangers the probability that the loan will be repaid (commonly known as "moral hazard"). Banks attempt to mitigate or eliminate moral hazard via collateral, contract design, control rights, and reporting requirements. Such safeguards may benefit borrowers by making lending more available, so that it can be in the borrower's interest to agree to these safeguards. Thus, "conditionality" in private lending is consistent with "ownership," that is, with the realization by borrowers that availability of lending requires they act in such a way that loans will be repaid. In contrast to private lending, countries borrowing from the IMF do not possess international collateral or have access to other safeguards available to private borrowers. Explicit IMF conditionality is thus meant to substitute for the lack of safeguards in private lending and, by analogy, to benefit borrowers by making loans more available.[3]

What is taken for granted in private lending is that the interests of lender and borrower will not coincide perfectly, their relation being a prime example of a "principal-agent" problem, with contract design meant to better align these interests. The realization that a conflict of interests underlies the conditions set out in a loan contract causes no problems in the case of private lending. Arguing that IMF lending is analogous to private lending, however, raises a difficult question on the relation of the institution to its sovereign members: to what extent is the IMF inducing a country to take actions that the country does not necessarily see in its own best interests? In the extreme, conditionality is viewed as the IMF "imposing conditions" on a country in a way that infringes on its national sovereignty. Hence, use of conditionality is not simply a question of prudent economic behavior, but a potentially politically charged question of the proper relation of the IMF to its members.[4] Many in the IMF find it objectionable even to use the term "principal-agent" in analyzing lending programs, as it "builds in" the assumption of a difference in objectives and is thus inconsistent with the notion of ownership.[5] I return to this point shortly.

---

[3]For example, Khan and Sharma (2001) argue that the analogy with private bank lending is useful in understanding IMF lending. Tirole (2002) presents a similar argument reconciling conditionality and ownership. Analogous to the commitment arguments made above, he argues that by giving up certain control rights or otherwise constraining himself *ex ante*, a borrower can commit himself not to take specific actions *ex post* that a lender would see as detrimental to repayment prospects. (See also Federico (2001).) In this approach, structural conditionality can be partially justified by the argument that a credible promise of loan repayment requires sustained medium-term improvement in economic performance.

[4]This essential tension in terms of what conditionality means about the "political" status of borrowers has long been recognized. It was well stated by Diaz-Alejandro (1984) and forms the basis of recent critiques, such as Killick (1997).

[5]"...conditionality is often viewed as an attempt of international financial institutions (or aid donors) to use financing to 'buy' policy reforms that are not desired by authorities. [This] interpretation of conditionality is often reflected in the use of a principal-agent model, in which the Fund (the principal) establishes a mechanism intended to ensure that reforms will be undertaken by the authorities (the agent), in a setting in which the objectives of the Fund and the authorities do not fully coincide and there are informational asymmetries associated with the fact that the Fund cannot directly observe some aspects of the authorities' actions, objectives, and/or circumstances. This presentation of the Fund as "the principal" in this framework is inconsistent with that of country ownership of the program." (IMF, 2001, paragraph 16.)

The official view is that IMF lending to member countries is characterized not by a conflict of interests but by a commonality of interests. IMF financing and recipient country policies are seen by the IMF as two components of a successful program that are connected. For example, a country with a balance of payments problem needs to undertake some policy changes but, at the same time, needs short-term financing to weather the payments imbalances while these changes are being undertaken. Lending is thus seen as complementary to policy reform. This may be summed up as:

> The IMF's financing and agreed policy adjustments are intended as two sides of an integrated response to a country's balance-of-payments problem in the context of its overall economic situation. This can best be seen in the stereotypical situation in which a country faces acute external imbalances as a result of excessive monetary financing of a fiscal deficit. In such a situation, the IMF finances short-term external imbalances while the country pursues macroeconomic policies aimed at external adjustment over an agreed time frame, possibly accompanied by structural reforms to enhance the supply response. ... In such a situation, the need for adjustment would be clear, with or without the IMF; the IMF essentially provides financing that permits this adjustment to be made in a more gradual and orderly way.
>
> ...Thus, the intended purpose of conditionality is as a mechanism to help bring together a combination of financing and policies as a solution to economic difficulties; it is needed to provide assurances to both authorities and the IMF that both parts of the package are provided together. This concept of conditionality is fully consistent with a cooperative approach to designing and implementing programs. (IMF, 2001, paragraphs 12 and 15.)

Under this view of conditionality, country ownership of a program is seen not simply as consistent with conditionality but, in fact, crucial to the success of conditionality. (See paragraph 36, IMF (2001).) It is argued that in the absence of a high degree of ownership, conditionality won't work, and there is some empirical evidence supporting this view.[6] The basic idea is that if a country is not seriously interested in reform, it will find ways around conditionality, so that conditionality will fail. The multiplicity of potential causes for program failure combined with imperfect observability of a government's actions means that the cause of any particular failure is not necessarily identifiable.

The Basic Intellectual Conundrum

What should one make of the "official" view? Though great effort has been invested into arguing that conditionality and ownership are not only consistent, but also necessarily complementary, one cannot escape a strong feeling of discontent. To put it simply, *why is conditionality needed if it is in a country's best interests to undertake the program in question?* This, to my opinion, is a question with

[6]Many references could be given. See, for example, Haque and Khan (1998). Dollar and Svensson (2000) present convincing evidence that political conditions in the receiving countries are much more important than conditionality in explaining the success or failure of World Bank programs.

which IMF documents really struggle and often talk around. I will argue that it is basically impossible to justify conditionality in the absence of a conflict of interests of some sort. Any attempt to argue that none really exists is not only unconvincing but, ultimately, self defeating in that it stands in the way of reforming conditionality. This conflict of interests may be due to differences between the borrowing country and IMF, differences between the country and other lenders, or (as I will stress) conflict of interests within the country.[7]

The argument that conditionality only makes sense if there is a conflict of interests does not fully answer the question of how exactly it is related to ownership. Conditionality makes little or no sense if there is full ownership, but it also makes no sense if there is no ownership. How much ownership is needed for conditionality to be effective, and how much lack of ownership justifies conditionality? How can one distinguish those cases in which the lack of ownership is so severe, or the cause of problems so fundamental, that conditionality is a waste of time from those in which conditionality could make a difference? I address these questions in the formal model and present examples that provide specific answers.

The central role of heterogeneity in understanding conditionality also suggests that the principal-agent approach is possibly a useful tool in helping to understand conditionality, both in specific design issues and in more general lessons.[8] The optimal design of an IMF program towards a borrower is a principal-agent problem in the technical sense, even if not in the political sense. If there is a problem, it is in how the principal-agent approach should be applied. I will argue that while the standard principal-agent model refers to a single principal and single agent, the conflict of interests within the borrowing country are more relevant.[9] The principal-agent literature has also largely concentrated on nongovernment principals and agents, also greatly limiting its applicability to the issues being considered. There is beginning to be interesting work on principal-agent models applied to public agencies,[10] and this may eventually provide some useful models specifically applied to IMF lending, but so far there are no such formal models of IMF behavior.[11]

---

[7]One should note that IMF (2001) explicitly acknowledges the importance of heterogeneity within a country, for example, in paragraph 38.

[8]For example, the behavior by an agent that can be induced by an optimal contract will depend on the extent to which the interests of the principal and agent are aligned.

[9]There is now a growing body of work on multiple-principal, multiple-agent, and multiple-task models, though the application of existing formal models to the specifics of IMF programs is not immediate. It has been suggested that models of "moral hazard in teams" (Holmström (1982)) may be relevant. In these models, the outcome is a function of the actions of several agents (and perhaps also a random component), where individual actions are unobservable, so that there is a "free rider" problem. The design of an IMF program would be finding a scheme that induces optimal actions by each agent. On the one hand, team behavior captures the notion that many agents must "sign off" on a program. On the other, the team setup does not seem to describe very well the nature of the economic problem an IMF program is meant to address nor the nature of policymaking.

[10]Prendergast (1999) and Dixit (2000a) present excellent surveys of principal-agent models as applied to the public sector.

[11]Dixit (2000b) provides some suggestions on how conditionality and other aspects of IMF programs may be better understood in terms of formal principal-agent theory.

Attempting to Reconcile Conditionality and Ownership

A number of arguments have been made on how conditionality may play a role in the presence of ownership. In this section, I briefly review some of these arguments and contend that heterogeneity of interests must underlie any such assertion. Put another way, the question is not whether there is heterogeneity of interests, but whether it is between the IMF as lender and the country as borrower (the standard "principal-agent" approach), between the country and other foreign lenders, or between sharply conflicting interests within a country. I focus on the last view as the strongest argument, whereby in the presence of domestic conflict of interests, conditionality may play a role even when the authorities "own" a program.

A standard argument, taken as part of the "official view," is that borrowers may benefit from the imposition of conditions that increase the probability of loan payback if it makes lending more available. As already suggested, this view requires that borrower's and lender's interests are not perfectly aligned in the absence of such conditions.

Another argument is that the conflicts are "second-order." For example, it is argued that the overall goals of the program are mutually accepted, but there may be disagreement on the best means of or the "time-frame" for achieving these goals. There may indeed be some cases where the conflict of interests is really how or when to best achieve mutually agreed goals, but this assertion has the flavor of "window-dressing." Unless one contends that agreement on improving the economic situation in the country is an indicator of the absence of a conflict of interest, any observer would have to agree that in the majority of cases, the use of conditionality could not be explained if there is general agreement on a program.

A third argument concerns time inconsistency. Specifically, conditionality is used as a commitment device to overcome a time inconsistency problem. Sachs (1989) and Diwan and Rodrik (1992) argue that policies of recipient governments are time inconsistent, governments accepting *ex ante* the need for policy change as a condition for receiving loans but having a strong incentive to avoid the change in policy once the loans have been received. Sachs, for example, considers the choice between current consumption and investment. The latter has a high return, so that a country realizes the value of taking a loan to increase investment. The government's discount rate is even higher than the return on investment, however, so that once the loan is received, it will be spent on current consumption. Conditionality thus binds a country to a course of investment and consumption postponement, thus increasing the amount of loans that foreign investors or international financial organizations are willing to make. In the time inconsistency case, commitment is meant to address a conflict of interests between the country and foreign lenders.

Time consistency problems arise even (or especially) when there is full information about a policymaker's preferences. Conditionality may also play an important role when there is asymmetric information about the authorities' commitment or ability to carry out reforms.[12] Investors may be unwilling to make loans to a

[12]The *type* of conditionality may also demonstrate commitment. For example, structural conditions may more effectively demonstrate the government's commitment to sustainable macroeconomic stability.

country if they are unsure how the loans will be used. A government that is committed to the policy changes that the IMF or foreign investors favor may accept conditions on itself to *signal* its commitment and thus separate itself from government types that are less committed.[13] Here, it is the *possibility* of a conflict of interests between the lenders and governments not committed to reform that gives conditionality a role in signaling that a government is interested in reforming.

The approach to reconciling conditionality and ownership that is stressed in this paper begins with the argument that there are conflicts within a country about policy. A reformist government may be interested in carrying out an IMF program, but it faces internal opposition. Hence, though the authorities may "own" the program, this is not identical with ownership by the country as a whole. More formally put, since policymaking is the process of collective choice in the face of conflicting interests, ownership by some important policymakers is not ownership by the "policymaking apparatus."[14] Conditionality may then "strengthen the hands" of the reformers who are committed to carrying out reform but face domestic opposition.

Conflict of interest over desired policy may reflect various causes. In the most benign case, there simply may be ideological differences over what is the best way to achieve a commonly agreed goal, a conflict stressed in the "official" IMF view of conditionality. Alternatively, different groups may have different objectives and, hence, desire different policies. This latter view is the one explored in this paper. In the extreme, powerful interest groups may oppose reforms that reduce their ability to engage in rent seeking. Numerous cases of these latter phenomena could be cited, some of which are discussed in IMF, 2001.

II. A Political-Economic Model

I now present a stylized model of the decision of a government of what policy to adopt. The model is highly stylized in order to highlight the political economy dimensions of policy reform in the presence of heterogeneity of interests, both between the IMF and the government of a country and, more importantly, between the government and domestic groups opposed to reform. It is not meant to answer specific policy questions but to highlight the importance of political constraints and their interaction with economic constraints. The model is not explicitly dynamic, even though the process of both lending, especially conditional lending, and reform is inherently dynamic, for the same reason. I begin with the economic model without politics.

A Benchmark Economic Model

In the benchmark model, there are no political constraints, and the authorities and IMF have identical objectives, namely maximization of economic performance.

[13]There are many models of this type. See, for example, Dhonte (1997) or Marchesi and Thomas (1999).

[14]As Khan and Sharma (2001, p. 15), "in pluralistic societies, does ownership refer to the views on program design of and objectives held by key ministers and central bank officials that negotiate the program with the IMF, or to the views of the entire domestic bureaucracy that has to approve the necessary legislation, or to the beliefs of civil society at large?"

There are two domestic dimensions to policy, represented by values of two policy instruments, denoted e and τ. The first may represent macroeconomic or exchange rate policy, the second, structural policy. Economic performance (or "output") Y also depends on IMF lending, whose size is denoted S (measured in the same units as Y), so that $Y = Y(e, \tau, S)$.[15] The pre-reform or "*status quo*"[16] values of the policy variables are e^{SQ} and τ^{SQ}, with the resulting level of output (in the absence of IMF lending) given by $Y^{SQ} = Y(e^{SQ}, \tau^{SQ}, 0)$. A policy reform is a program to increase economic performance via changes in macroeconomic and structural policy.

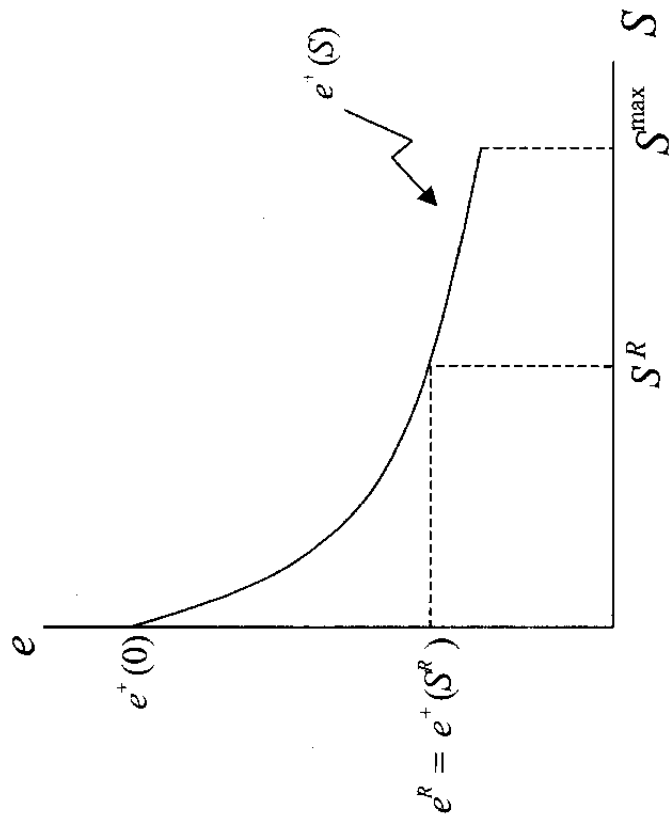
The following assumptions are made about the effect of policy and lending on Y. First, the output-maximizing level of τ is 0, so that positive τ is simply seen as a structural distortion. Hence, $\partial Y/\partial \tau \equiv Y_\tau < 0$ for $\tau > 0$. Second, in the absence of structural distortions, reducing high e (an "overvalued exchange rate") will increase output when supported by IMF lending. This captures the idea (albeit in a static context) that from an economic perspective, IMF lending is meant to enable a country to address a short-term balance of payments problem (to reduce e) in such a way to increase economic performance (increase Y) rather than reduce it. To model this, it is assumed first that for each value of S, there is a value of e that maximizes $Y(e, 0, S)$. Call this maximizing value $e^+(S)$, which is the authorities' "reaction function" in the absence of political constraints, with $\partial Y(e, 0, S)/\partial e \equiv Y_e < 0$ for $e > e^+(S)$, $Y(e, 0, S)$, and $Y_e > 0$ for $e < e^+(S)$. (More generally, it is assumed that for $\tau > 0$, $\partial Y/\partial e < 0$ for values of e above the output-maximizing level.) The second derivatives of Y with respect to e and τ are assumed to be negative. We naturally assume that $e^{SQ} > e^+(0)$, that is, that e^{SQ} is above the output-maximizing exchange rate in the absence of lending. Assume further that $\partial Y_e/\partial S \equiv Y_{eS} < 0$ for sufficiently high values of e and low values of S, both for $\tau = 0$ and for $\tau > 0$. This assumption means simply that up to a point, more lending increases the effect that reducing e has on increasing Y. This implies that $e^+(S)$ is falling in S up to some level of aid, say $S = S^{max}$. The $e^+(S)$ schedule, summarizing economically constrained policy choices, is shown in Figure 1. Finally, it is assumed that $\partial Y/\partial S \equiv Y_S > 0$ (once again, both for zero and positive τ), so that aid can have a positive effect on output even with no change in e.

This model of the effect of lending on economic performance is obviously a gross simplification of a complicated dynamic story, but I think it captures essential elements. Its simplicity allows us to focus on the role of domestic politics. To further simplify the basic model, I assume throughout there is no question of repayment of lending. This is clearly a heroic assumption, which eliminates a major set of arguments for conditionality. However, including issues of sovereign debt repayment and handling them adequately in a political model would be a paper in itself. Hence, this assumption is made in order to concentrate on the political constraints

[15] An IMF program would have no structural component (that is, no reliance on τ) to the extent that the Fund targets Y, and τ has little or no effect on Y. This would represent the case in which the IMF's performance target is narrowly defined so that it is a function only of macroeconomic variables such as e, so that the IMF's narrowly defined objectives imply no role for structural conditionality.

[16] The term "status quo" may be slightly misleading, since this could be the state after the economy has suffered a large shock. The idea is that once the economy finds itself in this position, domestic interests may oppose any reform, hence the term "status quo."

Figure 1. Economic Equilibrium



on the adoption and implementation of programs, and the implications of conditionality and ownership for those questions. It is assumed that a fraction r of any lending must be repaid, so that $1-r$ is the concessional part of lending. Net output is then $Y(e,\tau,S)-rS$.

Suppose that the country, taken as a unitary actor, chooses a policy to maximize net output $Y-rS$. (Implicit in this maximization are any economic constraints on the maximization of Y.) Representing the authorities' objective as $W(e,\tau,S)$, we have:

$$\underset{e,\tau}{\text{Max}}\, W(e,\tau,S) = Y(e,\tau,S) - rS. \tag{1}$$

First-order conditions are:

$$\frac{\partial W}{\partial e} = \frac{\partial Y}{\partial e} = 0 \tag{2}$$

$$\frac{\partial W}{\partial \tau} = \frac{\partial Y}{\partial \tau} \leq 0.$$

Using our above assumptions, this yields an optimal policy $(e,\tau) = (e^{+}(S),0)$.

If the IMF's objective is maximization of net output, it chooses S to maximize $Y-rS$ subject to the first-order conditions in equation (2). This yields a first-order condition for S of:

$$Y_S(e^{+}(S),0,S) - r = 0. \tag{3}$$

Call the solution to equation (3) S^R and the associated policies (e^R,τ^R) $(=(e^{+}(S^R),0))$, where it is assumed that $e^R < e^{SQ}$ and $\tau^R < \tau^{SQ}$. This is the first-best economic reform program, which is both the authorities' and the IMF's preferred solution (given identical objectives). There is no conflict over economic policy. We denote this reform package $P^R \equiv (e^R,0,S^R)$.

In this simple benchmark, there is no role for conditionality at all. With no heterogeneity of interests, unconditional lending will achieve the goals of the program. In fact, if the government had better information than the IMF about the workings of the economy, unconditional lending would be superior to conditional lending. Lending is simply a "technical" issue meant to improve economic performance without economic dislocations. Conditionality as part of a lending program requires heterogeneity of interests, either between the country and the IMF (or other lenders) or within the country. I consider these in turn.

Different IMF and Country Objectives in the Economic Model

Suppose that the IMF's objective function that $F(e,\tau,S)$ differs from the authorities' objective $W(e,\tau,S)$, where, in the relevant range, $F_e < 0$, $F_S < 0$, $F_{ee} < 0$, and $F_{SS} < 0$. The optimal amount of unconditional lending from the IMF's point of view is the S that maximizes $F(e,\tau,S)$ subject to the constraint that the authorities will choose policy according to equation (2). Diagrammatically, it is given by the

point where the IMF's highest attainable indifference curve is just tangent to the curve $e^+(S)$, represented by point U^E in Figure 2 (drawn on the assumption that $\tau = 0$). Mathematically, this is given by the conditions:

$$\frac{F_S}{F_e} = \frac{Y_{eS}}{Y_{ee}} \tag{4a}$$

$$Y_e(e, 0, S) = 0, \tag{4b}$$

the first condition representing tangency of the IMF's indifference curve and the authorities' reaction function, the second, maximization by the authorities implying $e = e^+(S)$.

Conditional lending in this framework would mean the IMF offers not a given amount S but differing amounts of lending in response to different policies e. Optimal conditional lending from the IMF's point of view would be represented by its choosing the point on the authorities' *indifference curve* (rather than reaction function) tangent to the highest possible IMF indifference curve. To tie down the equilibrium, one has a *participation* condition, namely that the country (weakly) prefers taking aid to not taking aid at all. Mathematically, these two conditions are:

$$\frac{F_S}{F_e} = \frac{Y_S - r}{Y_e} \tag{5a}$$

$$Y(e^+(S), 0, S) = Y(e^+(0), 0, 0), \tag{5b}$$

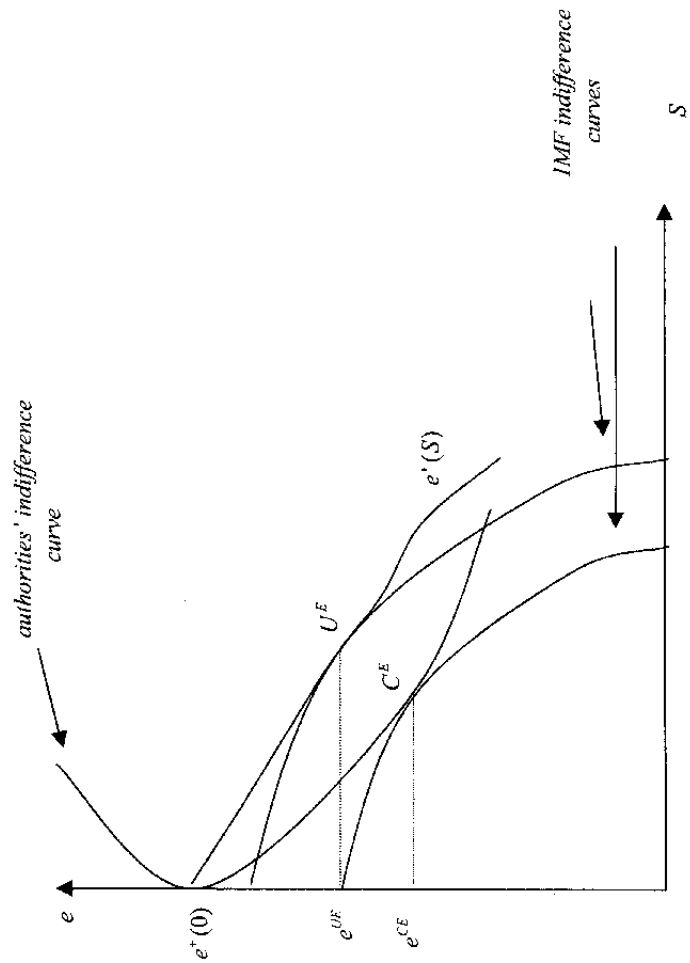
which may be represented in Figure 2 by point C^E.[17] Conditional lending makes the IMF better off, but the country worse off, than unconditional lending.[18] Conditionality induces the country to choose a lower value of e and lets the IMF achieve that objective with less aid. Here, once again, we see that there must be a conflict of interests if conditionality is to play a role.

Why might the IMF's objective differ from that of the country's authorities? One possibility is that the authorities have economic objectives in addition to maximization of output (or whatever macroeconomic goal the IMF is concerned with). Another possibility is that both are concerned about the same general macroeconomic objectives, but the IMF faces financing constraints (opportunity costs of lending to other countries or budgetary constraints), so that its true cost of funds may exceed r. (Or, the IMF is simply concerned with repayment.)

[17]The authorities' indifference curves are horizontal along $e^+(S)$, since this is a reaction function in which e is chosen optimally for each S.

[18]The discussion at the beginning of Section I, whereby conditionality may mean higher welfare for borrowers relates to the case of comparing conditional lending to no lending, the unavailability of lending reflecting problems of moral hazard, etc. In this discussion, in addition to the absence of such considerations, the lender is assumed to extract all the benefit of conditionality (equation (5b)), so that the borrower is only weakly better off.

Figure 2. Different IMF and Authorities' Objectives



To make explicit the effect of the IMF's financial constraints, it may be informative to write its objective as $F(e,0,S) \equiv Y(e,0,S) + H(e) - f(S)$, where $f(S)$ represents the (total) cost of funds to the IMF and $H(e)$ represents the difference between the IMF's and the authorities' macroeconomic policy objectives. The IMF's financial constraint (and the conflict of interest it implies) is represented by the assumption that $f_S > r$, that the marginal cost of lending to the IMF is above that perceived by the borrowing country. In this case, the slope of the IMF's indifference curve is:

$$\frac{F_S}{F_e} = \frac{Y_S - f_S}{Y_e + H_e}, \tag{6}$$

where, as assumed at the beginning of the section, both, $F_S < 0$ and $F_e < 0$. The amount of lending in the three cases—of identical objectives, unconditional lending with different objectives, and conditional lending with different objectives—can be represented respectively by the conditions:

$$Y_S - r = 0 \tag{7a}$$

$$Y_S - r = \left(f_S - r\right) + \frac{Y_{eS}}{Y_{ee}} H_e \tag{7b}$$

$$Y_S - r = -\frac{Y_e}{H_e}\left(f_S - r\right). \tag{7c}$$

In equation (7b), the case of unconditional lending, where we have used the assumption that on the $e^+(S)$ curve, $Y_e = 0$, there are conflicting effects. The financial constraint $f_S > r$ would imply that $Y_S > r$, which reduces IMF lending relative to the case of no conflict of objectives, while its desire to lower the exchange rate relative to what the authorities choose ($F_e = H_e < 0$) would raise lending in order to induce the authorities to choose lower e. In equation (7c), the case of conditional lending, the right-hand side is unambiguously positive when $f_S > r$ (remember that $Y_e > 0$ for $e < e^+(S)$), so that with conditional lending $Y_S > r$ unambiguously, which implies an unambiguously lower level of lending.

Domestic Political Constraints

On the basis of actual country experiences with failure to adopt reforms, a political process in which powerful interest groups can block reforms (termed "veto players" in political science[19]) seems especially relevant in studying possible political constraints on IMF lending programs.[20] This ability may flow from a

[19]Tsebelis (2002) presents a comprehensive discussion of veto player models and their application.

[20]Vreeland (1999, 2001) has used this type of model to study the possible effects of conditionality in a framework where policy has a single dimension (in his case, the size of the government budget deficit). Other papers that consider conditionality from a political economy perspective include Drazen (1999), Jeanne and Zettelmeyer (2001), Martin (2000), Mayer and Mourmouras (2002), Svensson (2000), and Willett (2000).

number of sources, including the structure of political institutions and the political power of these groups within this institutional structure, or from their economic power and the ability it gives them to influence political decisions. For simplicity, I work almost entirely with the case of a single domestic interest group that has veto power, since the basic results can be illustrated most easily in this case. Extension to several interest groups is straightforward (see footnote 22) and does not change the basic results.

Suppose that the government is the agenda setter, in that it determines e and τ subject to the approval of the domestic veto player, who will veto any program lowering its utility $I(e,\tau,S)$ relative to its status quo utility I^{SQ}. Treating the veto player as a unitary actor whose preferences can be summarized by a utility function with standard properties is not a trivial assumption (see, for example, the discussion in chapter 2 of Tsebelis (2002)), but is often used in the formal treatment of special interest groups (for example, Grossman and Helpman (2001)). The government's choice problem may be written as:

$$\underset{e,\tau}{Max}\, W(e,\tau,S)+\lambda\left[I(e,\tau,S)-I^{SQ}\right]. \tag{8}$$

We begin by assuming that the interest group cares directly only about e and τ, getting no direct utility from IMF lending, so that its utility may be represented as $I(e,\tau,S) \equiv V(e,\tau)$, so that $I^{SQ} \equiv V^{SQ} = V(e^{SQ},\tau^{SQ})$. The formulation in equation (8) makes clear that the constraint on the government is a political constraint, namely any reform must satisfy the constraint of being politically feasible in that it gains the approval of an interest group with veto power.

If the political constraint did not bind, the government would choose its most preferred policy (subject to the economic constraints), namely $(e,\tau) = (e^{+}(S),0)$, as in equation (1). This would be the case in which the government's preferred policy is also preferred by the interest group to the policy (e^{SQ},τ^{SQ}). In such a case, a "reform problem" would not arise, and the role of IMF assistance would depend on whether it and the authorities (or the country, which could be treated as a unitary actor) agreed on the objectives or not. If they agreed on objectives, the problem would be "technical" in the sense described above, and there would be no role for conditionality. If the objectives of the IMF were not the same as the authorities, the "standard" principal-agent problem would be present with a single agent.[21]

The more relevant case therefore is when the political constraint in equation (8) is binding. This would be the case, for example, when the interest group's desired policies, which can be denoted (e^{I},τ^{I}), are closer to (e^{SQ},τ^{SQ}) than to $(e^{+}(S),0)$ in a model with spatial preferences (that is, where an actor prefers policies that are spatially closer in Euclidean distance to his first-best policies than policies that are farther away). Put simply, in this case the interest group wants values of e and τ that are above (perhaps significantly) what the government wants. This implies that in the range of policies that maximize equation (8),

[21] There is a slight "catch" in that a conditional lending program itself must be assumed not to make the domestic political constraint binding.

$\partial V/\partial e > 0$ and $\partial V/\partial \tau > 0$, so that the conflict of interests is clear. (Second derivatives are assumed to be negative.) The government's power is given by its role as the agenda setter, the interest group's power by its ability to veto policies it doesn't want, where the alternative is the status quo.

The maximization problem yields first-order conditions:[22]

$$\frac{W_e(e,\tau,S)}{W_\tau(e,\tau,S)} = \frac{I_e(e,\tau,S)}{I_\tau(e,\tau,S)}\left(= \frac{V_e(e,\tau)}{V_\tau(e,\tau)}\right) \tag{9a}$$

$$V(e,\tau) = V^{SQ}, \tag{9b}$$

which can be solved for the equilibrium values of e and τ as functions of S. The politically constrained reaction functions are denoted $e^P(S)$ (which, like $e^+(S)$, is downward sloping in $e-S$ space), and $\tau^P(S)$. When the government's objective is to maximize economic performance net of lending, the left-hand side of equation (9a) is simply Y_e/Y_τ. As in the case of only economically constrained policies in equation (1), these policies are clearly functions of the amount of lending S. In the case of $S = 0$, let us denote the solution by (e^o, τ^o).

These conditions have a simple interpretation. Equation (9a) is simply the condition that the indifference curve of the government over e and τ is tangent to the indifference curve of the interest group over e and τ. The set of tangencies of these indifference curves yields the "contract curve" of Pareto optimal points from the viewpoint of the two agents. Equation (9b) determines which point on the contract curve is the equilibrium. For the interest group's reversion (or "threat") point being the status quo, the government's role as the chooser of policy implies that it "captures all the rents" in a political-economic equilibrium policy that leaves the interest group no better off than in the status quo.[23] Note, however, that along the interest group's indifference curve, e can be reduced from e^{SQ} only by increasing τ.

The determination of equilibrium may be represented as in Figure 3, where the upward sloping line represents the contract curve, that is the set of tangencies of the indifference curves defined by equation (9a), SQ represents the "status quo,"

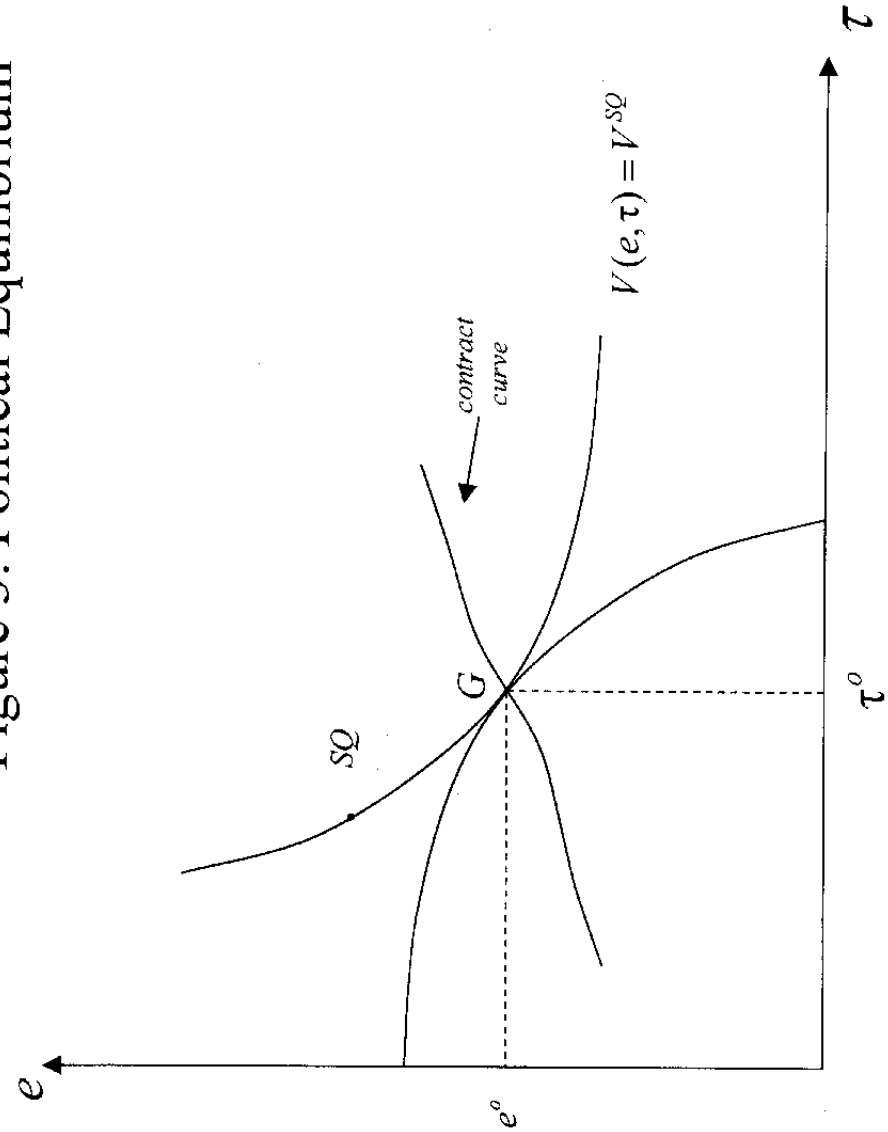
[22]With n interest groups, each concerned about some τ^j, the first-order conditions in a politically constrained equilibrium would be

$$Y_e(e,\vec{\tau},S) = \sum_{j=1}^{n} \frac{Y_j(e,\vec{\tau},S)\times V_e^j(e,\tau^j,S)}{V_j^j(e,\tau^j,S)}$$

(where $\vec{\tau}$ is the vector of the τ^j and the subscript j represents the partial derivative with respect to τ^j) in place of (9a) and $V^j(e,\tau^j) = V^j(e^{SQ},\tau^{jSQ})$ for every interest group where the veto constraint was binding.

[23]Condition (9a) is basically equivalent to the first-order condition derived in Mayer and Mourmouras (2002) in the absence of IMF lending (using a Grossman-Helpman (1994) menu-auction model) when τ, interpreted as a political contribution, enters linearly and of opposite sign and there are many interest groups. The difference is in equation (9b), where a menu-auction model with political contributions has a reservation utility constraint given by the requirement that the government's utility with positive contributions under the policy it chooses is the same as what it would get if it ignored the contributions of the interest groups. In terms of Figure 3, the equilibrium in the menu-auction model may represented by the point on the contract curve giving the same utility to the government (for a linear formulation for τ) as the case where $\tau = 0$.

Figure 3. Political Equilibrium



that is, the pre-reform policy parameters, and G the most preferred point of the government consistent with the constraint in equation (9b) that the interest group is no worse off than the status quo.

One economic interpretation of the solution, which draws the distinction between macroeconomic and nonmacroeconomic policies, would run as follows. Suppose a reform-minded government wants to improve macroeconomic performance Y, which is influenced primarily by (exchange rate) policies e. Under the status quo, e is at a high level inconsistent with high Y. The government thus wants to reduce e in order to improve the macroeconomy, but an interest group that has significant political power and can block reform prefers the distorted (that is, high) value of e to a lower value of e. In order to gain the acceptance of reduced e, the government must give the interest group higher τ, which could be thought of as a structural distortion that the interest group may particularly favor. To the extent that the government's objective Y is more sensitive to e than τ (implicit in the argument at the beginning of the paragraph), and the interest group's objective is more sensitive to τ than e, the political-economic equilibrium represented by equation (9a) will imply a decrease in e and an increase in τ relative to the status quo.

Assistance Not Directly Affecting Interest Group Welfare

The nature of IMF lending in achieving its policy objectives is now the design of policy given not only the characteristics of the function $Y(e,\tau,S)$—representing the economic constraints—but also the nature of the political constraint. It is assumed from here on that the objective of both the authorities and the IMF is maximization of net output $Y(e,\tau,S) - rS$. I begin by deriving the characteristics of the authorities' politically constrained reaction functions and then consider the implications for both unconditional and conditional lending.

When the political constraint is binding, $e^P(S)$ will lie to the northeast of $e^+(S)$, the politically unconstrained reaction function, indicating roughly the extent to which political constraints worsen the policy menu. It may also generally be flatter, most easily seen in the special case in which τ enters the authorities' and the interest group's objectives linearly but with opposite signs (negatively for the authorities and positively for the interest group). The slope of the $e^P(S)$ schedule may be derived from the first-order conditions (9a) and (9b) as:

$$\left.\frac{\partial e}{\partial S}\right|_{e^P(S)} = -\frac{Y_{eS}\left(e^P(S),\tau^P(S),S\right)}{Y_{ee}+V_{ee}}, \tag{10}$$

where $e^P(S)$ and $\tau^P(S)$ are defined by those first-order conditions. In contrast, the slope of $e^+(S)$ is $-Y_{eS}(e^+(S),0,S)/Y_{ee}$. On the assumption that Y_{eS} is not significantly different in the two cases, $\partial e/\partial S$ will be smaller in absolute value along $e^P(S)$ than along $e^+(S)$. That is, the curve will be flatter.[24]

[24]In the politically constrained case, e is higher (suggesting aid may be more effective), but there are both structural distortions and political constraints (suggesting aid may be less effective). Hence, the difference in the numerator is ambiguous and may be second order relative to the difference in the numerator.

The effect of increases in S on e and τ may be seen most clearly diagrammatically. Since unconditional aid does not affect the position of the constraint $V(e,\tau) = V^{SQ}$, its effect comes entirely from its effect on the government's indifference curve over e and τ. Whether unconditional aid raises or lowers e (with the opposite effect on τ, since the constraint $V(e,\tau) = V^{SQ}$ is downward sloping in $e-\tau$ space) depends on how it affects the slope of the government's indifference curve. Differentiating the left-hand side of equation(9a) with respect to S for given values of e and τ, one derives:

$$\frac{\partial Y_\tau/Y_e}{\partial S} = -\frac{Y_{eS}\dfrac{Y_\tau}{Y_e} - Y_{\tau S}}{Y_e}, \tag{11}$$

which shows how the slope of the authorities' indifference curve changes at a given point. Analogous to the assumptions in the pure economic model, I assume that the numerator on the right-hand side of equation (11) is negative, that is, $(Y_{eS}Y_\tau)/Y_e - Y_{\tau S} < 0$, meaning that the effect of increases in S in lowering Y_e is greater than any effect of higher S in lowering Y_τ. In other words, higher lending increases the output gain obtainable from lowering e, not only in absolute terms ($Y_{eS} < 0$) as in the economic model, but also relative to its effect on the output gain from lowering τ. That is, if one interprets e as an exchange rate policy (or more generally a macroeconomic policy) and τ as a structural policy, the assumption is that an IMF assistance program is more economically effective in correcting a balance of payments or exchange rate problem (more exactly, in the effect of such a change on output), than in correcting a structural problem. This seems to be consistent with how one views the effect of assistance programs.

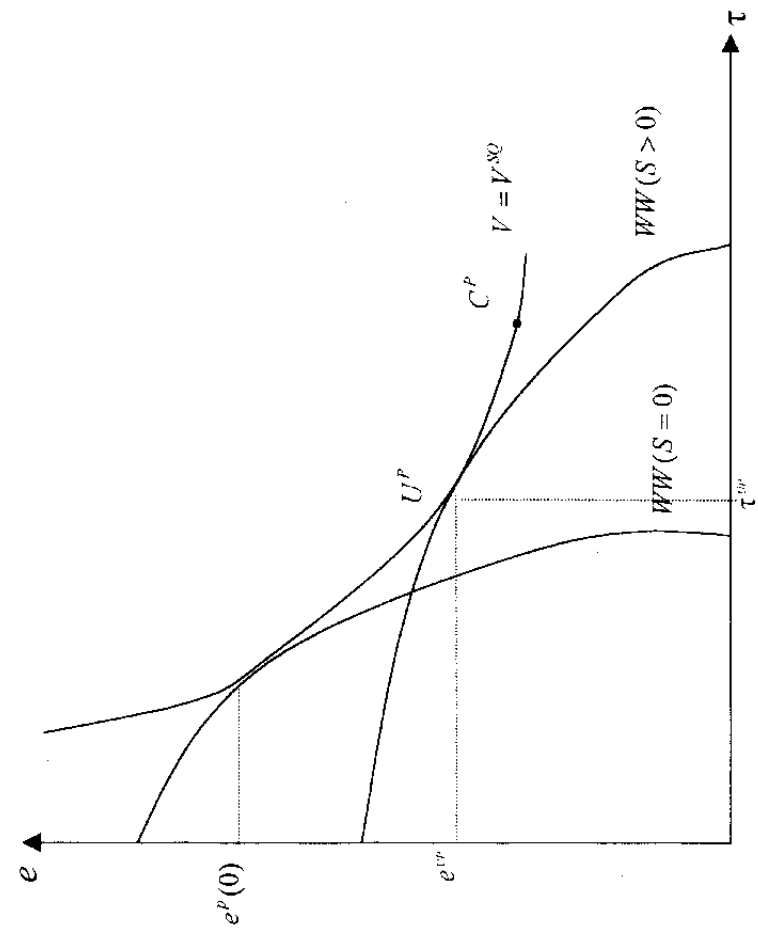
Under this assumption, an increase in S causes the government's indifference curve to become flatter at each point in $e-\tau$ space in Figure 4, as in the flatter WW curve in the diagram. The new equilibrium is one with lower e and higher τ, as represented by U^P—the equilibrium with unconditional lending—with a contract curve analogous to that in Figure 3 that would go through U^P. (Under the opposite assumption that $(Y_{eS}Y_\tau)/Y_e - Y_{\tau S} > 0$, the government's indifference curve would become steeper with an increase in S, so that higher aid would lead the government to choose higher e and lower τ.) The reaction function for the politically constrained case, which we denote $e^P(S)$, is also downward sloping in $e-S$ space. Note that under the assumption that $\partial Y/\partial S > 0$ at (e^o, τ^o), that is, that IMF lending can improve output even if policy is not affected, unconditional lending unambiguously increases output (and welfare from the point of view of the authorities and the IMF).[25]

This result—unconditional lending lowers e in a politically constrained equilibrium (when $(Y_{eS}Y_\tau)/Y_e - Y_{\tau S} < 0$)—may be understood as follows. To begin, suppose that $Y_{\tau S} = 0$, so that our assumption becomes $Y_{eS} < 0$.[26] In other words,

[25]Since (e^o, τ^o) is feasible for $S > 0$, any other point chosen must yield higher welfare than (e^o, τ^o), which yields higher welfare when S is positive than when it is zero.

[26]The assumption that $Y_{\tau S} = 0$ does not mean that changes in τ do not affect Y, but rather that a change in S does not change the effect of τ on Y.

Figure 4. Unconditional and Conditional Lending in Political Equilibrium



higher S raises the responsiveness of Y to e, meaning that the economic benefit of lowering e becomes greater. Since the political cost of lowering e (the need to raise τ to maintain the support of the interest group) is unchanged, the optimal decision is to lower e in response to greater lending, which for an unchanged political constraint means that τ must be raised. The reasoning for the more general case in which $Y_{\tau S} \neq 0$ is identical. Conversely, if $Y_{\tau S} < (Y_{eS} Y_\tau)/Y_e$, the economic benefit of lowering e in terms of higher τ has fallen rather than risen, so the optimal response to more aid would be to lower τ and hence raise e.

Unconditional lending is chosen in essentially the same way as in the purely economic model. The IMF chooses S to maximize $Y(e,\tau,S) - rS$ subject to constraints (9a) and (9b), that is, given the government's politically constrained reaction functions $e^P(S)$ and $\tau^P(S)$. Since lending does not change the position of the $V(e,\tau) = V^{SQ}$ curve, it can only induce a movement along the curve, better macroeconomic or exchange rate policy being "bought" at the price of worse structural policy. The equilibrium value of e would be larger than in the economic model for two reasons. First, the $e^P(S)$ curve lies to the northeast of the $e^+(S)$ curve, implying a higher value of e for any value of S. Second, the $e^P(S)$ curve is flatter than the $e^+(S)$ curve, indicating that the point chosen will be more towards higher e and lower S. Lending meant to maximize a country's welfare will be lower when the authorities face political constraints than when they don't.

The analysis of conditionality in the case of political constraints is also analogous to that in the purely economic model, but with the authorities' reaction function given by $e^P(S)$ rather than $e^+(S)$, and with the authorities' indifference curves similarly defined as taking into account the political constraint. As was seen in the economic model above, conditional lending makes the country worse off when the country and the IMF have different objectives, and can make the country no better off when they have the same objectives.[27] (Point C^P in Figure 4 represents this. A diagrammatic analysis would parallel Figure 2.)

The source of the weakness of both unconditional and conditional lending reflects two characteristics of the political model. First, and quite crucially, the authorities' role as agenda setter gives it all the "bargaining power," allowing it to pick the point on the interest group's indifference curve it finds optimal. Given this, if IMF lending does not affect the interest group's indifference curve, that is, it does not affect the political constraint directly, it can have relatively little effect. Any equilibrium must be on the curve, with points on the reaction function giving the optimal response to lending S. Hence the authorities can do no better than when lending is unconditional. For conditionality to have a role when the constraint is the political power of interest groups (whose interests differ from those of the authorities), either lending must directly affect their welfare or it must strengthen the bargaining power of the authorities in a political setup where this power is limited.

[27] In the case of different objectives (such as an IMF financial constraint), a strong distortion due to the political constraint in the sense of $e^P(S)$ being very much above $e^+(S)$ means that the unconditional and conditional lending solutions will generally be farther apart in the politically constrained case than in the economically constrained case. In this very limited sense one might argue that political constraints in themselves give a role for conditionality, but it is a weak argument given our interest in the case where authorities and the IMF agree on objectives.

Assistance Affecting Interest Groups Utility

If lending induces a shift in the $I(e,\tau,S) = I^{SQ}$ curve to the southwest, it will allow choice of an (e,τ) policy closer to what is optimal according to the authorities' (and the IMF's) preferences. Perhaps less obviously, it will also give a role to conditionality. The general point is presented in this section and some examples in Section IV.

Consider a reform package $P' = (e',\tau')$ that the interest group prefers to the status quo if lending S' is received, but where lending itself makes the status quo less onerous. Specifically, suppose that the welfare of the interest group displays the following characteristics:

$$I(e^{SQ},\tau^{SQ},0) \leq I(e',\tau',S') \leq I(e^{SQ},\tau^{SQ},S'). \tag{12}$$

That is, the interest group prefers reform with lending to no reform without lending, but prefers lending with no reform to lending with reform. This may be seen diagrammatically in Figure 5, in which we consider only one dimension e of domestic policy and draw the interest group's indifference curves over e and S corresponding to the three quantities in equation (12). (Analogous to Figures 1 and 2, one may think of this as a "slice" of a three-dimensional diagram in which τ is held constant.) For any domestic policy, higher lending raises the interest group's welfare. If lending S' is made without any policy conditionality, and the interest group can veto reform programs, it is clear that once the loan has been received the interest group will veto any program P' relative to the status quo if equation (12) holds, implying a point such as U^P. That is, though interest groups would benefit from reform, loans or aid, once given, reduce their willingness to agree to reform. On the other hand, if receipt of the loan S' were made conditional on adopting the program P', that is, if the policy configuration (e^{SQ},τ^{SQ},S') (or (e^{SQ},S') in the diagram) were not an option, the interest group would support the program, implying a point such as C^P.

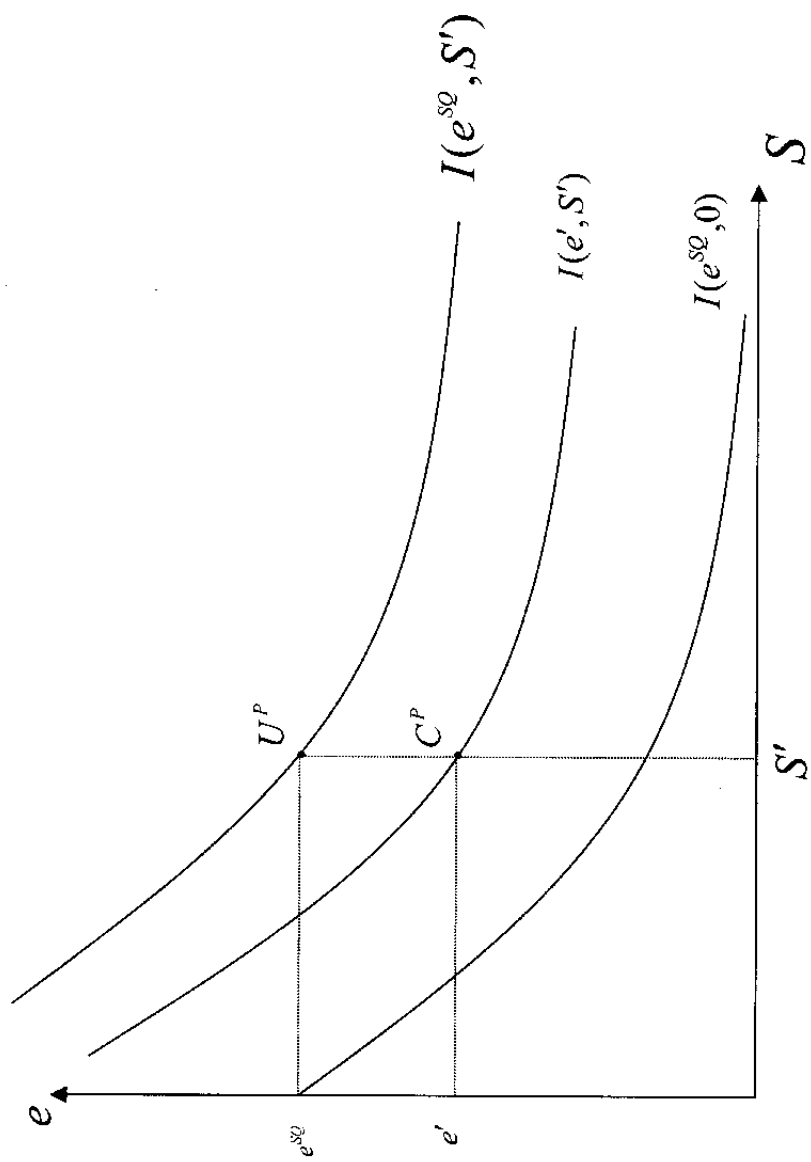
This case requires that $I(e^{SQ},\tau^{SQ},S') > I(e^{SQ},\tau^{SQ},0)$, that is, that lending directly affected the welfare of the interest group, for otherwise the inequalities in equation (12) could not hold. Note further that the conditional lending package does not intervene in the political process per se in the sense of placing political conditions on receipt of loans or in interfering in the domestic political process. It works, however, by taking account of what the political constraints are and designing aid packages with these constraints in mind.

Limited Government Agenda-Setting Power

We have so far assumed that the political mechanism is essentially one in which the authorities choose a policy package that interest groups can either accept or reject. Suppose instead that the policymaking process gave significant bargaining power to the interest group.[28] In this case, even if lending does not affect the interest group's utility directly, it can significantly change the outcome in ways it couldn't when the government was the agenda setter.

[28]Iida (1993, 1996) and Mo (1995) consider bargaining in basic veto player models.

Figure 5. Lending Affects Interest Group's Utility



The importance of conditionality when the authorities cannot make "take it, or leave it" offers may be simply illustrated by reversing the roles of the players, and assuming that the interest group is the agenda setter and thus has all the bargaining power. (The representation of bargaining is very simple, and a more complete model would require an explicitly intertemporal framework. However, the basic point made here will still hold true in richer frameworks.) Consider Figure 6, showing indifference curves in the absence of lending (where by assumption lending only affects the authorities' indifference curves). If lending were unconditional, the interest group would choose the point $I = U^P$, so that government utility is the same as in the status quo. To support a point such as C^P, just to the northeast of the curve $V(e,\tau) = V^{SQ}$ (so that the interest group is infinitesimally better off than in the status quo), the IMF could offer the following (admittedly extreme) conditional lending package. It provides enough lending if policy remains at SQ so that the authorities prefer SQ to any point on the contract curve northeast of C^P; sufficient lending at C^P so that the government prefers it to SQ; and zero lending otherwise. The government will then reject any program other than C^P and revert to the status quo, but it will accept C^P. In terms of the diagram, conditionality eliminates all points on the contract curve preferred by the interest group to the status quo other than C^P. The interest group knows that the government will reject any offer other than C^P and thus will offer this package.

This example illustrates (albeit starkly) how conditionality can strengthen the "bargaining power" of the government in the case where the policymaking mechanism itself does not give it this ability, as we assumed earlier. Though lending doesn't affect the interest group directly, it is sufficient that the interest group knows that, because the *government* derives utility from IMF lending, lending changes its payoffs in such a way that it increases the government's effective bargaining power. This is a "backbone strengthening" effect of conditional lending.

This effect could interact with that in the previous section. That is, when IMF lending affects interest group utility and the government does not have all the bargaining power, conditionality could serve both to shift the interest group's indifference curves—and hence the set of points that are preferred to the status quo—as well as to affect which point in the set is chosen. Interesting as this second line of inquiry is, I do not pursue it in this paper, concentrating instead on the first effect of conditionality outlined earlier in this section.

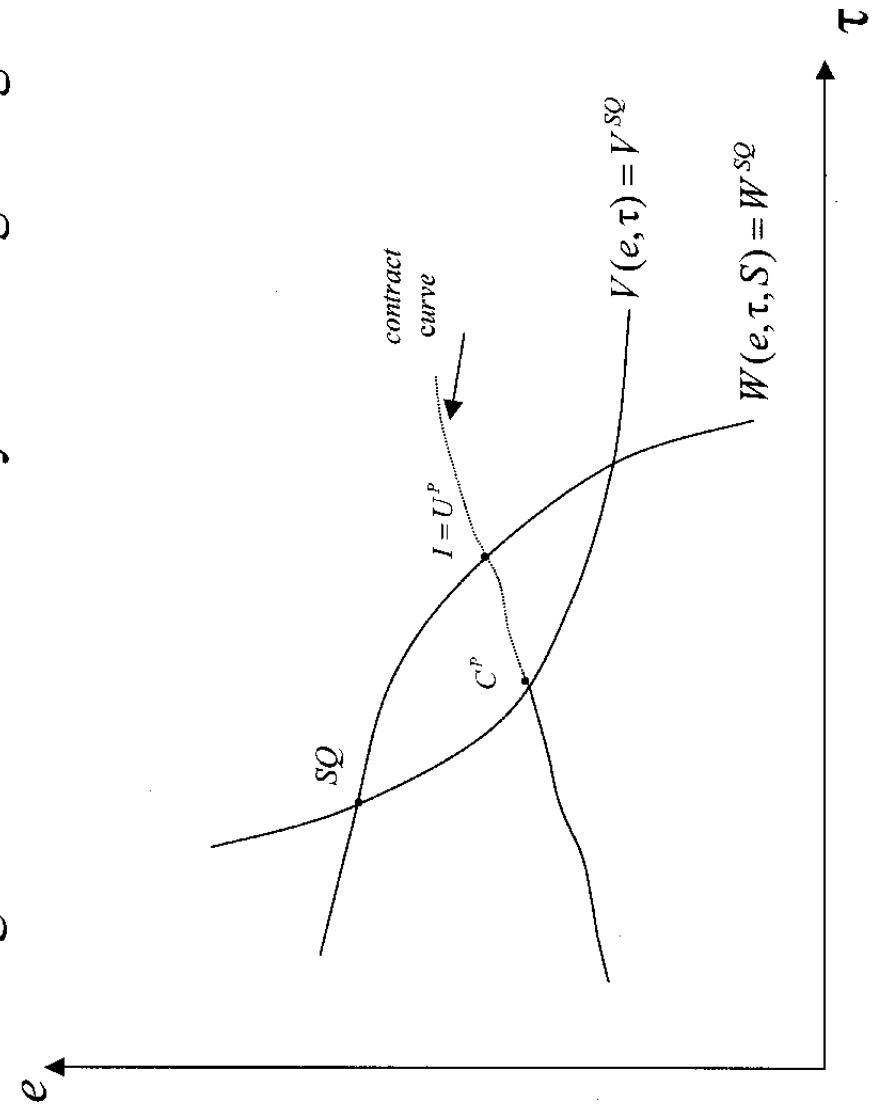
IV. Some Examples

I now briefly sketch some specific examples in which the welfare of an interest group may be directly affected by lending, as well as some implications.

Country Ownership

One simple example where assistance directly affects the interest group's welfare is where it depends on both its private interests, as represented by $V(e,\tau)$, and on "social welfare," as represented by $Y(e,\tau,S)$, with weights α and $1-\alpha$:

Figure 6. Conditionality and Bargaining



$$I(e,\tau,S) = \alpha V(e,\tau) + (1-\alpha)W(e,\tau,S), \tag{13}$$

where $W(e,\tau,S) \equiv Y(e,\tau,S) - rS$. To see the role of conditionality, consider the two inequalities in equation (12) for a specific reform program, for example, the first-best program $P^R \equiv (e^R, 0, S^R)$ as defined by equation (2). In this case, the second inequality in equation (12) becomes:

$$\alpha V(e^{SQ},\tau^{SQ}) + (1-\alpha)W(e^{SQ},\tau^{SQ},S^R) > \alpha V(e^R,0) + (1-\alpha)W(e^R,0,S^R). \tag{14}$$

Equation (14) with equality defines a critical value $\alpha^U(P^R)$, such that for $\alpha \le \alpha^U(P^R)$, the reform will be supported by the interest group (even when lending is unconditional), while for $\alpha > \alpha^U(P^R)$, equation (14) will hold, and the group will veto the reform when lending is unconditional. (Simple algebra shows that the excess of the left-hand over the right-hand side of equation (14) is increasing in α.) It may be said that when $\alpha \le \alpha^U(P^R)$, ownership is high enough (that is, the domestic interest group puts a high enough weight on social welfare) that conditionality is unnecessary.

To consider the role of conditionality, suppose equation (14) holds (that is, $\alpha > \alpha^U(P^R)$), and consider the second inequality for a program P^R. It may be written:

$$\alpha V(e^R,0) + (1-\alpha)W\big(Y(e^R,0,S^R) \ge \alpha V(e^{SQ},\tau^{SQ}) + (1-\alpha)W(e^{SQ},\tau^{SQ},0)\big); \tag{15a}$$

or:

$$V(e^R,0) + \frac{1-\alpha}{\alpha}\Big[\big(Y(e^R,0,S^R) - rS^R\big) - Y(e^{SQ},\tau^{SQ},0)\Big] \ge V(e^{SQ},\tau^{SQ}). \tag{15b}$$

Note first that though $V(e^R,0) < V(e^{SQ},\tau^{SQ})$, the second term on the left-hand side of equation (14b) is positive for an output-increasing reform ($Y(e^R,0,S^R) - rS^R > Y(e^{SQ},\tau^{SQ},0)$), and it is this factor that allows the reform to be politically acceptable.

Moreover, equations (14) and (15) can hold simultaneously. To see this, observe that equation (15a) with equality also defines a critical value $\alpha^C(P^R)$, such that for $\alpha \le \alpha^C(P^R)$, the reform will be supported by the interest group (and vice versa for $\alpha > \alpha^C(P^R)$) if receipt of the loan S^R is made conditional implementing the reform. Since $W(e^{SQ},\tau^{SQ},S^R) > W(e^{SQ},\tau^{SQ},0)$, it is immediate that the value of α that satisfies equation (15) is above the value of α that satisfies equation (14), that is, $\alpha^C(P^R) > \alpha^U(P^R)$. Hence, there is a set of interest group "types," namely, those for whom:

$$\alpha^C(P^R) \ge \alpha > \alpha^U(P^R), \tag{16}$$

such that equations (14) and (15) hold simultaneously. (For any program P, one can derive similar bounds.) For these types, the reform will be blocked if lending is unconditional but will be supported if lending is conditional on acceptance of reform. To complete the argument, when $\alpha > \alpha^C(P^R)$, so that the economic first-

best package is not politically feasible even with conditional lending, equation (15) becomes the binding constraint. The politically constrained second-best reform is that which maximizes $Y(e,\tau,S)-rS$ subject to equations (9a) and (15), that is, where $e = e^P(S)$ and $\tau = \tau^P(S)$, and lending is made conditional on adopting these policies.

This discussion illustrates a notion of ownership when there are domestic political constraints, and how it interacts with conditionality. It shows how conditionality can require a certain degree of country (and not just government) ownership to be effective, but is unnecessary when there is high enough country ownership. If the IMF and the authorities agree on the objective of maximizing net economic performance Y, so that the authorities own the program, it is the "ownership" of interest groups that is crucial. For any program P, conditionality is unnecessary when $\alpha \leq \alpha^U(P)$ and ineffective when $\alpha > \alpha^C(P)$. When equation (16) holds, conditionality is central to reform, and it indicates "how much ownership" is necessary for conditionality to support reform.

Appropriation and Selectivity

Suppose the political process is such that the interest group can appropriate some portion of the aid or lending directly. This approach is motivated by the view that in many cases, assistance programs fail because the lending is simply misappropriated, being used for purposes very different than what was intended.

In Drazen (1999), I considered a formal dynamic model of this phenomenon, in which a government whose objective was to maximize social welfare competes for resources with interest groups who, as in equation (13), care about a weighted sum of social welfare and their own private gains from appropriating resources. A "common property" model was adopted, in which the incentive of interest groups to appropriate a country's resources depends on the level of resources there are to be appropriated. In this setup, "cooperative" behavior of no appropriation cannot be sustained when the amount that can be appropriated in aggregate is too high, with appropriation leading to deterioration in the economy. When the level of resources that can be appropriated becomes low enough, the behavior that interest groups find optimal switches to "cooperative" nonappropriative behavior. A key purpose of the paper was to present a case for selectivity. If interest groups find appropriation to be a dominant strategy and program design is unable to prevent such behavior, then lending will be wasted, and the IMF can do no better than simply not provide loans, that is, adopt a policy of selectivity. In this setup, there is an even stronger argument for selectivity. Since appropriation of resources is optimal from the point of view of interest groups when the resources to be appropriated are high, but not when they are low, denying loans may serve to put a stop to appropriative behavior sooner than would otherwise be the case.

To represent the arguments simply, suppose that lending can either be appropriated as output-reducing transfers to the interest group (denoted A) or can be used to increase economic performance and reduce e. Hence, if an amount A is appropriated and total lending is S, net lending to affect economic performance is $S-A$, so that net output is:

$$Y = Y(e, \tau + A, S - A) - rS. \tag{17}$$

The size of A may be constrained by political or institutional features as summarized by a maximum amount of appropriation $\bar{A}$, so that $A \leq \bar{A}$, where $0 \leq \bar{A} \leq S$.

To model interest group decisions over appropriation, suppose the interest group's welfare is given by equation (13):

$$I(e, \tau, S) = \alpha V(e, \tau + A) + (1-\alpha)(Y((e, \tau + A, S - A)) - rS). \tag{18}$$

The interest group will choose A to maximize equation (18) subject to the constraint on feasible appropriation, given α, the amount of lending S, and the government's policy rules $e^P(S, A)$ and $\tau^P(S, A)$. When α is close to 1 and $\bar{A} = S$, any unconditional lending will be appropriated and hence is worthless to reformist authorities that share the IMF's objective of increasing economic performance. Since loans have a cost in that some fraction of lending must be repaid, reformist authorities would prefer zero unconditional lending. This would coincide with the IMF's reluctance to make unconditional loans if it is known that all lending will be appropriated, that is, if it is known that α is in the range where the interest group will choose $A = \bar{A}$.

Unobserved Types, Preconditions on Lending, and Tranching of Loans

In the case of appropriation, it may be reasonable to assume that the IMF cannot observe the extent to which interest groups desire to appropriate lending.[29] In a standard application of asymmetric information about types, one might assume that the type of government cannot be observed. Here, I will assume that the IMF knows that the authorities are reformist, but cannot observe how appropriative interest groups are. (That is, the IMF does not observe the domestic political constraints that the authorities face.) For simplicity, suppose there are two possible types of interest group, one with low α (high weight on social welfare, or "high ownership"), and the other with high α (low weight on social welfare, or "low ownership"). In a standard principal-agent asymmetric information framework, the principal designs a contract offering different packages, such that the two types reveal his type by the choice of which package they choose. In a model of domestic conflict, even though the authorities' own preferences are known, uncertainty about the "type" of interest group means that the IMF does not know the constrained preferences of the government, that is, its "constrained type." Assume that the IMF can assign probabilities to the types, say probability π that the type is low α and probability $1-\pi$ that the type is high α. Let's denote by $W^H(e, \tau, S)$ the constrained

[29]In presenting a case for selectivity in lending, Drazen and Fischer (1997) and Drazen (1999) argue that conditional lending may be ineffective in addressing appropriation because of problems of asymmetric information and nonobservability. For example, suppose not only that the use of loans cannot be observed, but also that neither policy actions nor the connection between policies and outcomes is fully observable. Coate and Morris (1997) suggest that poorly designed conditionality may make things worse if it induces appropriation in especially inefficient ways.

preferences of a government facing a high α interest group, and by $W^L(e, \tau, S)$ the constrained preferences of a government facing a low α interest group.

Consider two policy packages, (e', τ', S') and (e'', τ'', S''), where these packages are such that the low α type prefers (e', τ', S') to (e'', τ'', S''), and the high α type prefers (e'', τ'', S'') to (e', τ', S'). In a "separating" equilibrium, these packages must obey two sorts of constraints. There are two participation constraints (each type prefers the package "designated" for him to the status quo $(W^L(e', \tau', S') \geq W^L(e^{SQ}, \tau'^{SQ}, 0))$ and analogously for the type with high α for (e'', τ'', S'')). There are also incentive compatibility constraints, whereby each type prefers the package intended for it to the package intended for the other group. (Typically in this two-type setup, only two of these four constraints will bind.) The IMF chooses the packages given these constraints to maximize its expected utility.

Conditionality would be a crucial part of this equilibrium, in that different amounts of lending would be offered in "exchange" for different amounts of adjustment. One may easily show that in this case, the package offered the government facing a low α type (that is, where the domestic political system as a whole exhibits high ownership) will have lower e and higher S. Only conditionality can get types to reveal themselves, allowing optimal use of resources in the face of asymmetric information.

An asymmetric information model in which policy induces self selection also gives a simple explanation for preconditions in lending, as well as for tranching of loans. Suppose we gave policy choice a time dimension, in that policies were chosen not simultaneously but sequentially. To take a simple example, suppose that we consider τ (a structural policy) chosen before e is chosen and before lending S is made. Then, if there is asymmetric information about type, an announcement of a loan package conditional on observed policy τ would serve to direct lending to those countries where it will be most effective.

V. Summary and Conclusions

This paper has attempted to show how political economy can inform both the conceptual thinking about conditionality and ownership, and the possibility of modeling specific arguments. I have concentrated on a specific question, namely, what is the role of conditionality if there is ownership, that is, if a government believes it is in a country's best interests to undertake the program reforms. Key to my approach is the realization that a conflict or heterogeneity of interests is central to understanding conditionality. In contrast to approaches that stress a conflict between the borrowing country and the lenders (whether an IFI or a private lender), I stress a conflict of interests *within* a country receiving loans, in order to show the role of conditionality even when the IMF and authorities agree on the goals of an assistance program. Conditionality can be reconciled with ownership by drawing a careful distinction between country and government ownership.

The basic results of the paper may be summarized as follows. When there are no domestic political constraints on the government, there is no role for conditionality if the IMF and the country agree on the objectives of an assistance program. These objectives can be achieved with unconditional lending, which may

be preferable if the government has better information about the economy. When the IMF and a country have different objectives, conditional lending helps the IMF achieve its objectives, but makes the country worse off than unconditional lending.

When a government faces domestic opposition to reform, conditionality can play a role even when the IMF and the government agree on the objectives of an assistance program. These conditions, however, are not sufficient for conditionality to be optimal. When both the government has the power of an agenda setter to make "take it, or leave it" offers to special interests that oppose reform, and IMF assistance does not directly affect the welfare of special interests, conditional lending makes a country no better off than unconditional lending. This holds true even when special interests have the power to veto reform packages, so that a reform must leave them no worse off than the status quo before reform. Assistance leads to policy change to the extent it changes the government's relative weighting of objectives (for example, if assistance makes it easier to reduce an overvalued exchange rate), but conditionality plays no role per se in helping a government achieve its objectives.

For conditionality to play a role when the IMF and a country's authorities agree on objectives, at least one of two conditions must hold. One possibility is that assistance directly affects the welfare of a domestic interest group that opposes reform, so that lending essentially shifts its indifference curve. Lending thus changes the set of policies that leaves it no worse off than the status quo. Making lending conditional on specific policy changes may be crucial in ensuring that interest groups do not block reform once assistance has been given.

The second possibility is that the government is not the agenda setter. Conditionality may then strengthen the government's bargaining power with interest groups and thus affect policy outcomes. By changing the incentives of the government in a way that interest groups are aware of, IMF lending can affect what special interests offer at the bargaining table even if lending doesn't affect them directly.

It was also shown how a model in which interest groups are directly affected by lending could be used to formalize and better understand a number of issues connected with conditionality and ownership. For example, if interest groups weight both social welfare and their own private interests, a high enough weight on the former (indicating country and not government ownership) will mean that conditionality is unnecessary, while too low a weight implies that it is ineffective. For intermediate values, conditionality can make some reforms politically acceptable, with a formal model making it possible to derive how much country ownership is required for a specific reform to be politically feasible.

The model can also illustrate the case for denying assistance ("selectivity") if interest groups can appropriate aid for their private uses. When there is asymmetric information about the extent to which interest groups weight social as opposed to private welfare, the model gives a simple explanation for preconditions in lending, as well as for tranching of loans.

To summarize, the paper demonstrates how a formal political economy approach could both clarify thinking about conditionality and ownership, and provide a formal apparatus for better understanding when conditionality can help overcome political constraints. As the paper makes clear, there are a number of interesting unexplored avenues, but that is for future work.

REFERENCES

Coate, Stephen, and Stephen Morris, 1997, "Policy Conditionality," Working Paper (Philadelphia: Penn Institute for Economic Research, University of Pennsylvania).

Dhonte, Pierre, 1997, "Conditionality as an Instrument of Borrower Credibility," IMF Paper on Policy Analysis and Assessment 97/2 (Washington: International Monetary Fund).

Diaz-Alejandro, Carlos F., 1984, "IMF Conditionality: What Kind?" *PIDE Tidings*, Vol. 23 (January-February), pp. 7–9.

Diwan, Ishac, and Dani Rodrik, 1992, "External Debt, Adjustment, and Burden Sharing: a Unified Framework," Princeton Studies in International Finance 73 (Princeton: Princeton University Press).

Dixit, Avinash, 2000a, "Incentives and Organizations in the Public Sector: An Interpretative Review," Working Paper (Princeton: Department of Economics, Princeton University).

———, 2000b, "IMF Programs as Incentive Mechanisms," (unpublished; Washington: International Monetary Fund).

Dollar, David, and Jakob Svensson, 2000, "What Explains the Success or Failure of Bank Supported Adjustment Programs," *The Economic Journal*, Vol. 110, pp. 894–917.

Drazen, Allan, 1999, "What Is Gained By Selectively Withholding Foreign Aid?" Working Paper (College Park: University of Maryland).

———, 2000, *Political Economy in Macroeconomics* (Princeton: Princeton University Press).

Drazen, Allan, and Stanley Fischer, 1997, "Conditionality and Selectivity in Lending by International Financial Institutions," paper presented at a Symposium in Memory of Michael Bruno, Jerusalem, November 23–24, 1997.

Federico, Giulio, 2001, "IMF Conditionality," Working Paper (Oxford: Nuffield College, Oxford University).

Grossman, Gene M., and Elhanan Helpman, 1994, "Protection for Sale," *American Economic Review*, Vol. 84, pp. 833–50.

———, 2001, *Special Interest Politics* (Cambridge, Massachusetts: MIT Press).

Haque, Nadeem Ul, and Mohsin S. Khan, 1998, "Do IMF-Supported Programs Work?: A Survey of the Cross-Country Empirical Evidence," IMF Working Paper 98/169 (Washington: International Monetary Fund).

Holmström, Bengt, 1982, "Moral Hazard in Teams," *Bell Journal of Economics*, Vol. 13, pp. 224–40.

Iida, Keisuke, 1993, "When and How Do Domestic Constraints Matter? Two-Level Games with Uncertainty," *Journal of Conflict Resolution*, Vol. 37, pp. 403–26.

———, 1996, "Involuntary Defection in Two-Level Games," *Public Choice*, Vol. 89, pp. 283–303.

International Monetary Fund, 2001, "Conditionality in Fund-Supported Programs: Policy Issues," Policy Development and Review Department (Washington: International Monetary Fund).

Jeanne, Olivier, and Jeromin Zettelmeyer, 2001, "International Bailouts, Moral Hazard, and Conditionality" (unpublished; Washington: International Monetary Fund).

Khan, Mohsin S., and Sunil Sharma, 2001, "IMF Conditionality and Country Ownership of Programs," IMF Working Paper 01/142 (Washington: International Monetary Fund).

Killick, Tony, 1997, "Principals, Agents, and the Failings of Conditionality," *Journal of International Development*, Vol. 9, pp. 483–95.

Marchesi, Silvia, and Jonathon P. Thomas, 1999, "IMF Conditionality as a Screening Device," *Economic Journal*, Vol. 109, pp. C111–25.

Martin, Lisa, 2000, "Agency and Delegation in IMF Conditionality," Working Paper (Cambridge, Massachusetts: Department of Government, Harvard University).

Mayer, Wolfgang, and Alex Mourmouras, 2002, "Vested Interests in a Positive Theory of IFI Conditionality," IMF Working Paper 02/73 (Washington: International Monetary Fund).

Mo, Jongryn, 1995, "Domestic Institutions and International Bargaining: The Role of Agent Veto in Two-Level Games," *American Political Science Review*, Vol. 89, pp. 914–24.

Prendergast, Canice, 1999, "The Provision of Incentives in Firms," *Journal of Economic Literature*, Vol. 37, pp. 7–63.

Sachs, Jeffrey D., 1989, "Conditionality, Debt Relief, and Developing Country Debt Crisis," in *Developing Country Debt and Economic Performance, Vol. 1. International Financial System*, edited by Jeffrey Sachs (Chicago: University of Chicago Press).

Svensson, Jakob, 2000, "When Is Foreign Aid Policy Credible? Aid Dependence and Conditionality," *Journal of Development Economics*, Vol. 61, pp. 61–84.

Tirole, Jean, 2002, *Financial Crises, Liquidity, and the International Monetary System* (Princeton: Princeton University Press).

Tsebelis, George, 2002, *Veto Players: How Political Institutions Work* (Princeton: Princeton University Press), forthcoming.

Vreeland, James Raymond, 1999, "The IMF: Lender of Last Resort or Scapegoat?" Working Paper (New Haven: Department of Political Science, Yale University).

———, 2001, "Institutional Determinants of IMF Agreements," Working Paper (New Haven: Department of Political Science, Yale University).

Willett, Thomas D., 2000, "A Soft-Core Public Choice Analysis of the International Monetary Fund," Working Paper (Claremont, California: Claremont Graduate School).