

Dreher, Axel; Jensen, Nathan

**Working Paper**

## Independent actor or agent? An empirical analysis of the impact of US interests on IMF conditions

KOF Working Papers, No. 118

**Provided in Cooperation with:**

KOF Swiss Economic Institute, ETH Zurich

*Suggested Citation:* Dreher, Axel; Jensen, Nathan (2005) : Independent actor or agent? An empirical analysis of the impact of US interests on IMF conditions, KOF Working Papers, No. 118, ETH Zurich, KOF Swiss Economic Institute, Zurich,  
<https://doi.org/10.3929/ethz-a-005104885>

This Version is available at:

<https://hdl.handle.net/10419/50852>

**Standard-Nutzungsbedingungen:**

Die Dokumente auf EconStor dürfen zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden.

Sie dürfen die Dokumente nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, öffentlich zugänglich machen, vertreiben oder anderweitig nutzen.

Sofern die Verfasser die Dokumente unter Open-Content-Lizenzen (insbesondere CC-Lizenzen) zur Verfügung gestellt haben sollten, gelten abweichend von diesen Nutzungsbedingungen die in der dort genannten Lizenz gewährten Nutzungsrechte.

**Terms of use:**

*Documents in EconStor may be saved and copied for your personal and scholarly purposes.*

*You are not to copy documents for public or commercial purposes, to exhibit the documents publicly, to make them publicly available on the internet, or to distribute or otherwise use the documents in public.*

*If the documents have been made available under an Open Content Licence (especially Creative Commons Licences), you may exercise further usage rights as specified in the indicated licence.*

# Arbeitspapiere/ Working Papers

Axel Dreher and Nathan Jensen

Independent Actor or Agent?  
An Empirical Analysis of the Impact  
of US Interests on IMF Conditions



# **Independent Actor or Agent? An Empirical Analysis of the impact of US interests on IMF Conditions**

**Axel Dreher**  
**Department of Management, Technology, and Economics**  
**Swiss Federal Institute of Technology (ETH Zurich)**

**Nathan Jensen**  
**Department of Political Science**  
**Washington University in St. Louis**

First version: September 2003  
This version: December 2005

## **Abstract**

In this paper we analyze whether IMF conditionality is exclusively designed in line with observable economic indicators or, alternatively, whether it is partly driven by its major shareholder, the US. A panel data analysis of 206 letters of intent from 38 countries over the period 4/1997-2/2003 reveals that the number of conditions on an IMF loan depends on a borrowing country's voting pattern in the UN General Assembly. Closer allies of the United States (and other G7 countries) receive IMF loans with fewer conditions especially prior to elections. These results contribute to the current public policy debates on the role and process of setting IMF conditions, and provide broader insights into the influence of the United States and other G7 countries in international institutions.

**Keywords:** IMF, conditionality, elections, UN General Assembly voting compliance

**JEL-Code:** F33

We would like to thank Thomas Barnebeck Andersen, Graham Bird, Andy Mertha, Andy Sobel and Finn Tarp for their comments and insights. Thanks to Gyung-Ho Jeong, Jong-Hee Park, and Natsuki Yamada for their valuable research assistance.



## 1. Introduction

There is a growing debate on the purpose, role and impact of international institutions. Institutions of global governance such as the United Nations and the International Criminal Court are struggling to find their place on the world stage. Other international institutions designed to govern the global political economy, such as the World Trade Organization, the World Bank, and the International Monetary Fund have been subject to protests and criticism from scholars, activists, and politicians.

Some of this criticism has been leveled on international institutions for their perceived failure to solve global political and economic problems. The institution that has come under some of the most intense fire is the International Monetary Fund.<sup>1</sup> In the wake of the Asian Financial Crisis scholars from both outside and inside the IMF issued scathing criticisms of both the organization's inability to help avoid financial crisis and their overly draconian policy prescriptions. Critics see the IMF as either too passive or too active in reacting to the crisis. Others attribute part of the blame to the Fund's major shareholders, specifically the US. This is the main focus of our paper.

We argue that the IMF is responsive to domestic politics in the country receiving its loan. The literature on political business cycles shows that politicians have the incentives (and usually the means) to expand monetary and fiscal policy in the period prior to elections. We believe this is the period when we should see the most obvious case of US influence on IMF policy. In countries that are not strongly allied with the United States, the IMF should restrain this fiscal and monetary policy expansion by setting tight conditions on the loan. For countries

---

<sup>1</sup> Some of the most leveling criticism has been on the link between IMF agreements and lower levels of GDP growth. See Przeworski and Vreeland (2000), Vreeland (2003) and Dreher (2005a). For a review of the recent literature see Stone (2002) and the discussion between Meltzer (2006) and Krueger (2006). Jensen (2002, 2004) finds that IMF loans have a negative impact on foreign direct investment inflows, Boockmann and Dreher (2003) show that neither Fund credits nor its conditionality promote economic freedom in creditor countries.

that are allied with the US, the IMF will be more lenient, rewarding incumbent politicians with loose conditions and the opportunity to manipulate the economy for electoral gain.

In this paper we focus on how the IMF sets conditions on borrower countries. In an empirical analysis of 38 countries from 1997-2003 we find that political factors, namely the borrower's relationship with the United States (and the other G7 countries), are important determinants of the number of conditions the IMF imposed.

The paper proceeds as follows. We start with discussing our theory on the relationship between donor interest and IMF conditions and postulating our hypotheses. Then we present our data, method and results. The final section sums up.

## 2. Theory

As IMF conditions became more numerous and intrusive with the introduction of Structural Adjustment Loans in 1986,<sup>2</sup> the conception of the IMF as an agent of the most powerful stakeholders strengthened in the popular press. The IMF is seen as “an agent of U.S. foreign policy” promoting the interests of the United States under the veil of an international institution.<sup>3</sup> This power is exercised through the system of weighted voting based on the size of a country's capital contribution, rather than a one-country one-vote system like the UN General Assembly. With a voting share of more than 17 percent the US has a veto over all important decisions. Even official United Nations documents lament this institutional framework of the IMF (UN 2002: 112).

---

<sup>2</sup> The development of IMF conditionality and the specific conditions involved are summarized in Dreher (2002). Dreher and Vaubel (2004a) also document the increase in the number of conditions. Dreher (2004a) provides a public choice perspective on the development of IMF (and World Bank) conditionality. See also Gould (2003).

<sup>3</sup> The Toronto Star Oct 26, 2000. “Reforms Need to Restore IMF Credibility”. For an interesting discussion of leadership selection in the IMF see Kahler (2001). Vaubel (2006) provides an excellent survey on principal agent problems in international organizations.

A number of academic works have stressed the disproportionate influence of the United States foreign policy on international organizations. Vaubel, Dreher, and Soylu (2005) have shown that the staff of international organizations expands if the financing share of the largest contributor (usually the United States) declines and if the ideological orientation of the US President shifts to the left.

Gould (2003) has claimed that IMF conditions are partly driven by private banks attaching their loans to those of the Fund. Others assert that the US government drives IMF policies (Goldstein 2000: 67, Frey 1997: 121). Oatley (2003) presents examples where the United States pressed the Fund to extend credits to Argentina during the 1980s and to Mexico in 1982 and 1985.<sup>4</sup> The US Congress even passed several legislative mandates instructing the American Executive Director to enforce American interests (General Accounting Office 2001). It has been stated that “no managing director...can make a major decision without clearance from the U.S.” (Swedberg 1986: 379).

Thacker (1999) and Barro and Lee (2005) report that access to Fund programs is skewed towards countries supportive of United States foreign policy. Oatley (2003) finds that closer allies of the US receive larger loans (especially after the end of the Cold War). The empirical analysis of Dreher and Sturm (2005) shows that countries are more likely to vote with the US (and other G7 countries) in the UN General Assembly after receiving an IMF program. According to these results, the US uses its influence in the Fund to enforce its own political agenda. In order to further test this proposition, we have to analyze whether political relations with the US influence conditionality.

Other scholars argue that the IMF can behave as independent actor in the international system. Changes in the institutions would thus reflect the institutions’ drive to greater power

---

<sup>4</sup> Other examples are credits granted to Russia in 1992 and 1996 where the US government exerted strong pressure on the Fund to lend in spite of missed targets (Goricki 1999: 223) or the case of Pakistan, receiving low conditionality credits from the Fund after joining the United States-led alliance against Afghanistan recently.



(Vaubel 1996). International institutions may be created by nation-states, but once they're built, they have their own sets of preferences. As one example for such dynamic, Vaubel (1991) shows that the IMF tries to obtain quota increases by "hurry-up lending" at the time of the regular quota reviews. Also, the growth of IMF staff does not seem to be related to the "need for balance of payments credits" as defined by the Fund but rather seems to grow because a larger staff is in the bureaucracy's own interest (Vaubel 1996).

We argue that examining the functions of the IMF, specifically in how the IMF sets conditions can help answer these questions. Does the IMF set conditions based on economic fundamentals or does the Fund set policies according to the interests of the principle stakeholders, and especially the US? We believe that answering this question is important for understanding the role and impact of the IMF as well as for intellectual debates on the role of international institutions in the global economy.

The purpose of this paper is not a comprehensive test of the competing theories on the role, functions and operations of international institutions. Rather, we want to situate the debate on the functioning of the IMF into this larger literature on international institutions. Does the IMF function as an institution to solve financial crises, reacting to domestic economic conditions, policy, or humanitarian demands? Many studies have tried to answer these questions focusing on large sample analysis of IMF program conclusions or amounts of credit drawn. These studies find that IMF lending is influenced by a borrower country's debt service, its international reserves and economic growth, and that political variables such as government stability, the quality of bureaucracy and the extent of political opposition are robust predictors of IMF lending.<sup>5</sup>

Since the amount of credit is only one of the Fund's two major policy instruments, similar patterns may prevail with respect to its other instrument, conditionality. We thus

---

<sup>5</sup> Sturm, Berger and de Haan (2005) provide an overview of the more recent literature on this topic. See also Dreher (2004b) and Dreher and Vaubel (2004b).

theorize that the IMF, functioning as the lender of last resort to countries in financial crisis and acting as an international organization designed to solve problems associated with financial crises, will set the number of conditions on loans according to observable economic indicators of the borrower country.<sup>6</sup> Thus we set our first hypothesis as:

*Hypothesis 1:* The IMF will set conditions based on domestic economic conditions including the growth rate of real GDP, the government's consumption, the budget deficit, the rate of monetary expansion and the current account balance.

Alternatively, the Fund may set conditions based on political relationships between the largest actor in the international system (the United States) and the recipient country. Countries with closer alliances to the United States will be rewarded with looser conditions on IMF loans, while the IMF will impose stricter conditions on non-allied countries.

*Hypothesis 2:* The IMF will specify fewer conditions on countries that are closely allied with the United States.

A second set of hypotheses takes into account the incentives of political leaders in democracies prior to elections to engage in "political business cycles". Incumbent politicians attempt to manipulate economic policy to change expectations of future economic performance, increasing their probability of reelection.<sup>7</sup> We argue that the insights from the political business cycle literature on the incentives for fiscal and monetary policy expansion

---

<sup>6</sup> Clearly, the Fund might also take domestic political conditions into account when deciding on the number of conditions to be included under a program. To the extent that, e.g., "commitment to reform" implies fewer conditions, our results might be biased by this omission. However, Martin and Bargawi (2005) report that there is little difference in the number of conditions included in programs with good as compared to bad performers. Sturm, Berger and de Haan (2005) show that IMF lending is mainly determined by economic variables. Dreher (2003) finds that the only domestic political variable related to IMF program interruptions refers to national elections. We employ this variable in our empirical analysis below.

<sup>7</sup> The classic works are Nordhaus (1975) and Tufte (1978). See Alesina et al. (1999) and Franzese (2002) for an excellent overview of the literature.

prior to elections have important implications for IMF conditionality. IMF conditions usually prescribe austerity measures that conflict with incumbents' incentives for monetary and fiscal policy expansion. Politicians have the incentive to inflate the economy when the IMF is attempting to tighten monetary and fiscal policy which results in the contraction of the economy in the short-run. On the other hand, IMF money can be used to finance the desired expansion (Vaubel 1991).

According to the results of Dreher (2005b), participation in IMF Standby- and Extended Fund Facility arrangements does overall improve economic policy. However, several empirical studies have shown that the pattern of IMF involvement is different at election times. It has been shown that the conclusion of IMF arrangements is significantly less likely immediately prior to elections (Dreher 2004b) although net credits are significantly larger (Dreher and Vaubel 2004b). Moreover, breakdowns of Fund programs are more likely at those times (Dreher 2003). Program conclusion is more likely after elections (Przeworski and Vreeland 2000, Vreeland 2003). It has even been shown that the IMF can help incumbents win elections (Dreher 2004b) or stay in power (Smith and Vreeland 2003).

We believe that the different incentives in the period prior to elections also provide some insights into the functioning of IMF conditionality. If the IMF is attempting to limit the impact of financial crisis and adverse policy, we would expect that its conditions would become stricter in the periods prior to democratic elections. Politicians have the incentive to expand the economy in this period, and the IMF will specify a more complete contract to limit the opportunities for expansion.

*Hypothesis 3: The IMF will set more conditions in the period prior to democratic elections.*

An alternative hypothesis is that if the IMF reflects the power of the hegemon (the United States) it will act strategically in the period prior to democratic elections. For the governments that are not allied with the United States, the IMF will impose strict conditions.

On governments closely allied with the United States, the IMF will impose looser conditions in order to allow the incumbent to have some degree of discretion over monetary and fiscal policy authority. In short, the IMF will be careful not to threaten the political survival of incumbents closely allied with the United States.

*Hypothesis 4: The IMF will set fewer conditions in the period prior to democratic elections for countries closely allied with the United States.*

### **3. Data and Method**

Since it is difficult to measure and compare the intrusiveness and stringency of particular conditions in an objective way, our dependent variable for the empirical analysis is the number of IMF conditions. The number of conditions has been the focus of heated debate. As one example, in 1999 US congress threatened to refuse ratification of the quota increase if the Fund did not reduce the stringency and number of its policy conditions.

The number of conditions has been used as a proxy for stringency in previous studies. Mosley (1991) studied the tightness of World Bank Structural Adjustment Loans using this measure. Gould (2003), Dreher (2004a) and Dreher and Vaubel (2004a) used the number of IMF conditions to analyze the determinants and causes of conditionality. Ivanova et al. (2005) utilized them to measure the extent of conditionality. The IMF (2001) has used similar data in empirical analysis as well. Our data on the number of IMF conditions are from Dreher and Vaubel (2004a) who analyzed 206 IMF letters of intent with 38 countries between October 1997 and March 2003. However, after including the relevant covariates to our regressions, the sample is reduced to a maximum of 139 letters of intent for 29 countries.<sup>8</sup>

---

<sup>8</sup> The following countries and number of letters are included in the study (countries shown in italics are included in the sample but not in the regressions): Albania (5 letters of intent), Argentina (3), Armenia (5), *Azerbaijan* (3), *Belarus* (1), Benin (5), Bolivia (4), Brazil (6), Bulgaria (3), Burkina Faso (8), Cambodia (3), Cameroon (3), Cape Verde (2), Central African Republic (3), Colombia (5), Croatia (5), Estonia (3), Georgia (3), Ghana (4), *Guinea*

A typical loan agreement includes very detailed descriptions of the policies the borrowing governments promise to implement over the time of the arrangement. Whereas in older programs it was very difficult to judge whether those statements will be subject to Fund evaluation or have just been included by the government to express its policy objectives, most recent arrangements provide tables classifying conditions into performance criteria and structural benchmarks. Prior actions are, however, not always available to the public. In those cases where it was not obvious whether there were no prior actions included in a program or where those conditions were simply not attached, the specific country-period was omitted from the disaggregated analysis and the number of prior actions was set to zero in the analysis of the total number of conditions. Since it is not possible to weigh the different types of conditions in an objective way, we use the unweighted sum. However, we also provide a separate analysis for each type of condition.

Of the countries included in our sample, 23 received loans under the Fund's Standby Arrangement or Extended Fund Facility and 18 countries received PRGF loans. For each country, all letters of intent publicly available have been analyzed, starting with the first letter posted on the Fund's web page in October 1997. The resulting data are quarterly and refer to periods where an IMF arrangement has been active.<sup>9</sup>

While the total number of conditions of each type can thus be objectively counted, classifying conditions according to category was sometimes critical. Clearly, a ceiling on monetary growth is a monetary condition while a ceiling on government expenditure is a fiscal one. However, there are cases that are less obvious. In those critical cases the conditions have not been classified as monetary or public-sector (and are thus only included in the

---

(5), Indonesia (11), Jordan (4), *Kazakhstan* (1), Korea (7), Latvia (4), Mali (5), Moldova (2), Nicaragua (5), *Pakistan* (1), Panama (8), Peru (6), *Russia* (2), Rwanda (6), *Sao Tome and Principe* (5), Uganda (5), Uruguay (6), and *Zimbabwe* (1).

<sup>9</sup> Notice that, since all countries in our sample are under active programs, we do not have sample selection bias.

analysis of the total number of conditions). In Table 1 we summarize the number of conditions by type and sector. As can be seen, the country programs analyzed include more than 22 conditions on average.

*Insert Table 1*

To empirically estimate how relations between the US and the country signing an IMF agreement affect conditionality, we include a variable on voting in the UN General Assembly.<sup>10</sup> We operationalize our variable “Voting with the US” as the percentage of UN General Assembly votes where the recipient country and the United States vote either both “yes” or both “no” together on a given issue.<sup>11</sup> Since some quarters have more UN votes than others, we smooth the time series by using a quarterly moving average. To test for the robustness of our results we also changed the construction of the UN variable, starting with a zero value for each new government. The estimated results are qualitatively similar to the ones reported below.

We also include a dummy variable for democratic elections within the next six months. We coded cases of legislative and presidential elections from a number of sources. In the empirical analysis we used the dummy variable, “election”, which included legislative and presidential elections.<sup>12</sup> Our estimation sample contains 15 elections.<sup>13</sup>

We use a number of economic control variables. Most of these control variables are from the IMF’s International Financial Statistics Indicators. All additional variables with their

---

<sup>10</sup> UN General Assembly voting is publicly available through the official UN website.

<sup>11</sup> Abstentions and absences have been omitted.

<sup>12</sup> We also tested legislative and presidential elections independently. Our empirical results remain unchanged.

<sup>13</sup> Over the sample period, there has been one election in Albania, Armenia, Benin, the Central African Republic, Colombia, Estonia, Ghana, Latvia, Mali, Moldova, Nicaragua, Peru, Uganda and Uruguay. There have been two elections in Peru. On average, voting coincidence has been slightly higher in countries with elections (0.26 as compared to 0.25).

means and standard deviations, their precise definitions and data sources are listed in the appendix.

Our estimates are pooled time-series cross-sectional regressions. Since our data are strongly skewed to the right, we estimate the model using Poisson regressions. However, the data displayed signs of over-dispersion, and the relevant tests reveal that not all of our dependent variables follow the Poisson distribution. We therefore replicate all regressions using OLS and Negative Binomial Regressions instead. The basic results, however, are robust to the method of estimation.

Since some of the (quarterly) data are not available for all countries or periods, the panel data are unbalanced and the number of observations depends on the choice of explanatory variables. To account for time-invariant unobservable heterogeneity potentially correlated with the regressors, we use country dummies. We also include a dummy for each quarter of the year (“fixed time effects”).<sup>14</sup> All quantitative variables are lagged by one quarter to avoid simultaneity.

---

<sup>14</sup> The Hausman test rejects the random effects specification in favor of fixed effects at the one percent level of significance. Clearly, within-groups variation is small compared to the between-groups variation (with standard deviation 0.01 versus 0.1). The time dummies are significant at the one percent level. We have to omit two time dummies to identify the variables “OECD growth rate” and “LIBOR”. The initial regressions included a time trend. However the trend term showed to be completely insignificant so we do not report the results below. The other results are unchanged by the inclusion of the trend variable.

## 4. Results

### *Insert Table 2*

Column 1 of Table 2 replicates the analysis of Dreher and Vaubel (2004a).<sup>15</sup> As can be seen, IMF programs include significantly more conditions when the borrower's real GDP is low and real per capita GDP growth in the OECD countries has been high. If IMF staff is interested in enforcing as many conditions as possible, they negotiate more stringent programs with countries in a weak bargaining position. The possibility to enforce its own agenda in negotiations with the Fund is worse the more a government is in need of IMF loans. Moreover, a country's power to negotiate is influenced by other countries' willingness to support the potential borrowers (Bird and Rowlands 2003). Both a country's own (direct) influence in the Fund and support by other countries rise with its GDP, since countries with higher GDP are more important for the world economy. Moreover, their quota with the Fund is higher which results in higher voting rights. Countries with lower GDP must therefore accept more conditions. Fund staff may enforce more conditions in recessions. However, they might also be inclined to lend more freely since they feel that external circumstances, not domestic misgovernment, lead a country into crisis. The Fund might even deliberately vary its conditionality counter-cyclically. The latter effects dominate here.

The London Inter Bank Offer Rate (LIBOR) on three months credits to US banks increases the number of conditions since the interest rate subsidy provided by the Fund is higher with higher world interest rates, and demand for Fund credits should rise. The

---

<sup>15</sup> We omit variables related to the World Bank as they might be endogenous to (the number of) IMF conditions. Similar covariates have been used by Dreher (2004a). The exceptions are real GDP growth, LIBOR, the government's budget deficit and changes in international reserves. Dreher additionally uses principal arrears, US military grants and loans, public and publicly guaranteed bilateral and commercial debt, an index measuring democracy and an index measuring economic freedom. We do not employ those variables here since they are not available on a quarterly basis. The same is true for other domestic political variables such as government effectiveness or bureaucratic quality.



coefficient of LIBOR is significant at the five percent level. At the ten percent level of significance, net IMF credit disbursed reduces the number of conditions. This stands in contrast to the IMF's claim that higher loans go along with tougher conditionality.

Finally, the results show that a high rate of monetary expansion leads to significantly more conditions. This is what we would expect from a normative perspective.<sup>16</sup> Table 2 also shows that a country's real GDP growth, government consumption, the government's budget deficit, the change in international reserves and the current account balance do not significantly influence the number of conditions.

The following columns add variables directly testing our hypotheses. We report two regressions for each specification. The first includes all variables of column 1; the second employs only those variables which have been significant in this regression at the five percent level at least. This increases our number of observations from 92 to 139.

Columns 2 and 3 include the variable measuring voting compliance in the UN General Assembly (lagged by one quarter). At the one and five percent level of significance, respectively, the number of conditions is lower for closer allies of the US. According to the estimates for the larger sample reported in column 3, an increase in the voting index from zero to one reduces the number of conditions by almost nine. An increase in the voting index from the 10th to the 90th percentile reduces the number of conditions by about two. This provides strong evidence in favor of Hypothesis 2. Our result is thus in line with those of Thacker (1999) and Oatley (2003) for IMF lending reported above. Our findings are in contrast to Gould (2003) who finds that the US has not driven changes in IMF policy.<sup>17</sup>

---

<sup>16</sup> Note that this does not seem to reflect the impact of high inflation, but those of "bad" economic policy. If the rate of inflation is included instead of, or in addition to monetary expansion, its coefficient is insignificant.

<sup>17</sup> Using the variable employed by Gould (2003) to proxy US interest in a country, US loans and grants, Dreher (2004a) also found no influence. However, US loans and grants are probably an inferior proxy, since the US

In columns 4 and 5 we include a dummy variable for elections within the next six months; columns 6 and 7 add the interaction of the election variable with the voting variable. Most important for our analysis, the coefficient of the voting variable stays significant (at the five percent level at least) in all regressions. When the interaction term is excluded, the election dummy has a negative and significant effect on the number of conditions. This contradicts our Hypothesis 3. One possible explanation is provided in Dreher (2003). His results show that in democratic countries fewer IMF programs break down prior to elections. He attributes this to a general tendency of Fund staff to take the incumbent politicians' concerns at election time into account. After all, the number and stringency of conditions are the outcome of a bargaining process, and the Fund, eager to lend, is probably prepared to endorse fewer conditions if it feels that this is necessary to reach an agreement. Another possible explanation is that IMF participation is a joint decision between the Fund and the borrower. Prior to democratic elections countries only sign IMF agreements with loose conditions and refuse loans with tighter conditions. Finally, softer conditionality in programs with closer US allies might dominate the tougher conditions for non-allies if no interaction term is included in the regression. With the inclusion of the interaction term (columns 6 and 7), the coefficient of the election dummy becomes individually insignificant. In any case, due to the small sample and few elections, the results are based on 15 elections only.

In the larger sample of column 7, the interaction term is significant at the ten percent level and has the expected sign: Prior to elections, programs include fewer conditions the more often a country voted in line with the US in the UN General Assembly. In both columns 6 and 7, the voting and election variables are jointly significant at the one percent level and have the signs implied by our 'political' hypotheses. According to the estimates of column 7, an increase in the voting index from zero to one reduces the number of conditions directly by

---

often tries to press the IMF to lend to exactly those allies that it can for political reasons not lend to by themselves (Dreher and Sturm 2005).

9.56 and by an additional 1.47 via the election effect. An increase in the voting index from the 10th to the 90th percentile reduces the number of conditions before elections by 2.5. As the coefficient of the dummy shows, IMF programs include 0.21 conditions more in election periods.<sup>18</sup>

*Insert Table 3*

In Table 3 we examine how IMF policies vary by sector. As can be seen, voting with the US affects conditions predominantly in the public sector. In all three specifications, the voting variable is significant at the one percent level, while it is no significant determinant of conditions in the monetary sector. Again, there is evidence in favor of the election hypothesis. When both the election dummy and the interacted variable are included, closer US allies have to accept significantly fewer monetary and public sector conditions prior to elections. According to the coefficients of column 6, an increase in voting coincidence by ten percentage points reduces the number of public sector conditions by almost three. Prior to elections the same increase in voting compliance further reduces the number of conditions by about 0.3. An increase in the voting index from the 10th to the 90th percentile reduces the number of conditions before elections by about seven. As column 3 shows, countries not allied with the US have to accept more conditions in the monetary sector prior to elections.

*Insert Table 4*

Table 4 reports disaggregated results by type of condition. However, we only report results for the larger sample, with all voting and election variables included. As can be seen, performance criteria are neither influenced by General Assembly votes nor by elections. The effects of our political variables are confined to structural benchmarks and prior actions. Since some performance criteria are included in almost all programs, there is less variation in those

---

<sup>18</sup> Note that the coefficient of the voting variable is substantially smaller in the larger sample as compared to the smaller one. This does not reflect the impact of the additional control variables, but the difference in countries included.

conditions compared to structural benchmarks and prior actions. It is therefore more difficult to justify the omission of typical performance criteria. However, it would be interesting to analyze whether performance criteria are less demanding for US allies. Unfortunately we lack the data for such analysis.

As Table 4 shows, in election periods the number of structural benchmarks is significantly higher for countries not voting in line with the US in the General Assembly and lower for closer allies of the US. Programs include significantly more structural benchmarks prior to elections, and fewer structural benchmarks and prior actions for closer US allies.

The next section further expands on these results.

## 5. Further Tests

In the regressions reported above, the UN voting variable has been lagged by one quarter. To test for robustness we replicated all regressions with the contemporaneous voting variable instead, and the results are basically unchanged. To test a slightly different version of the story, we also included UN voting behavior up to three quarters in the future. The idea behind this is to test whether countries demand low conditionality loans and ‘reward’ the US with voting compliance after those agreements have been negotiated. As it turns out, those leads are individually and jointly insignificant, not supporting this variant of the story (not reported in tables).<sup>19</sup>

Arguably, the fixed country effects eliminate cross-country information, which might be an important source of information about the relation between UN voting patterns and conditionality. We replicated our analysis with the fixed country effects excluded and found the coefficient of the UN voting variable to be insignificant (not reported in tables). This is in line with the results of Thacker (1999) showing that it is not the absolute position of countries that matter for their relationship with the IMF, but the change in those positions.

---

<sup>19</sup> In the specification of Table 2, column 7, the coefficient of the first (second, third) lead is -16.11 (8.83, 2.09).

Finally, the question arises whether the results for the US can be replicated for other major shareholders of the IMF. Clearly, the US is the most important source of external pressure on the Fund, and most of the literature focuses on this relationship. Nevertheless some studies include other G7 countries as well.<sup>20</sup> Table 5 thus replicates our full specification for all other G7 countries. The final column of Table 5 tests whether the inclusion of variables controlling for voting with these countries affects our results for the US.

*Insert Table 5*

As can be seen in columns 1-6 of Table 5, the results for the US hold for the other G7 countries as well. Generally, closer allies of all G7 countries receive significantly fewer conditions – particularly at election time. The election dummy itself is significant at the ten percent level in three regressions, with the expected sign. For all six additional countries, the voting variable is significant at the one percent level. The coefficients are also quantitatively similar. All else constant, voting with Japan gives the smallest discount in the number of conditions, voting with Canada the highest – implying a reduction in the number of IMF conditions between 5.12 (Japan) and 6.20 (Canada) following an increase in voting compliance from zero to one. The impact of an increase in the voting index from the 10th to the 90th percentile amounts to 1.1 and, respectively, 1.4 conditions. Given the high correlation in the voting behavior of the US and the other G7 countries (which is between 0.74-0.82), these results come as no surprise. G7 countries frequently vote together in the UN General Assembly (see Dreher and Sturm 2005). Column 7 therefore includes – despite the high correlation among them – all voting variables at the same time. However, the interaction of the voting variable with the election variable is only included for the US as we do not have sufficient election periods to reliably identify seven interaction terms.

---

<sup>20</sup> For example, Barro and Lee (2005) employ data for the US, France, Germany and the UK to construct their voting variable. Dreher and Sturm (2005) use data for all G7 countries to examine the impact of IMF and World Bank loans on General Assembly voting patterns.

The results of column 7 show that when all voting variables are included jointly, three of them remain significant at conventional levels. As can be seen, voting with the US and with Germany still reduces the number of conditions included under IMF programs, while voting with the UK increases the number of conditions. Both the election variables and the interaction of the election term with the US voting variable are completely insignificant. Controlling for voting with the other G7 countries also, the impact of voting with the US slightly increases. Countries switching from complete non-compliance to full compliance obtain IMF programs with a discount of more than 13 conditions. However, given the high correlation among the voting variables, the results of the final regression have to be interpreted with caution.

## 6. Summary

International institutions, such as the IMF, play an important role in the functioning of the global economy, and in some cases have an enormous impact on nation-states. Understanding how these international institutions function has important academic and public policy ramifications.

In this paper we analyzed whether IMF conditionality is driven by its major shareholder, the United States. Our empirical results reveal that the number of conditions depends on a borrowing country's voting pattern in the UN General Assembly. Countries that vote with the United States in the UN systematically receive fewer conditions on IMF loans.

Our empirical results on the relationship between IMF programs and democratic elections are equally straightforward. We find evidence that countries receive fewer conditions prior to elections if they are closer US allies.

These results show that the IMF does not function simply as an institution of multilateralism. Although domestic economic conditions are an important determinant of the

---

number of IMF conditions a country faces, the United States and the other G7 countries remain dominant players in influencing IMF policy.

## References

- Alesina, Alberto, Nouriel Roubini and Gerald Cohen. 1999. *Political Cycles and the Macroeconomy*. Cambridge, MA: MIT Press.
- Barro, Robert J. and Jong-Wha Lee. 2005. IMF-Programs: Who Is Chosen and What are the Effects? *Journal of Monetary Economics* 52, 7: 1245-1269.
- Bird, Graham and Dane Rowlands. 2003. Political Economy Influences within the Life-Cycle of IMF Programmes, *The World Economy* 26, 9: 1255-1278.
- Boockmann, Bernhard and Axel Dreher. 2003. The Contribution of the IMF and the World Bank to Economic Freedom, *European Journal of Political Economy* 19, 3: 633-649.
- Dreher, Axel. 2002. The Development and Implementation of IMF and World Bank Conditionality, Hamburg: HWWA Discussion Paper 165.
- Dreher, Axel. 2003. The Influence of Elections on IMF Program Interruptions, *The Journal of Development Studies* 39, 6: 101-120.
- Dreher, Axel. 2004a. A Public Choice Perspective of IMF and World Bank Lending and Conditionality, *Public Choice* 119, 3-4: 445-464.
- Dreher, Axel. 2004b. The Influence of IMF Programs on the Re-election of Debtor Governments, *Economics & Politics* 16, 1: 53-76.
- Dreher, Axel. 2005a. IMF and Economic Growth: The Effects of Programs, Loans, and Compliance with Conditionality, *World Development*, forthcoming.
- Dreher, Axel. 2005b. Does the IMF Influence Fiscal and Monetary Policy? *The Journal of Policy Reform* 8, 3: 225-238.
- Dreher, Axel and Jan-Egbert Sturm. 2005. Do IMF and World Bank Influence Voting in the UN General Assembly? Unpublished Manuscript. Swiss Federal Institute of Technology and KOF, December.
- Dreher, Axel and Roland Vaubel. 2004a. The Causes and Consequences of IMF Conditionality, *Emerging Markets Finance and Trade* 40, 3: 26-54.
- Dreher, Axel and Roland Vaubel. 2004b. Do IMF and IBRD cause moral hazard and political business cycles? Evidence from panel data, *Open Economies Review* 15, 1: 5-22.
- Franzese, Robert. 2002. Electoral and Partisan Cycles in Economic Politics and Outcomes. *Annual Review of Political Science* 5: 369-421.
- Frey, Bruno S. 1997. The Public Choice of International Organizations. Pp. 106-123 in *Perspectives on Public Choice*, edited by Dennis C. Mueller. Cambridge University Press.



- General Accounting Office. 2001. International Monetary Fund: Efforts to Advance U.S. Policies at the Fund, Washington D.C.
- Goldstein, Morris. 2000. IMF Structural Programs, Paper prepared for NBER Conference on “Economic and Financial Crisis in Emerging Market Economies”, mimeo.
- Goricki, Clarissa. 1999. *Marktwirtschaftliche Reformsteuerung – Die Rolle von IWF und Weltbank in Mittelosteuropa nach 1990*, Verlag Fakultas, Singapur.
- Gould, Erica R. 2003. Money Talks: Supplemental Financiers and International Monetary Fund Conditionality, *International Organization* 57, 3: 551-586.
- International Monetary Fund. 2001. Structural Conditionality in Fund-Supported Programs, February 16, <http://www.imf.org>
- International Monetary Fund. 2003. International Financial Statistics Indicators. CD-Rom. Washington, D.C.
- Ivanova, Anna, Mayer, Wolfgang, Mourmouras, Alex and Anayiotos, George. 2005. What Determines the Implementation of IMF-Supported Programs? Forthcoming in *IMF-Supported Programs: Assessing Program Design, Implementation, and Effectiveness*, edited by Ashoka Mody and Alessandro Rebucci. Washington DC: International Monetary Fund.
- Jensen, Nathan. 2002. *The Political Economy of Foreign Direct Investment: Government Policies, Political Institutions and Foreign Direct Investment Flows*. Ph. D. Dissertation. Yale University.
- Jensen, Nathan. 2004. Conditions, Confidence, and Credibility. The Effects of International Monetary Fund Agreements on Foreign Direct Investment Inflows. *The Journal of Conflict Resolution* 48: 194-210.
- Kahler, Miles. 2001. *Leadership Selection in the Major Multinationals*. Washington D.C.: Institute for International Economics.
- Krueger, Anne O. 2006. Comment on Meltzer, Reviving the Bank and the Fund, *Review of International Organizations* 1, 1, forthcoming.
- Martin, Matthew and Hannah Bargawi. 2005. A Changing Role for the IMF in Low-Income Countries Pp. 68-126 in *Helping the Poor? The IMF and Low-Income Countries*, edited by Jan Joost Teunissen and Age Akkerman. The Hague, Netherlands: FONDAD.
- Meltzer, Allan H. 2006. Reviving the Bank and the Fund, *Review of International Organizations* 1, 1, forthcoming.

- Mosley, Paul. 1991. Conditionality as Bargaining Process: Structural-Adjustment Lending, 1980-86. Working Paper. International Finance Section, Dept. of Economics, Princeton University.
- Nordhaus, William. 1975. The Political Business Cycle, *Review of Economic Studies* 42: 169-90.
- Oatley, Thomas. 2003. American Interests and IMF Lending, mimeo, University of North Carolina at Chapel Hill.
- OECD. 2003. Statistical Compendium. CD-Rom.
- Przeworski, Adam, and James R. Vreeland. 2000. The Effect of IMF Programs on Economic Growth, *Journal of Development Economics* 62: 385-421.
- Smith, Alastair and James R. Vreeland. 2003. The Survival of Political Leaders and IMF Programs: Testing the Scapegoat Story. Forthcoming in *Globalization and the Nation State: The Impact of the IMF and the World Bank*, edited by Gustav Ranis, James Vreeland, and Stephen Kosack. Routledge.
- Stone, Randall W. 2002. *Lending Credibility: The International Monetary Fund and the Post-Communist Transition*. Princeton, N.J.: Princeton University Press.
- Sturm, Jan-Egbert, Berger, Helge and Jakob de Haan. 2005. Which Variables Explain Decisions on IMF Credit? An Extreme Bounds Analysis, *Economics & Politics* 17: 177-213.
- Swedberg, Richard. 1986. The Doctrine of Economic Neutrality of the IMF and the World Bank, *Journal of Peace Research* 23, 4: 377-90.
- Thacker, Strom C. 1999. The High Politics of IMF Lending, *World Politics* 52: 38-75.
- Tufte, Edward R. 1978. *Political Control of the Economy*. Princeton, N.J. Princeton University Press.
- United Nations. 2002. *Human Development Report: Deepening Democracy in a Fragmented World*. New York: Oxford University Press.
- Vaubel, Roland. 1991. The Political Economy of the International Monetary Fund: A Public Choice Analysis. Pp. 204-244 in *The Political Economy of International Organizations: A Public Choice Approach*, edited by Roland Vaubel and Thomas D. Willett. Boulder, Co.: Westview Press.
- Vaubel, Roland. 1996. Bureaucracy at the IMF and the World Bank: A Comparison of the Evidence, *The World Economy* 19: 185-210.
- Vaubel, Roland. 2006. Principal-Agent Problems in International Organizations, *Review of International Organizations*, forthcoming.

- Vaubel, Roland, Axel Dreher, and Ugurlu Soylu. 2005. Staff Growth in International Organizations: A Principal-Agent Problem? An Empirical Analysis. Forthcoming in *Principles of International Institutions – Theoretical Foundations and Empirical Evidence*, edited by John-ren Chen and David Sapsford. Edward Elgar Publishing.
- Vreeland, James. R. 2003. *The IMF and Economic Development*. Cambridge: Cambridge University Press.

**Table 1: IMF conditionality, Summary Statistics**  
**(206 letters of intent, 38 Countries, 4/1997-2/2003)**

	mean	median	min	max	stdv.
all conditions	22.19	18.5	5	102	14.95
performance criteria	8.96	8	3	21	3.09
structural benchmarks	10.70	7	0	94	14.57
prior actions	2.56	0	0	39	4.70
monetary sector, total	7.32	5	0	79	10.31
public sector, total	5.62	5	0	23	4.31
monetary sector, performance criteria	2.78	3	0	12	1.47
public sector, performance criteria	2.15	2	0	10	1.89
monetary sector, structural benchmarks	4.11	1	0	75	9.90
public sector, structural benchmarks	2.46	2	0	20	3.15
monetary sector, prior actions	0.39	0	0	9	1.04
public sector, prior actions	1.02	0	0	15	2.09

Source: Dreher and Vaubel (2004a)

**Table 2: Total number of IMF Conditions (quarterly panel data, 1997-2003, Poisson)**

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
voting with US (t-1)		-23.74 (4.30***)	-8.62 (2.34**)	-26.86 (4.76***)	-9.75 (2.61***)	-26.50 (4.66***)	-9.56 (2.56**)
election within next six months				-0.44 (2.97***)	-0.15 (1.80*)	-0.19 (0.39)	0.21 (0.98)
voting with US * election variable						-0.92 (0.54)	-1.47 (1.81*)
real GDP (t-1)	-0.03 (4.19***)	-0.02 (3.84***)	-0.01 (3.00***)	-0.02 (3.70***)	-0.01 (2.93***)	-0.02 (3.70***)	-0.01 (2.88***)
real GDP growth (t-1)	-0.004 (0.60)	0.003 (0.40)		0.001 (0.13)		0.001 (0.16)	
real per capita GDP growth in OECD countries (t-1)	0.59 (5.07***)	0.58 (4.95***)	0.50 (4.92***)	0.60 (5.15***)	0.48 (4.72***)	0.60 (5.10***)	0.48 (4.71***)
LIBOR (t-1)	0.12 (2.06**)	0.22 (3.39***)	0.13 (2.85***)	0.24 (3.71***)	0.14 (3.07***)	0.23 (3.65***)	0.14 (2.98***)
government consumption (in percent of GDP, t-1)	-0.01 (0.37)	-0.04 (1.12)		-0.04 (1.17)		-0.04 (1.13)	
government budget deficit (in percent of GDP, t-1)	-0.01 (0.93)	-0.002 (0.35)		-0.01 (1.00)		-0.01 (0.78)	
monetary expansion (percent, t-1)	0.01 (4.53***)	0.01 (4.08***)	0.01 (4.80***)	0.01 (3.53***)	0.01 (4.96***)	0.01 (3.56***)	0.01 (4.92***)
change in international reserves (t-1)	-0.002 (0.69)	-0.003 (0.98)		-0.002 (0.96)		-0.002 (0.93)	
current account balance (in percent of GDP, t-1)	-0.004 (0.50)	-0.01 (1.18)		-0.01 (1.27)		-0.01 (1.26)	
new net IMF credit (in percent of quota, t-1)	-0.001 (1.71*)	-0.001 (1.57)		-0.001 (1.94*)		-0.001 (1.88*)	

log likelihood	-254.25	-244.93	-398.01	-240.26	-396.35	-240.11	-394.70
number of countries	19	19	29	19	29	19	29
number of observations	92	92	139	92	139	92	139

Notes:

Fixed country and time dummies included.

z-statistics in parentheses

Levels of significance: 1 percent (\*\*\*), 5 percent (\*\*), 10 percent (\*)

**Table 3: Total number of IMF Conditions by sector**  
(quarterly panel data, 1997-2003, Poisson)

	(1)	(2)	(3)	(4)	(5)	(6)
	monetary conditions			public sector conditions		
voting with US (t-1)	-3.11 (0.44)	-2.17 (0.30)	-1.02 (0.14)	-28.88 (3.53***)	-29.52 (3.56***)	-28.89 (3.58***)
election within next six months		0.13 (0.78)	0.94 (1.99**)		-0.07 (0.46)	0.61 (1.47)
voting with US*election variable			-3.23 (1.81*)			-2.96 (1.73*)
real GDP (t-1)	-0.01 (1.77*)	-0.01 (1.78*)	-0.01 (1.79*)	-0.02 (1.25)	-0.02 (1.24)	-0.02 (1.24)
real per capita GDP growth in OECD countries (t-1)	0.61 (2.69***)	0.63 (2.77***)	0.65 (2.85***)	0.28 (1.53)	0.28 (1.49)	0.28 (1.49)
LIBOR (t-1)	0.16 (1.58)	0.15 (1.46)	0.14 (1.34)	0.06 (0.69)	0.07 (0.76)	0.06 (0.72)
monetary expansion (percent, t-1)	0.01 (2.50**)	0.01 (1.08)	0.01 (2.54**)	0.01 (1.97**)	0.01 (2.01**)	0.01 (1.99**)
log likelihood	-224.41	-146.94	-222.71	-232.09	-231.98	-230.45
number of countries	29	29	29	29	29	29
number of observations	139	139	139	139	139	139

Notes:

Fixed country and time dummies included.

z-statistics in parentheses

Levels of significance: 1 percent (\*\*\*), 5 percent (\*\*), 10 percent (\*)

**Table 4: Total number of IMF Conditions by type of condition**  
(quarterly panel data, 1997-2003, Poisson)

	performance criteria	structural benchmarks	prior actions
voting with US (t-1)	-1.05 (0.16)	-14.96 (1.63*)	-52.37 (2.25**)
election within next six months	0.39 (1.25)	2.26 (1.91*)	1.24 (1.59)
voting with US*election variable	-1.51 (1.19)	-11.52 (2.45**)	-2.72 (0.78)
real GDP (t-1)	-0.001 (0.21)	-0.06 (4.46***)	0.08 (1.45)
real per capita GDP growth in OECD countries (t-1)	0.09 (0.59)	1.35 (6.16***)	-0.0002 (0.00)
LIBOR (t-1)	-0.03 (0.47)	0.15 (1.66*)	0.61 (2.86***)
monetary expansion (percent, t-1)	0.0001 (0.05)	0.01 (3.64***)	0.01 (1.05)
log likelihood	-216.22	-218.84	-124.16
number of countries	29	29	20
number of observations	139	139	85

Notes:

Fixed country and time dummies included.

z-statistics in parentheses

Levels of significance: 1 percent (\*\*\*), 5 percent (\*\*), 10 percent (\*)



**Table 5: Voting with G7 countries, total number of IMF Conditions**  
(quarterly panel data, 1997-2003, Poisson)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
voting with US (t-1)							-13.46 (2.15**)
voting with Canada (t-1)	-6.20 (3.65***)						-19.32 (1.30)
voting with UK (t-1)		-5.72 (2.87***)					70.83 (2.70***)
voting with France (t-1)			-5.63 (2.82***)				-7.98 (0.41)
voting with Germany (t-1)				-5.91 (3.58***)			-54.86 (2.05**)
voting with Italy (t-1)					-5.62 (3.48***)		13.48 (0.44)
voting with Japan (t-1)						-5.12 (3.42***)	5.36 (0.56)
election within next six months	0.54 (1.58)	0.51 (1.60*)	0.51 (1.57)	0.54 (1.62*)	0.56 (1.66*)	0.45 (1.27)	0.15 (0.64)
voting with US* election variable							-1.06 (1.08)
voting with Canada* election variable	-1.35 (2.16**)						
voting with UK* election variable		-1.48 (2.20**)					
voting with France* election variable			-1.48 (2.17**)				
voting with Germany* election variable				-1.38 (2.19**)			
voting with Italy* election variable					-1.38 (2.22**)		
voting with Japan* election variable						-1.14 (1.75*)	
real GDP (t-1)	-0.02 (3.52***)	-0.01 (3.45***)	-0.01 (3.39***)	-0.01 (3.45***)	-0.01 (3.52***)	-0.02 (3.77***)	-0.01 (2.42**)
real p. c. GDP growth in OECD countries (t-1)	0.48 (4.78***)	0.49 (4.85***)	0.49 (4.81***)	0.50 (4.88***)	0.49 (4.81***)	0.50 (4.96***)	0.48 (4.27***)
LIBOR (t-1)	0.12 (2.71***)	0.11 (2.45**)	0.12 (2.67***)	0.10 (2.41**)	0.11 (2.61**)	0.10 (2.22**)	0.17 (2.16**)
monetary expansion (percent, t-1)	0.01 (4.65***)	0.01 (4.78***)	0.01 (4.78***)	0.01 (4.69***)	0.01 (4.66***)	0.01 (4.60***)	0.01 (4.58***)
log likelihood	-391.21	-393.87	-394.01	-391.60	-366.39	-392.70	-378.38
number of countries	29	29	29	29	29	29	29
number of observations	139	139	139	139	139	139	139

Notes:

Fixed country and time dummies included.

z-statistics in parentheses

Levels of significance: 1 percent (\*\*\*), 5 percent (\*\*), 10 percent (\*)

## Appendix: Descriptive Statistics and Data Sources

Variable	Data Source	Mean	Std. Dev.
Voting in the UN	<a href="http://www.un.org">www.un.org</a>	0.36	0.13
Dummy for elections	Election Watch in Journal of Democracy, Various years; Alan J. Day ed. Political Parties of the World, 5th Edition, (UK: John Harper Publishing, 2002); <a href="http://www.electionworld.org">http://www.electionworld.org</a> .	0.08	0.27
GDP (billion US\$, real)	IMF (2003)	18.74	53.83
GDP growth rate	IMF (2003)	1.65	12.00
real per capita GDP growth in OECD countries	OECD (2003)	0.61	0.38
London Inter Bank Offer Rate (LIBOR)	IMF (2003)	4.53	1.84
Government consumption (in percent of GDP)	IMF (2003)	15.18	5.60
Government budget deficit (in percent of GDP)	IMF (2003)	11.72	148.84
Monetary expansion (percent)	IMF (2003)	19.81	27.54
Change in international reserves (percent)	IMF (2003)	3.85	20.76
Current account balance (in percent of GDP)	IMF (2003)	-45.37	599.82
Change in IMF liabilities (percent of Quota)	IMF (2003)	0.39	55.51