The Scope of IMF Conditionality

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Abstract

IMF conditionality is controversial, and assessments reflect assumptions about the degree of delegation the organization enjoys from its member countries. We use a dataset drawn from the IMF's records of conditionality to test two models of the design of conditionality: a public-choice and a conditional-autonomy model. Public-choice critics argue that the Fund is an out-of-control agency that seeks to maximize its importance by imposing the highest levels of conditionality the market will bear. To the contrary, we find that the Fund has refrained from exploiting the vulnerability of particular countries to maximize the scope of conditionality. Alternatively, critics of major-power influence in the IMF claim that conditionality reflects the interests of the major shareholders rather than the needs of borrowing countries. We find evidence of U.S. influence, which operates to constrain conditionality, but only in vulnerable countries that are important recipients of U.S. aid. In ordinary countries under ordinary circumstances, broad authority is delegated to the Fund, which adjusts conditionality to accommodate local circumstances and domestic political opposition.

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1. Introduction

Popular and academic critics of the International Monetary Fund (IMF, or simply, the Fund) broadly agree on a negative assessment of conditional lending—the practice of requiring countries that draw on IMF funds to promise to make policy changes—but their diagnoses diverge. Public-choice critics assume that the Fund enjoys substantial discretion and seeks to extract maximum degrees of economic reform in order to expand its importance in the world economy. Critics of major-power influence, on the other hand, assume that the Fund is closely controlled by its major shareholders and argue that conditionality reflects their interests. While quantitative studies of conditionality have begun to appear, most of this debate is unsupported by quantitative data, because the Fund has only recently begun to publish documents that reveal the details of conditionality and to allow researchers access to its archives. This paper uses data on the conditions applied under all IMF programs between 1992 and 2002 to provide the most comprehensive study of the politics of conditionality to date. We exploit the fact that conditionality is the outcome of a bargaining process to use the pattern of bargaining outcomes to answer questions about the IMF's objectives and the degree of its autonomy from its shareholders.

The degree of the IMF's autonomy is controversial. The IMF was not designed to be the independent world central bank that Keynes envisaged; from the beginning, its members, most notably the United States, expressed a preference for a member-controlled organization rather than a supranational one. However, the Fund's management and staff have gradually gained autonomy from the shareholding countries represented on the Executive Board.[2]

[2] Martin 2006.

Critics of the IMF fear that this autonomy goes much too far, and that autonomy leads to excessive and counterproductive forms of conditionality. The public choice view[3], which influences prominent policy recommendations such as the Meltzer Commission Report[4], views this as an expression of an organizational interest in promoting mission creep. On the other hand, other critics have argued that the IMF is insufficiently independent from its principals, the countries that hold most of its shares, and that this may jeopardize its credibility.[5]

From a principal-agent perspective, the public choice view posits that both screening and monitoring have failed: the agent's preferences diverge from the principals', and the principals are unable or unwilling to exert effective control. The puzzle that this perspective cannot explain is why, in that case, the principals have chosen to delegate so much authority.[6] The argument presented here is that the IMF exercises *conditional autonomy*, which can be revoked at will. An empirical claim, which will be substantiated in the next section and tested below, is that this is achieved through a set of informal governance practices that have allowed the United States to retain the substance of decisive influence in the organization while shedding most of the formal levers of power. The long-run objectives of the IMF are congruent with those of U.S. foreign economic policy—the principal has succeeded in constructing an organization that faithfully pursues its long-term objectives—but the

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[3] Vaubel 1986, Vaubel and Dreher 1994, Przeworski and Vreeland 2000, Vreeland 2003.

[4] Meltzer 2000.

[5] Thacker 1999; Oatley and Yackee; Author.

[6] Hawkins et. al. 2006.

principal's interests are subject to short-term fluctuations, and the principal is unable to make binding commitments to shelter its agent from its own decisions to interfere. The implication is that we should expect that conditionality should reflect long-term economic policy priorities during normal times in ordinary countries, but it should reflect political interference on the part of the United States during crises in politically important countries.

The content of conditionality in IMF programs is the subject of bargaining between the Fund and the borrower, and this theoretical setting has implications for the appropriate econometric strategy. Because bargaining involves the strategic use of threats to block agreement, we use data on which countries participate in IMF programs to generate proxies for bargaining power, which we subsequently use to test for bargaining effects. We first estimate the probability of participating in an IMF program.[7] We use a bivariate probit model with partial observability, which, unlike single-equation selection models, captures the fact that participation depends upon decisions made both by the IMF and by the borrowing country.[8] The model generates two predicted marginal probabilities: the probability that a country applies to the IMF for support and the probability that the IMF is willing to approve a program. These probabilities can be interpreted as measures of expected utilities that the researcher cannot observe: governments that are motivated to accept IMF financing are more

[7] In addition to addressing our substantive interest in bargaining, this approach addresses the problem of selection bias: if the process of program selection is not independent of the determinants of conditionality, analyses of conditionality that do not control for selection may be biased.

[8] Przeworski and Vreeland 2000, Vreeland 2003. We do not observe whether a non-participating country applied for a program and was rejected, or would have been approved but chose not to seek IMF support. Nevertheless, it is possible to draw inferences about the effects of particular variables on the countries' and the IMF's choices by making identifying assumptions that rely upon strong priors (Poirier 1980).

likely to apply, and countries that the IMF or its principals have incentives to support are more likely to be approved.[9] The predicted probabilities therefore measure the bargaining power of the borrower and the Fund, respectively. In the second stage of the analysis, we analyze the substantive scope of conditionality. We employ a negative binomial event count model, where the dependent variable is the number of categories of conditions that apply at each test date during a program.

The empirical analysis leads to three main findings. First, we reject the implications of the public choice view of the Fund as a bureaucratic agency that pushes for influence and strives to maximize conditionality.[10] To the contrary, the Fund typically refrains from exploiting conditions of high economic vulnerability to impose additional conditions. Second, we find evidence of U.S. influence over conditionality, but that influence is exercised in ways that indicate a broad delegation of authority to the Fund. Lending to important recipients of U.S. foreign aid is associated with narrower conditionality, but only when these countries are vulnerable to external conditions. We interpret this finding to mean that the United States intervenes to constrain the Fund's application of conditionality only when important aid recipients have urgent need for Fund support. Third, bargaining over conditionality is responsive to domestic political constraints. The evidence again rejects the public choice view that constrained governments evade public accountability under the cover

[9] The bivariate probit estimates two latent variables that represent the expected utility of participation to each actor, and the predicted probabilities represent the probabilities that these utilities are positive in each observation.

[10] Vaubel 1986, Dreher and Vaubel 2004.

of a Fund program.[11] Instead, domestic political constraints appear to enhance a borrower's bargaining position vis-à-vis the Fund, leading to more narrowly targeted programs of policy reform.[12]

The rest of this paper is organized as follows: Section 2 provides a theoretical backdrop for the empirical analysis. Section 3 describes our data and the pattern of IMF conditionality. Section 4 describes the estimation strategy and presents our first-stage estimation of the factors influencing participation in IMF programs. Section 5 evaluates the determinants of the scope of conditionality, controlling for the probability of program participation. Section 6 concludes.

2. Theory and Hypotheses

Public Choice

Conditionality is not stipulated in the IMF's Articles of Agreement, and was originally instituted at the insistence of the United States and over the objections of the rest of the membership. After the collapse of the Bretton Woods system of fixed exchange rates the Fund reinvented itself as an agency with extensive involvement in the politics of development, and managing conditionality became a more important part of its mandate. As late as the 1970s, only 26 percent of IMF loan disbursements involved substantial conditionality, but the Latin American debt crisis in the 1980s and the expansion of lending

[11] Vreeland 2003.

[12] Putnam 1988.

to Africa increased this figure to 66 percent by the end of the 1980s.[13] In the subsequent decade covered by the present study, the number of conditions specified in an IMF program steadily climbed in response to new substantive problems, including the transition from state planning to the market in former Communist countries and the importance of financial sector issues in the East Asian crisis. At the same time, the scope of conditionality ventured into areas of domestic economic structure and policies outside the Fund's traditional purview and competence. Critics see the bureaucratic interests of the IMF behind the gradual accretion of new spheres of influence.[14]

It did not take long for the Fund's conditionality to come under severe criticism. Williamson (1983) summarized the charges to include a doctrinaire adherence to free markets, insensitivity to individual country conditions, and the overriding of national sovereignty. These charges, which were leveled in response to the limited conditionality of the 1970s that sought to control only macroeconomic variables, have increased their currency as the reach of conditionality has expanded. The IMF continues to be criticized for applying one-size-fits-all policy prescriptions without sensitivity to context, ignoring borrowers' domestic political constraints, and promoting the interests of major shareholding governments (or their elites) at the expense of borrowing countries' needs.[15] Especially following the Asian crisis, the IMF was faulted for conditionality that sought to control too

[13] Boughton 2001, 561.

[14] Vaubel 1984, Dreher and Vaubel 2004.

[15] e.g., Meltzer 2000, Easterly 2001, and Stiglitz 2002.

many policy variables, many of which extended beyond its traditional areas of competence;[16] moreover, it was claimed, such conditionality did not help and may even have hurt economic prospects.[17] Sympathetic insiders and the Fund itself have conceded that conditionality may, as a consequence of these shortcomings, have been superficially implemented, requiring a shift to greater "ownership" of reform by country authorities and "streamlining" of its content.[18]

Implicit or explicit in most critiques of IMF autonomy is a public choice view of international institutions: the Fund is an autonomous agent that seeks to maximize conditionality, and once released from Pandora's box, it exploits opportunities for conditional lending to promote its own influence in the international system.[19] The principals, in this view, are unable or unwilling to monitor the behavior of their agent very closely, so the Fund enjoys wide latitude to select loan recipients and to design conditionality.[20] Expanding the number of loan recipients and the invasiveness of its

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[16] Feldstein 1998, Hills, Peterson and Goldstein 1999, Goldstein 2001.

[17] Feldstein 1998. An extreme example of the proliferation of conditions is the program introduced in Ukraine on the eve of its financial collapse in 1998, which contained 227 prior actions and performance criteria (Ukraine 1998). Goldstein (2001) judged conditionality to have been excessively intrusive during the Asian crisis. Based on their conclusion that IMF-supported programs are associated with lower GDP growth rates, Przeworski and Vreeland (2000) inferred that lending is conditioned on inappropriate policy measures.

[18] Khan and Sharma 2001 and Drazen 2002 call for greater ownership, and IMF 2005 introduced the initiative to streamline conditionality. Even studies showing beneficial outcomes of IMF programs, while recognizing the value of commitment to policy reform, question whether the form or scope of conditionality is crucial to achieving the needed commitment (Mody and Saravia 2006).

[19] Vaubel 1984, Dreher and Vaubel 2004.

[20] Martin (2006) argues that distributional conflict among the shareholders leads to a multiple principal problem.

preferred policy reforms makes the IMF a more vital player in the international economy, and thereby promotes the careers and improves the outside options of its employees. The IMF has the most discretion to determine the scope and nature of conditionality when a country's short-term economic prospects critically depend on receiving IMF financial support. Therefore, if the IMF's objective is to maximize conditionality, the conditions should be most extensive when borrowers are most vulnerable. We test this proposition. The null hypothesis is that, rather than attempting to maximize conditionality, the IMF seeks to negotiate an optimal package of reforms based on a technical conception of conditionality, reflecting national circumstances. In this case, conditionality need not be associated with the Fund's bargaining leverage.

A domestic-politics variant of the public choice approach focuses on agency problems within the borrowing country, emphasizing that Fund policies undermine political participation and representation in the countries to which the IMF lends. In this view, governments participate in Fund programs in order to escape accountability to voters or otherwise evade domestic political constraints. Critics have argued that governments engage in IMF programs in order to depress real wages and transfer wealth to economic elites.[21] Even if a government negotiates a reform program with the Fund that represents its true preferences, it may have incentives to blame the Fund for imposing these reforms upon it against its will. This allows the government to confront domestic actors that are not privy to the negotiations with a *fait accompli*: they must either support the government's program in spite of their misgivings or forfeit IMF support. While they might be tempted to punish the

[21] Vaubel 1986, Przeworski and Vreeland 2000, Vreeland 2003.

government for putting them in this position, they do not know whether its claim of duress is true or false, so they may decide not to oppose the government if this entails some costs. The testable implication of this argument is that governments have incentives to accept more intrusive conditions if they are constrained by legislative opposition or numerous coalition members, because conditions are a means for leaders to evade the constraints of domestic politics. The null hypothesis—also an influential view—is that the borrowing country prefers fewer conditions and will exercise its available leverage to reduce the scope of conditionality.[22] In this view, represented by the literature on two-level games, domestic constraints represent bargaining leverage, and should be associated with less intrusive forms of conditionality.[23]

Conditional Autonomy

In contrast to public choice approaches, a growing body of literature suggests that limits to IMF autonomy create the potential for time inconsistency. Principals may find it convenient to use IMF programs as an inexpensive form of foreign aid. They may draw upon their influence at the Fund to attempt to induce recipient governments to support their foreign policy objectives, and they may be reluctant to risk destabilizing friendly regimes. The principals' long-term interests in promoting economic development and open markets may suffer when they subordinate the Fund's priorities to these other objectives, because this undermines the credibility of the loans-for-reforms contract. Indeed, if they could commit

[22] Krasner 1985, Dreher and Vaubel 2004.

[23] Putnam 1988, Haggard and Kaufman 1995.

themselves in advance to refrain from these inefficient practices, they might do so. In the absence of an effective commitment device, however, short-term interests may outweigh long-term ones. Recent studies indicate that major shareholders are able to skew the distribution of IMF loans and to subsequently undermine the enforcement of conditionality.[24] Similarly, countries that enjoy special relationships with the Fund's principals may be able to use them to avoid the rigors of extensive conditionality.[25]

While there is substantial evidence of U.S. influence in IMF policymaking, there is also evidence of substantial delegation and autonomy. The present paper argues that the process of IMF decision making suggests a two-track model, which we term *conditional autonomy*: in ordinary times, the Fund creates policies autonomously, and in special circumstances, shareholders—particularly, the United States—intervene in the process to achieve particular objectives. The conditional-autonomy model predicts that the design of conditionality should reflect U.S. preferences only in the countries of most interest to U.S. policymakers, and only when the circumstances make IMF lending particularly important to the borrower.

IMF decision making is shaped by formal rules and by informal practices that allow for substantial deviations from the rules. There are extensive formal rules that insulate the design of conditionality from participation by shareholders through their Executive Directors. Except for those representing the borrower, Executive Directors do not participate in

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[24] Thacker 1999, Barro and Lee 2002, Dreher and Jensen 2003, Eichengreen, Gupta, and Mody 2006, Author.

[25] Polak 1991, Dreher and Jensen 2007.

missions to countries or the negotiation of programs. In addition, they are not privy to the confidential documents that are key to the negotiations, the Mission Briefs that determine the parameters of the negotiator's discretion and the Back-to-Office reports that report on the progress of negotiations.[26] Most programs are negotiated by IMF staff in accordance with these formal rules, without input from Executive Directors or country authorities. However, Executive Directors and officials from the capitals of major shareholder countries are able to participate informally in program development when they are motivated to exert the necessary effort, and they can have significant influence when they do so. This influence is overwhelmingly exercised by the United States. For example, the U.S. Executive Director routinely interviews Chiefs of Mission before and after missions to Latin American countries, and in extraordinary cases such as Mexico, Russia, Indonesia and Korea, senior U.S. Treasury officials were intimately involved in the details of the negotiations.[27]

How does a country that holds only seventeen percent of the voting power in an organization exercise a controlling interest in its activities? The United States does this through informal participation, in a way that is similar to the way minority shareholders can control publicly held corporations if they exert sufficient effort. The informal practices of the Fund qualify the formal rules and at times override them. According to the formal

[26] This may seem surprising; after all, the principal should want full access to information in order to monitor the agent effectively. When interviewed, however, IMF officials unanimously agreed that these documents were never provided to Executive Directors. Executive Directors reported that they never asked to see them, and they would not expect Staff to comply if they did. There was broad agreement that these rules were necessary to safeguard the integrity of the bargaining process, because the Directors could not commit to not reveal the Staff's bottom line to the borrowing country if they knew what it was.

[27] IEO 2003.

procedures, the Managing Director exercises a remarkable degree of gate-keeping power and proposal power as Chairman of the Executive Board. Voting on the Executive Board is almost always unanimous, and amendments are not allowed to country lending items because they have been negotiated with country authorities before they are brought to the Board for ratification. In effect, the Managing Director can control the agenda and choose his most preferred policy from the feasible set. However, informal participation allows influential shareholders to control the substance of the Management proposal, assuming the formal proposal-setting prerogatives of the Chair for themselves. The United States exercises effective control because the United States participates much more actively than any other shareholder. The United States has a tremendous organizational advantage over other shareholders because it has a more extensive diplomatic corps, particularly important private financial institutions, numerous advantages in gathering information, and all of the advantages of having the IMF located in the U.S. capital, in addition to issuing the international reserve currency and commanding the resources of a superpower. With the exception of France and England, which exercise substantial influence in their respective spheres in Africa, the United States is usually the only active participant.

In ordinary times, the United States and the other shareholders have no compelling interest in intervening in the details of conditionality. The IMF's principals, the United States and the other major shareholders, have long-term objectives that are reflected in the Fund's Articles of Agreement and official lending policies: promoting prudent macroeconomic management, market-oriented economic reforms, and trade openness. The Fund is a technocratic agency with staff selection procedures guaranteed to promote policy outcomes broadly consistent with those interests, so there is no need to closely monitor its

daily activities. Furthermore, the major shareholders have no general conflicts of interest about these objectives, so they have no occasion for conflict. However, the shareholders also have interests in particular countries that lead to short-term deviations from their long-term ideal points, and these can be sufficiently compelling to induce them to take a direct hand in particular decisions. If conditionality reflects shareholder intervention on behalf of favored client countries, the pattern of conditionality should reflect the variation in shareholder participation in program design.

Under what circumstances will the United States choose to exercise its informal influence, and for what purposes? One possibility is that U.S. intervention will take a form similar to trade policy, which is motivated by narrow, well-organized private sector interests. There is, indeed, anecdotal evidence for this pattern in certain cases, such as the design of the Mexican program in 1995 and the Korean program in 1997. However, private sector interests are generally well served by the default option of allowing the Fund to develop policy autonomously, so interest groups have weak incentives to organize. A more compelling possibility is that the United States participates when its security or broader strategic interests become involved, because these interests are not ordinarily represented in IMF objectives. U.S. participation in program design should be skewed towards strategically important countries. In Argentina in 2001, for example, the State Department and National Security Council pushed for extending loans, while Treasury was initially reluctant.[28] These strategic interests only become operative, however, when securing IMF financing becomes a high priority for an important borrower. From a borrower's perspective, influence with the

[28] Blustein 2005, Taylor 2007.

United States is a valuable resource, which should only be drawn down when the stakes are high. Thus, the effects of the borrower's strategic importance should be conditional on the borrower's external vulnerability. This pattern of incentives, furthermore, dictates the form that U.S. participation should take: it should lobby for weakening conditionality, either by urging concessions on Management at the program design stage or by encouraging it to waive conditions that have not been met at the subsequent enforcement stage. The United States employs its influence to weaken conditionality because the incentive for participating in the process is to accommodate the interests of an important client that is desperate for IMF support.

3. Describing IMF Conditionality

This paper uses a new dataset extracted from the IMF's Monitoring of Agreements Database (MONA), which covers the 96 countries that participated in IMF programs between 1992 and 2002. We reorganized the data in terms of country-month units. Thus, for each country-month, we identify whether the country was participating in an IMF program and, if so, what performance criteria were currently applicable. We coded IMF conditionality in nineteen categories, representing the most frequently applied types, ranging from fiscal and monetary policy to exchange rate restrictions and structural reforms.

The data measure quantitative macroeconomic performance criteria and structural benchmarks, which are the key yardsticks of compliance with conditionality. Performance criteria are formal conditions that must be met by a corresponding test date, or officially waived by the Executive Board in the event of non-compliance, in order for scheduled disbursements to be made under IMF programs. Benchmarks are more specific structural

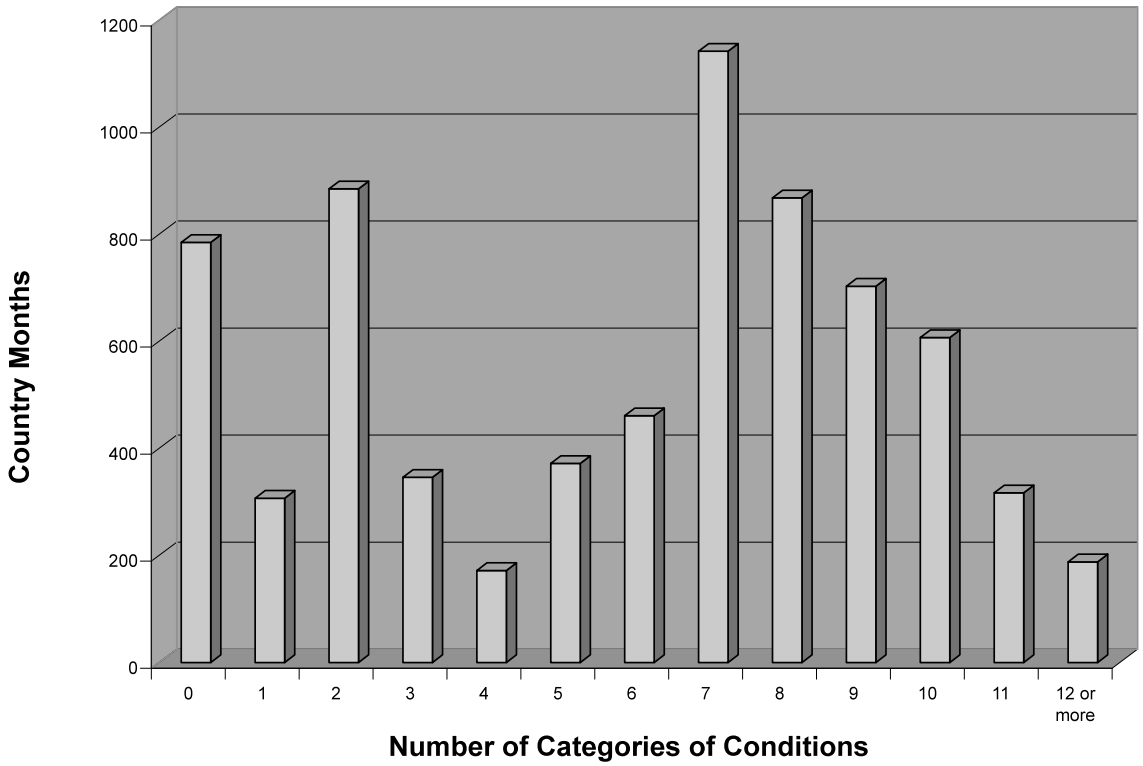
reforms, such as privatization, deregulation and tax reform that are used to determine a country's compliance with a program, but do not automatically call for suspending IMF support in the event of non-fulfillment. Our measure of conditionality excludes prior actions, which are conditions that must be met before the Executive Board approves a program. Excluding prior actions means that we focus on the elements of conditionality that a country promises to implement in the future when it contracts with the Fund.

The dependent variable of primary interest is the number of categories of conditions subject to test in the forthcoming review. We code this variable retrospectively based upon program reviews, so that the conditions prevailing in April and May are those that will be the basis for the review to be held in June. This measure of conditionality captures the scope—or, to the Fund's critics, the intrusiveness—of conditionality. This definition of conditionality focuses on the range of obligations that constrain country authorities at any given point in time. In adopting this more refined measure of conditionality, we go beyond assessments of conditionality that depend, for example, on letters of intent.[29] As IMF authors have emphasized, conditionality evolves over the course of a program in response to country policies and unanticipated events, so the scope of a program contained in a Letter of Intent may give a misleading snapshot of what is really a moving target.[30]

[29] Gould 2003, Dreher and Jensen 2003, 2005, and Copelovitch 2004.

[30] Mussa and Savastano 1999.

Figure 1: Scope of Conditionality
(Frequencies of Country-Months in which Each Number of Categories of Conditions Applied)



In an average month, six categories of conditions were subject to test at the next review; about two-thirds of the time, at least two and no more than ten types of conditions were under review. In about 11 percent of program months, no conditions were tested because the program remained open after the final review. Figure 1 illustrates the variation in the number of categories of conditionality applied. For the statistical analysis reported below, we include only observations that fall on test dates to avoid inflating the number of observations. [Figure 1 about here.]

Table 1 illustrates the substantive variety of IMF conditionality. Some aspects of IMF conditionality are very consistent: domestic credit is constrained and reserve targets are

set about half the time, and there is almost always some limit on public debt or government spending, although the forms of those restrictions vary. There is a strong emphasis on avoiding foreign debt arrears. Some programs involve extensive regulation of public spending, taxation, borrowing, and the maturity structure of domestic and foreign debt, while others simply set deficit targets. However, the frequent criticism that the IMF systematically promoted fixed exchange rate regimes in the 1990s is not supported by the data on conditionality.[31] To the contrary, the data support a different criticism: the Fund is too neutral with respect to exchange rate policy, and allows itself to be captured by country authorities that are determined to defend overvalued exchange rates, as happened in Russia in 1998, Brazil in 1999, and Argentina in 2001.[32] Although structural conditions of some sort are being tested 43 percent of the time, even our coarse breakdown of structural reforms into six categories indicates that structural conditionality varies enormously across countries. In fact, the way we have aggregated the data understates the case. Our experience with the raw data revealed that many structural reforms are very country-specific and refer to proper names of institutions and organizations to be reformed, so a six-fold categorization of structural reforms exaggerates the similarity of conditions across countries.

[31] Hills, Peterson, and Goldstein 1999; IFIAC 2000; Stiglitz 2002.

[32] Blustein 2001, IEO 2003, 2004, Mussa 2002.

Table 1: Coverage of Conditions under IMF programs, 1992–2002

	All programs	SBAs	EFFs	ESAFs	PRGFs
Monetary policy:					
Domestic credit	0.53	0.54	0.69	0.54	0.42
Balance of payments reserve test	0.53	0.58	0.75	0.46	0.42
Fiscal policy:					
Fiscal deficit	0.37	0.39	0.61	0.29	0.35
Domestic public borrowing	0.47	0.36	0.47	0.63	0.50
Domestic public debt	0.34	0.27	0.31	0.43	0.40
Long-term foreign debt ceiling	0.62	0.59	0.77	0.65	0.56
Long-term for. debt sub-ceiling	0.47	0.43	0.62	0.48	0.49
Short term debt	0.58	0.54	0.75	0.60	0.60
Fiscal actions	0.36	0.26	0.44	0.45	0.47
Debt service:					
External arrears limit	0.20	0.15	0.14	0.32	0.12
No new external arrears	0.60	0.40	0.64	0.77	0.95
Exchange rates:					
Exchange rates	0.05	0.06	0.08	0.02	0.03
Foreign exchange operations	0.03	0.04	0.02	0.02	0.05
Structural reforms:					
Public sector reform	0.13	0.04	0.10	0.22	0.27
Banking	0.17	0.18	0.22	0.20	0.22
Privatization	0.09	0.03	0.03	0.18	0.13
Price controls	0.07	0.01	0.11	0.13	0.13
Trade actions	0.02	0.01	0.02	0.04	0.07
Others	0.07	0.03	0.03	0.12	0.13
Observations (months)	*7203*	*2664*	*1366*	*2811*	*1154*

The scope of conditionality varies across types of IMF programs. Stand-by facilities (SBAs) are typically one- to two-year programs offered to middle-income borrowers, and they test an average of five categories of conditions per month; Extended Fund Facilities (EFFs) are typically three-year arrangements with more ambitious goals, and they average seven test categories. Extended Structural Adjustment Facilities (ESAFs) and Poverty

Reduction and Growth Facilities (PRGFs) are long-term programs for poor countries, and their average levels of conditionality were intermediate between the other two. The replacement of the ESAF program by the PRGF ushered in new poverty-reduction targets and increased the emphasis on debt arrears, but otherwise generally scaled back the application of conditionality.

A principal components analysis of the categories did not reveal any clear pattern of clustering of types of conditions; thus, it is not the case that conditionality follows, for example, one, two, or more typical patterns. Rather, conditions are applied idiosyncratically and apparently in response to local circumstances. Only one component was revealed to be important, and it reflected the number of categories applied, so in the analysis that follows we use the number of categories of conditions as our measure of the breadth of conditionality.

4. Participation in IMF Programs

In the first stage of our analysis, we model participation in IMF programs using a bivariate probit model with partial observability.[33] The dependent variable for the analysis is an indicator variable coded 1 when a country participates in a program and 0 when it does not. We treat this variable, *z*, as the product of two decisions: $d_{i,t}^{G}$, the government's decision

[33] This model is due to Poirier (1980), and has been used in studies of IMF conditionality by Przeworski and Vreeland (2000) and Vreeland (2003). The model is *bivariate probit* because the dependent variable is modeled as the product of two dichotomous decisions (one made by the country and the other by the IMF). It is a model with *partial observability* because we only observe ones when both the country and the IMF choose a program; when we observe zeros we do not know whether the country, the IMF, or both rejected a program. In contrast to Vreeland (2003, 105–6), we do not assume that the two decisions are independent, so the model includes a parameter for the correlation between the error terms.

to participate, and $d_{i,t}^{IMF}$, the IMF's decision to approve a program. We observe $z_{i,t}$=1 only when $d_{i,t}^{G}$=1 and $d_{i,t}^{IMF}$=1. The sample includes only observations in which there is no prior program in force, so the model explains program initiation.

The government's value of participating in an IMF-supported program is expressed by the latent equation:

$$d_{i,t}^{G*} = X_{i,t}^{G} \quad_{G} + \quad_{i,t}^{G}$$

Similarly, the IMF's value of participation is:

$$d_{i,t}^{IMF*} = X_{i,t}^{IMF} \quad_{IMF} + \quad_{i,t}^{IMF}$$

The probability of observing z=1 is the probability that both latent variables are positive, where the disturbance terms ($\varepsilon_{i,t}$) are distributed normally with correlation . If denotes the bivariate standard normal distribution, then the probability of program initiation is:

$$p_i = \quad \left(X_{i,t}^{G} \quad_{G}, X_{i,t}^{IMF} \quad_{IMF}; \quad \right)$$

Several macroeconomic and domestic political variables, as well as time series controls, are assigned to both equations, implying that they influence both decisions (see Table 3, below). For example, an extensive literature on participation in IMF programs finds that the level of foreign reserves, changes in reserves, and changes in the exchange rate are correlated with program initiation. In addition, we allow for the degree of democracy, the number of countries participating in programs, and the government's legislative support, left-right policy inclinations, and number of coalition partners to influence both decisions. At this point, however, a set of priors is needed to identify the latent equations, which allow us to distinguish the country's decision to apply for a program from the IMF's decision to

extend support. Multiple identification restrictions are required for global identification.[34] We identify our model by assigning the variables specified in Table 2 to only one equation.

Table 2: Identifying Conditions

Government Decision to Enter a Program	IMF Decision to Support a Program
Foreign Debt /GDP	Foreign Debt
Current Account Deficit /GDP	Current Account Deficit
Budget Deficit /GDP	Institutional Weakness
Past Participation in IMF Programs	Institutional Effort
GDP per capita	U.S. Aid Recipient
Net Foreign Direct Investment	UN Voting (S-Score with U.S.)
Proximity to an Election Year	IMF Quota
	OECD Aid

To make our results comparable to previous work, we follow Przeworski and Vreeland (2000) and Vreeland (2003) in assigning several macroeconomic aggregates normalized by GDP to the government's decision, while assigning the same aggregates in absolute terms to the IMF's approval decision. The substantive import of this assumption is that the IMF may have special concerns about the impact of a country's instability on international markets that the country's own government does not share. We expect that governments' interest in participating in programs depends on the frequency of past participation, which allows for the possibility of recidivism.[35] In addition, governments of poorer countries and those that are not sustained by substantial inflows of foreign direct

[34] Poirier 1980, 213. In our experience, the model is unstable until the equations are pinned down by a few instruments with strong effects, but the results then become robust to the inclusion of additional instruments.

[35] Bird, Hussain, and Joyce 2004.

investment should have more interest in participating in a program. In addition, we expect that governments will be more willing to assume the political risks of unpopular policies shortly after winning an election.

An important identifying assumption for the approval equation is that the IMF's willingness to extend a program depends upon a country's technical capacity to implement one, but a country's interest in participating does not. Our measure of institutional capacity is derived from the pattern of missing data in the information reported to the IMF and published in *International Financial Statistics*.[36] Principal components analysis of the pattern generates two variables. *Institutional weakness* is measured by the first principal component of the missing data, which captures the overall prevalence of missing data. The second principal component has a mix of positive and negative loadings, and a larger value appears to represent the *institutional effort* that countries make to comply with IMF reporting standards.[37] In addition, following a growing literature that shows that IMF lending depends

[36] For each of eighteen key variables, we coded a dummy variable to take the value 1 if data were missing in a given month and zero otherwise. The eighteen variables were: imports, exports, current account, the interest rate on treasury bills, the change in the money supply (M1), the exchange rate, international reserves, inflation, aggregate domestic credit, claims on the central government, central bank claims on the central government, central bank foreign liabilities, budget balance, net domestic borrowing, net foreign borrowing, foreign debt, commercial bank foreign liabilities and commercial bank reserves. Principal components analysis of these series revealed two main components (eigenvalues of 10.0 and 2.3, respectively), which together account for 68 percent of the variation along the eighteen dimensions. The scoring coefficients for the two components are in Appendix Table A1.

[37] The interpretation of the first component is clear, because all of the loadings are positive, but the interpretation of the second component (*institutional effort*) is more complex. It has positive loadings for budget balance, foreign and domestic borrowing, and foreign debt, but negative loadings for less frequently available macroeconomic and banking indicators. Countries in the sample typically report the variables that load positively and not those that load negatively, so the typical pattern generates a negative value for this component. A

(continued)

upon ties with the United States and other leading IMF shareholders, we allow for the possibility that the Fund's willingness to support a program will be affected by U.S. foreign aid to the borrowing country, the association in UN voting patterns between the potential borrower and the United States, and development aid from other OECD countries.[38] Also, the size of a country's claim on IMF resources (IMF quota) may affect the Fund's willingness to extend a program. Finally, Vreeland (2003) identifies his model by assuming that countries care about the size of economic aggregates relative to their GDP, whereas the IMF, which is concerned about global stability, is concerned about macroeconomic aggregates only if their absolute size is large. We test for this possibility but do not find support for it.

Our results, presented in Table 3, indicate that country decisions to apply for IMF support are related to long-term capital needs, macroeconomic vulnerability, and the timing of elections. [Table 3 about here.] All else equal, poorer countries (those with lower per capita incomes) are more likely to seek IMF assistance. Foreign exchange reserves play an important role in seeking IMF support. The average country in the sample held 3.5 percent of GDP in reserves, but a country that held one standard deviation more in reserves, or 65.5 percent of GDP, was 54 percent less likely to apply for an IMF program. Higher foreign debt also appears to motivate countries to turn to the Fund, but the quantitative effect is small. A larger fiscal deficit (smaller fiscal balance) appears to steer a country away from the Fund,

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larger value, conversely, represents the tendency to report data that low-capacity governments would not ordinarily generate without prodding from the IMF.

[38] Thacker 1999; Barro and Lee 2002; Dreher and Jensen 2003. A series of influential studies support the argument that the United States uses aid as an instrument of foreign policy (Boone 1996, Alesina and Dollar 2000, Alesina and Weder 2002). A recent analysis shows that the non-permanent members of the U.N. Security Council receive disproportionate shares of U.S. aid, especially before critical votes [JPE].

suggesting that governments expect conditionality to be onerous in a situation of rising public debt. The average country in the sample had a budget deficit of 1.6 percent of GDP, but a country that had a deficit one standard deviation greater, or 5.5 percent, was 14 percent less likely to apply for a Fund program. Similarly, although low reserves move a country toward a Fund program, countries with deteriorating foreign reserves appear to be reluctant borrowers (p=.07). Domestic political constraints appear to weigh heavily on borrowers' minds, because a government is 42 percent more likely to apply in the year after it has won an election. Democracies, however, show more interest in program participation, suggesting congruence between democracy and economic reforms.

Recipients of U.S. aid are 39 percent more likely to have their programs approved. Strikingly, aid from other members of the OECD does not have a discernible influence on IMF decisions to approve programs. *Institutional weakness*, measured by the prevalence of missing data, is negatively related to IMF decisions to extend programs, implying that general weakness in institutional capacity reduces the IMF's willingness to support a program. A one-standard deviation increase in the prevalence of missing data reduces the probability of program approval by 28 percent. Conversely, a government that makes an effort to comply with IMF reporting standards raises the probability that it will be approved for a program: the variable *institutional effort* is positively related to program approval, with a one-standard deviation shift increasing the probability that the Fund grants a program by 16 percent. Finally, countries that have substantially devalued their exchange rates, or that have recently suffered from exchange rate crises, are more likely to be approved for IMF programs, presumably because program targets more likely to be achieved.

These results support one hypothesis derived from the public choice perspective: governments prefer to wait until after elections to turn to IMF programs, to avoid electoral accountability for the short-term pain of reforms. However, several other public choice hypotheses are rejected. Vreeland (2003) argues that governments with large numbers of coalition members should be eager to participate in IMF programs in order to commit themselves to carry out reforms that would otherwise be blocked by veto players; in contrast, the IMF should be less interested in initiating programs under those circumstances. We find no support for either hypothesis. Vreeland further argues that the Fund's interest in pushing loans should be reflected in a decreasing probability of extending new programs when many countries are concurrently participating, as its interest in expanding its influence becomes satiated and its resources become tightly stretched. We find no such effect.

In sum, countries are eager to apply when their need for emergency financing is severe, but reluctant when the rates of change of macroeconomic aggregates indicate that the Fund will prescribe tough fiscal and monetary discipline. Democracies are more likely to apply for programs, but will generally wait until after an election to come to grips with politically risky reforms. The probability that the IMF will approve a program is higher when the borrower is a recipient of U.S. foreign aid, when the country has high levels of institutional capacity and also makes an effort to collect the data that the IMF requires, and when the borrower's currency has recently depreciated. These results provide a plausible basis for using the predicted probabilities from our two equations as measures of the interest of the borrower and the willingness of the IMF, respectively, to initiate an IMF program.

5. The Scope of Conditionality

The dependent variable is the number of categories of conditions subject to test in the current month, ranging from 0 to 19, and we use a negative binomial event count model to analyze variation in the scope of conditionality.[39] Observations are defined whenever new information about conditionality appears in the dataset: when a new program is initiated, when a program review occurs, and when a disbursement is scheduled or actually takes place.

Conditional Autonomy

We hypothesized that if the IMF's autonomy to determine conditionality were constrained, variables associated with borrowers' relationships with the leading shareholders should affect conditionality. We found that countries that received U.S. foreign aid were more likely to be approved for IMF programs. We now turn to a more direct test of this hypothesis, and we find that countries that receive substantial amounts of U.S. foreign aid are

[39] Negative binomial regression is a generalization of the Poisson event count model. Unlike the Poisson, it does not assume that the rate of occurrence, λ, is constant across events in an observation. Instead, it is parameterized by the gamma distribution, with $E(\lambda)=\varphi$ and $v(\lambda)=\varphi(\sigma^2-1)$. For our purposes, this means that the marginal probability of observing an additional condition can vary within a particular month; for example, some conditions could be more or less likely if other conditions are called for. The distribution of the dependent count variable is given as:

$$f_{nb}(y_i \mid \quad , \quad ^2) = \frac{\overline{\quad ^2 \quad 1} + y_i}{y_i! \quad \overline{\quad ^2 \quad 1}} \quad \frac{^2 \quad 1}{2} \quad ^{y_i} \left(\quad ^2 \right)^{\frac{\quad}{^2 \quad 1}}$$

where is the gamma distribution (King 1989, 51–52).

subject to dramatically reduced degrees of conditionality. This effect, indeed, is substantively important enough to overwhelm the effects of all other factors in the countries that are the largest aid recipients. This is not the full story, however. Closer examination of these effects indicates that the United States intervenes in the design of conditionality selectively, rather than systematically. We find that the Fund enjoys *conditional autonomy* to design conditionality. The United States becomes involved only when the borrower has a pressing need for IMF support, and is less willing to intervene on behalf of countries with weak institutional capacity.

The first model presented in Table 4 indicates that U.S. aid is associated with narrower conditionality. These effects are important enough to warrant further investigation, so we estimate a second model to determine the conditions under which it operates. The second model interacts U.S. foreign aid with three measures of vulnerability: *trade openness* (reflecting dependence on continued access to international markets), *debt service,* and *short-term debt* (representing rollover risk), and our measure of *institutional weakness*. These interactive effects require interpretation, so Figure 2 presents substantive effects of the variables based on Model 2.

Figure 2: Effects of U.S. Foreign Aid on Scope of Conditionality[40]

		Vulnerability Measures		
		low	mean	high
Institutional Weakness	high	19.8%	-0.8%*	-21.4%
	mean	13.2%	-7.3%	-28.0%
	low	7.3%	-13.2%	-33.8%

Effect of a one standard-deviation increase in U.S. foreign aid, conditional on vulnerability and institutional weakness.
*Not statistically significant.

The entries in the cells are the substantive effects of a one standard-deviation increase in U.S. foreign aid; because of the interactions, these effects depend upon the vulnerability and institutional capacity of the borrower. U.S. aid is associated with reduced conditionality, but only when countries are at least as vulnerable as the average program participant—i.e., when debt service is at least 18 percent of exports, at least 10 percent of debt is short term (has a maturity of one year or less), and trade accounts for at least two-thirds of GDP. We interpret this to indicate that the influence represented by aid is a resource both for the United States and for the aid recipient, and recipients are reluctant to spend this resource when it is not necessary to do so. When they are not vulnerable, aid recipients choose not to spend their influence by calling on the United States to influence the Fund. When vulnerability is high, however, this effect can be large. In a high-capacity state with high vulnerability, a one

[40] Vulnerability measures include the ratio of trade to GDP, debt service as a share of exports, and the percentage of total debt held in short-term instruments. High and low are one standard deviation above and below the mean, respectively. For ease of presentation, the three measures are varied simultaneously because their effects are qualitatively the same. U.S. aid in these models is measured in millions of U.S. dollars. The results were qualitatively the same when U.S. aid was measured as a percentage of GDP.

standard-deviation increase in U.S. aid has the effect of reducing the scope of conditionality by one-third.

On the other hand, borrowers that are less vulnerable than the average program participant according to all three measures are subject to greater conditionality: the estimates indicate that the effect of one standard deviation of U.S. aid in a low-capacity state with low vulnerability is to expand the scope of conditionality by about 20 percent. When the United States does not interfere on behalf of a country that has substantial latent influence, the Fund management may seize the opportunity to impose a robust set of conditions that will provide strong grounds for suspending financing in the future in the event of non-compliance. It is important to note, however, that the number of observations of IMF programs in cells with low vulnerability on all dimensions is relatively small and, hence, this effect refers to relatively few recipients of IMF support.

The United States appears to be less willing to intervene on behalf of low-capacity states (those with substantial missing data), which are more penalized for aid when not vulnerable and less advantaged by their influence with the United States when vulnerable. This suggests that the substantive significance of U.S. foreign aid is very different for relations with strong states than for weak states. Strong states are more nearly equals, and the fact that they are important enough to the United States to receive aid indicates that they have leverage that they can use to demand concessions. Weak states in Africa, in contrast, may depend upon foreign aid for ten percent of GDP and as much as two-thirds of government consumption, and are in no position to make demands.

IMF Objectives

As noted above, the bivariate probit model employed at the selection stage generates two predicted probabilities: the marginal probability that a country applies to the IMF for support, and the marginal probability that the IMF is willing to approve a program. We use these predicted values as measures of bargaining power.[41] The expectation of bargaining theory is that the probability that a country seeks a program should be associated with wider conditionality and the probability of program approval should be associated with narrower conditionality.

The public choice model offers a clear-cut prediction about the first of these variables: the IMF imposes the maximum possible level of conditionality, so countries that are motivated to accept IMF support are compelled to accept more conditions. Our results contradict this expectation, however. Countries that are eager to receive loans accept no more restrictions than those that are reluctant. Instead, we see a pattern in which the IMF imposes more conditions on reluctant borrowers and fewer on countries that are eager to participate. Perhaps IMF staff judge that countries that are highly motivated to seek IMF loans also have strong internal incentives to carry out reforms without explicit IMF conditionality, and that it is the reluctant reformers who require extensive surveillance. For our purposes, however, it is significant that we observe that the IMF refrains from imposing

[41] Because these probabilities are estimated, it is necessary to correct the standard errors in the second stage for the variance of the estimated regressors. In the absence of an analytical solution for the particular combination of models used here, we use a bootstrap approach. Bootstrapping involves drawing multiple samples of size N from the data with replacement, replicating the procedure multiple times, averaging the coefficients and calculating the standard errors from the empirical distribution of beta.

maximum levels of conditionality when it has the opportunity to do so; this is behavior that is inconsistent with the image of an out-of-control agency seeking to expand its influence.

The bargaining expectation is borne out for the probability of program approval. This could be consistent with alternative interpretations, depending upon the determinants of program approval. The public choice perspective predicts that the IMF should offer programs with fewer conditions when its own organizational incentives make it disposed to make loans, which would account for the observed association between a high probability that the IMF grants a program and reduced conditionality. However, the results of the first-stage analysis did not support public choice hypotheses about the IMF's motivations for making loans.[42] The most impressive influence on the IMF's willingness to lend was whether a country was a recipient of U.S. foreign aid. This gives the coefficient in the second stage an interpretation consistent with our earlier findings about the constraining effect of U.S. aid: the Fund is constrained by its principals, and the same factors that lead to program approval act to limit the extent of conditionality. Countries that are favored in the distribution of IMF programs receive more attractive terms because they know that the Fund's threat to withhold support if they do not accept its policy recommendations is not credible.

Another important dimension of bargaining power is the borrower's need for external financing. Countries that use a large portion of their exports for debt service and that owe a large proportion of their foreign debt in short-term instruments (resulting in greater rollover

[42] The IMF does lend more readily to countries that consistently publish data, that make an effort to collect the data that the IMF demands, and that have devalued their currencies, all factors that should satisfy organizational incentives to approve programs only if they are likely to be successful. However, since these factors also indicate that less conditionality may be necessary for technical reasons that have nothing to do with organizational biases, they do not represent clean tests of a public choice hypothesis. As noted above, other public choice hypotheses about loan origination were rejected.

risk of external financing) should be particularly dependent upon non-market sources of financing. Indeed, we found above that countries with significant external debt are more likely to seek IMF support, and they should therefore be willing to accept more conditions in return for that support. The IMF, on the other hand, aware of its strong bargaining position, should be able to push for far-reaching reforms in this situation.[43] The public choice perspective indicates that the Fund should not hesitate to exploit these opportunities to extract extensive reform commitments. Similarly, countries with more open economies are likely to be more vulnerable to international supply and demand shocks, and the IMF should therefore enjoy a bargaining advantage.

Our results again reject these expectations, however.[44] When these forms of vulnerability have any effect, it is to reduce rather than to increase the incidence of conditionality. As discussed above, vulnerability interacts with U.S. foreign aid in determining the conditionality outcome, so a complete discussion of the effects of vulnerability requires evaluation of these interaction effects. Figure 3 explores the substantive effects of various measures of vulnerability, which depend upon the level of U.S. foreign aid. In each column, one vulnerability measure varies by one standard deviation while the others are held constant.

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[43] Stallings 1992.

[44] We also hypothesized that countries with large populations or large IMF quotas, which roughly track the size of the national economy, trade and reserves, and capture a country's weight in IMF Board votes, would enjoy extra bargaining leverage. However, there is no evidence that these variables have any effect.

Figure 3: Effects of Vulnerability Conditional on U.S. Foreign Aid

		Vulnerability Measures		
		Trade	Debt Service	Short-term Debt
U.S. Foreign Aid	high	-11.8%	-8.7%	-12.9%
	mean	-3.9%	-2.6%	-6.3%
	zero	Insignificant	insignificant	insignificant

In no case do countries receive more ambitious program targets because they are dependent upon foreign trade flows, heavily indebted, or in imminent need of debt restructuring; if these factors affect conditionality, it is only to reduce it. Thus, contrary to popular criticisms of Fund policies during the East Asian crisis of 1997, international vulnerability has not, on average, led to more conditionality. When the IMF faces a particularly vulnerable country, it typically refrains from imposing the maximum possible degree of conditionality. However, none of the three variables that indicate vulnerability has any effect on conditionality in countries that receive no U.S. foreign aid, which implies that vulnerability affects conditionality only because it triggers the latent effects of U.S. influence. In countries that do receive generous amounts of U.S. aid, these forms of vulnerability are reflected in substantially reduced degrees of conditionality. Countries that are both vulnerable to sudden stops of financing and influential in Washington find ways to bring their influence to bear on the IMF, and this is reflected in the pattern of conditionality.

The effect of one form of vulnerability appears to support the public choice view, but our two-stage research design provides explanatory leverage that suggests an alternative

explanation. Poor countries receive programs with more extensive conditions. Dreher and Jensen (2007) have a similar finding and argue that poor countries have a weak bargaining position and are compelled to accept more conditions. If so, we ought to find this result reflected through the effects of our measures of bargaining power. We do indeed find that poor countries more actively seek support, which appears to support the view that the IMF is able to insist upon extensive reforms when the recipient has intense need for a program. However, as we saw above, the motivated borrowers that actively seek support are subject to less extensive conditionality, rather than more, which contradicts the public choice hypothesis. Thus, the effect of poverty cannot act through bargaining. Instead, the most plausible interpretation is that IMF staff believe that sweeping reforms are more appropriate or necessary in low-income countries than in middle-income countries.

Borrower Objectives

The effects of domestic political conditions and state capacity, furthermore, reject the domestic variant of the public choice hypothesis, which held that governments use the Fund strategically to misrepresent their preferences to voters. To the contrary, the evidence points to conventional bargaining effects, with bargaining strength deriving from domestic constraints. First, countries with democratic institutions receive markedly fewer conditions: an increase of one standard deviation on the Polity scale, or 5.5 points on a 21-point scale, results in an eight percent decrease in the number of conditions. This finding is subject to two possible interpretations, both consistent with a bargaining hypothesis. It may be that the Fund is sensitive to the criticism that its conditionality endangers the fragile, new democracies in many borrowing countries. Alternatively, it could be that democratic

governments insist on more lenient programs because they face more domestic policymaking constraints than authoritarian governments. In either case, the IMF apparently accommodates the constraints of democratic politics.

Controlling for the degree of democracy, presidential systems receive seven percent fewer conditions than parliamentary democracies. This effect is consistent with a two-level bargaining interpretation: presidents lack some of the institutional advantages for legislating reform that prime ministers enjoy, and domestic weakness is associated with international bargaining power.[45] Again, this evidence contradicts the hypothesis that presidents generally turn to the Fund to tie their hands vis-à-vis the legislature because they lack the legislative powers of prime ministers. Certain presidents have clearly done this—Russia's Boris Yeltsin comes to mind—but in the aggregate, Presidents bargain with the Fund and use divided government as an excuse to limit their concessions. Yeltsin followed this pattern, as well.

Political coalitions, which play an insignificant role in determining participation in IMF programs, nevertheless figure prominently in program design. Vreeland (2003) argues that fragmented governments are particularly eager to adopt binding conditions because their numerous coalition members block any movement away from the status quo. Leaders who desire reform in those circumstances find the IMF a convenient scapegoat, because they can use the prospect of losing IMF support as bargaining leverage within their own coalitions. To the contrary, we find that fragmented coalition governments constrain, rather than expand, the scope of conditionality. Each additional party added to a coalition government reduces the breadth of conditionality by approximately two percent. In addition,

[45] Putnam 1988, Mansfield, Milner and Rosendorf 2000, Martin 2000.

governments with leftist ideologies receive less expansive reform targets. Governments of the Left are more resistant to expansive proposals for sweeping reform, and the bargaining outcome reflects their preferences. We see no evidence that left-wing governments are particularly anxious to establish credibility or to avoid the policy consequences of populist electoral mandates.[46]

Finally, state capacity variables provide further evidence of bargaining. Controlling for per capita income levels, the weak states in sub-Saharan Africa received 21 percent fewer conditions. Low-interest rate facilities (SAF, ESAF and PRGF), available only to low-income countries with generally weak states, are associated with approximately six percent narrower conditionality. Furthermore, countries with one standard deviation lower administrative capacity than the mean received four percent fewer conditions. Countries that are unlikely to be able to implement sweeping reforms apparently leverage their weaknesses into bargaining strength. Weak states bargain for reduced conditionality rather than using the IMF as a cover to implement expansive reforms.

6. Conclusions

We reach conclusions about the autonomy of the IMF, about the organizational objectives of the Fund, and about the motivations of its borrowers.

We find substantial evidence of U.S. influence over IMF lending and over the pattern of conditionality, but with important qualifications. Countries that receive large amounts of U.S. foreign aid negotiate less ambitious applications of conditionality, and the effects of

[46] Milesi-Ferreti 1995, Cukierman and Tommasi 1998.

U.S. aid on conditionality are substantively very important. We interpret this to mean that the IMF cannot credibly threaten to withhold support from countries that enjoy the strong support of its largest shareholder, the United States, and consequently these countries enjoy a substantial bargaining advantage. A direct test of these causal links confirms this interpretation: countries that receive U.S. aid are 39% more likely to be offered IMF programs, and countries that are more likely to be offered a program accept fewer categories of conditions.

The qualification of these results is that U.S. aid only constrains conditionality when the borrowing country suffers from above-average levels of vulnerability to international shocks compared to the sample of program participants, which make IMF financing particularly urgent. We interpret this to mean that countries are reluctant to draw on their reserves of influence with the United States when their need for financing is not urgent, leaving the IMF free to negotiate conditionality according to its own objectives. We describe this situation as conditional autonomy: the IMF is autonomous when the borrower is unimportant to the United States or the borrower is unwilling to spend the influence needed to call upon U.S. assistance in dealing with the Fund. The effect of U.S. aid is similarly weakened when the borrower has weak institutional capacity, indicating that the relationship between aid donors and recipients depends on the strength of the recipient state. Strong states can bargain with the United States on a more nearly equal footing; weak states accept what they must.

We find no support for public choice arguments that IMF lending reflects organizational imperatives to push loans or to maximize conditionality. The IMF's willingness to lend does not appear to depend upon the number of countries currently

participating in IMF programs. There is, furthermore, no evidence that the IMF is less willing to lend to governments facing significant domestic opposition. Nor does the IMF systematically attempt to maximize conditionality; to the contrary, countries that are anxious to borrow are subject to narrower, rather than broader, conditionality. High levels of foreign debt and financial weakness impel countries to turn to the Fund for support, but neither debt service, rollover risk nor trade exposure are associated with more extensive conditionality. Rather than exploiting this bargaining leverage, the Fund apparently relies on the incentives that markets impose on vulnerable borrowers to institute effective reform programs. The use of conditionality has steadily increased over time and has reached more deeply into domestic economic policy. In light of the evidence that the Fund avoids imposing intrusive conditionality on the most vulnerable borrowers, however, there is reason to think that these trends reflect changing views on how best to address macroeconomic instability and the underlying causes of difficult development problems rather than a boundless ambition to expand conditionality.

The domestic variant of the public choice hypothesis, which maintains that governments turn to the IMF in order to overcome domestic opposition or to escape accountability to voters, fares no better. We find no evidence that governments are more likely to turn to the IMF when they face domestic opposition to reform. Furthermore, borrowers do not adopt more extensive reform commitments when the opposition is stronger. To the contrary, the effects of democracy, division of powers, fragmented coalitions, and state capacity indicate that domestic constraints reduce the scope of conditionality. Borrowers use their domestic weaknesses to their bargaining advantage, and the IMF accommodates these domestic constraints.

The trade-off between autonomy and legitimacy dominates proposals to reform the IMF and to redistribute voting shares among its members, but the debate is inadequately informed by empirical data. Academic and popular treatments alike assume that IMF conditionality is inflexible, failing to take into account the economic circumstances in which countries find themselves, and failing to adjust to the political realities on the ground that may make dangerous nonsense of idealistic policy reforms. Policy briefs representing the public choice view see the IMF as excessively autonomous, with a tendency to mission creep.[47] This study rejects these conclusions. We find that conditionality varies widely, and that the Fund apparently refrains from maximizing the scope of conditionality when countries are most in need of IMF resources. In addition, whether by design or by necessity, conditionality accommodates domestic political constraints. On the other hand, a different set of concerns appears to be very real. The Fund typically exercises autonomy, but that autonomy can be revoked when the United States exercises its informal influence over the process of program design. This interference distorts the application of conditionality, and may contribute to the IMF's credibility problems. The evidence suggests that the dangers of an autonomous IMF have been greatly overstated, and that the limitations on the Fund's autonomy are a more serious concern.

[47] Meltzer 2000.

Table 3. Participation in IMF programs, 1990–2002 (full model)

Partial observability bivariate probit
Number of observations = 14,440 (country months)
(robust standard errors adjusted for clustering by country)

	Country Decisions			IMF Decisions		
	Coef.	Std. Err.	*p*	Coef.	Std. Err.	*p*
reserves/GDP	-0.0087	0.0025	0.00	0.0021	0.0016	0.19
Δ reserves	0.0004	0.0002	0.07	-9.0E-06	1.7E-05	0.60
Δ exchange rate	-0.0008	0.0012	0.52	0.0691	0.0297	0.02
polityIV	0.0238	0.0125	0.06	0.0169	0.0120	0.16
Seats	0.0000	0.1665	1.00	-0.0762	0.2555	0.77
left_right	0.0492	0.0493	0.32	0.0208	0.0402	0.60
no. in coalition	0.0616	0.0416	0.14	-0.0228	0.0236	0.33
number under	-0.0093	0.0049	0.06	0.0108	0.0082	0.19
GDP per capita	-0.0001	4.98E-05	0.01			
fiscal bal/GDP	0.0338	0.0154	0.03			
current acct./GDP	0.0005	0.0008	0.56			
foreign debt/GDP	5.0E-10	1.2E-10	0.00			
FDI	-5.2E-12	1.10E-11	0.64			
prior participation	-0.1802	0.4478	0.69			
Election	0.3502	0.1844	0.06			
current acct.				0.0001	0.0001	0.39
foreign debt				1.64E-11	2.2E-11	0.45
Institutional Weakness				-0.1144	0.0475	0.02
Institutional Effort				0.0939	0.0364	0.01
U.S. aid				0.3314	0.1667	0.05
UN Voting (S-U.S.)				-0.0353	0.1218	0.77
foreign aid (DAC)				-6.4E-05	0.0002	0.75
Quota				-0.0006	0.0006	0.27
Spline1	0.0134	0.0214	0.53	-0.0424	0.0169	0.01
Spline2	-0.0172	0.0071	0.02	0.0001	0.0040	0.99
Spline3	0.0101	0.0036	0.01	0.3240	0.8436	0.70
Constant	-0.8590	0.4375	0.05	-1.9803	0.3255	0.00
ρ	0.9076	0.2519	0.29			

Table 4. Conditionality under IMF Programs, 1990–2002

Negative binomial regression
No. of obs. 2794
Bootstrap estimates, 500 repetitions

	Coeff.	Std. Err.	*p*	Coeff.	Std. Err.	IRR	*p*
Pr(country applies)	-0.363	0.194	0.06	-0.394	0.203	0.6745	0.05
Pr(IMF grants)	-0.138	0.063	0.03	-0.128	0.066	0.8796	0.05
No. of countries under	-0.002	0.002	0.16	-0.003	0.002	0.9973	0.10
Program duration	-0.001	0.001	0.22	-0.001	0.001	0.9993	0.19
Extended program	0.135	0.020	0.00	0.162	0.023	1.1762	0.00
Low income program	-0.036	0.029	0.21	-0.065	0.029	0.9374	0.03
GDP per capita	-2.1E-05	7.2E-06	0.00	-2.7E-05	7.2E-06	1.0000	0.00
Sub-Saharan Africa	-0.228	0.026	0.00	-0.240	0.027	0.7867	0.00
Polity II	-0.015	0.002	0.00	-0.015	0.002	0.9850	0.00
No. coalition members	-0.021	0.005	0.00	-0.021	0.005	0.9790	0.00
Time to legislative elections	0.000	0.001	0.55	0.000	0.001	0.9996	0.53
Left_right	0.019	0.006	0.00	0.021	0.006	1.0210	0.00
Presidential system	-0.081	0.025	0.00	-0.070	0.024	0.9320	0.00
Seats supporting gov't	0.002	0.037	0.95	0.019	0.038	1.0194	0.61
IMF quota	-2.4E-05	2.3E-05	0.30	-2.3E-05	2.5E-05	1.0000	0.35
Population	-3.5E-05	4.6E-04	0.94	-1.2E-04	5.0E-04	0.9999	0.80
U.S. foreign aid	-1.8E-04	7.4E-05	0.01	0.002	0.001	1.0020	0.01
UN voting (S-U.S.)	-0.001	0.038	0.98	-0.022	0.039	0.9781	0.57
War	0.024	0.030	0.42	0.028	0.027	1.0284	0.30
Year	0.019	0.005	0.00	0.019	0.005	1.0190	0.00
Poor standing	-0.051	0.037	0.17	-0.054	0.039	0.9479	0.17
Institutional Weakness (missing1)	-0.014	0.010	0.16	-0.021	0.011	0.9792	0.06
Institutional Effort (missing2)	0.011	0.007	0.15	0.011	0.008	1.0107	0.16
Openness (trade/GDP)	-0.001	3.3E-04	0.11	-1.6E-04	3.8E-04	0.9998	0.68
Debt service (% of exports)	-0.001	0.001	0.19	-1.1E-04	8.6E-04	0.9999	0.89
Short-term debt (% of debt)	-0.006	0.002	0.02	-0.003	0.003	0.9965	0.19
Short-term debt (% of debt)^2	1.2E-04	3.6E-05	1.0E-03	9.7E-05	3.9E-05	1.0001	0.01
U.S. aid x Institutional Weakness				3.6E-04	2.5E-04	1.0004	0.15
U.S. aid x Openness				-1.4E-05	4.7E-06	0.99999	0.00
U.S. aid x Debt service				-2.7E-05	7.9E-06	0.99997	0.00
U.S. aid x Short-term debt				-4.3E-05	1.5E-05	0.99996	0.00
Constant	-35.224	9.928	0.00	-35.150	9.580		0.00
ln(alpha)	-2.867	0.159		-2.896	0.165		-2.57
Alpha	0.057	0.009		0.055	0.009		0.08

Appendix: Additional Tables

Table A1: Principal Components of Missing Data

	Eigenvectors	
	1	2
Imports	0.24	0.03
Exports	0.24	0.02
current account	0.22	0.05
treasury bill rate	0.12	0.05
Δ money supply	0.28	-0.16
exchange rate	0.24	-0.12
Reserves	0.23	-0.15
Inflation	0.25	0.01
domestic credit	0.29	-0.15
claims on government	0.26	-0.17
CB claims on gov't	0.27	-0.14
CB foreign liabilities	0.25	-0.12
fiscal balance	0.20	0.42
net domestic borrowing	0.18	0.49
net foreign borrowing	0.17	0.50
foreign debt	0.13	0.38
banking foreign liabilities	0.29	-0.14
bank reserves	0.27	-0.13
Eigenvalue	10.02	2.31
Variance explained	56%	13%

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