PROMISES MADE, PROMISES BROKEN:
A MODEL OF IMF PROGRAM IMPLEMENTATION

by

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Abstract

A country that enters an IMF sponsored lending program agrees to enact stabilization and reform measures. The actual disbursal of funds by the Fund is tied through a process known as conditionality to the implementation of these policies. Many programs are not fully completed because the borrowing government fails to comply with the original agreement. This paper presents a model of program implementation, which is then empirically tested with data from the period 1975-99. The IMF and the borrowing country are shown to have asymmetric evaluations of a program's discounted benefits, due to differences in their measurements of the benefits, the relevant time frame and appropriate discount rate. The model also distinguishes between a government that seeks to maximize national welfare and an autocracy that acts only to benefit the ruling group. It can also be shown that the existence of threshold effects in the benefits may result in dual optimal implementation rates. The results of the empirical analysis demonstrate that successful program implementation is affected by a country's trade openness, the duration of the political regime, the ideological cohesion of the government, and the degree of political openness.

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Promises and pie-crust are made to be broken.
--Jonathan Swift, *Polite Conversation*

1. Introduction

The lending programs of the International Monetary Fund have drawn a great deal of notice and criticism in recent years.[1] The disbursement of funds to governments that enroll in these programs is linked through a procedure known as "conditionality" to their implementation of policies specified in advance. The scope and nature of these policies have expanded in recent years, and analysts such as Goldstein (2003) have examined the consequences of this extension. The IMF released a series of reports (2001a, 2001b, 2001c) reviewing the changes in conditionality in the last decade, and agreed that there is a need to streamline the process.

A related focus of attention has been the implementation of Fund programs. Incomplete compliance can limit the improvement in a country's economic performance, adversely affect its reputation in the international capital markets, and leave it with a need for further assistance and more programs.[2] In recent years the Fund has sought to foster the concept of a country's "ownership" of a program in order to increase the government's sense of responsibility for the program's completion and success.[3] The IMF's Managing Director Horst Köhler has stated that "…The Fund is streamlining conditionality with the objective of promoting greater ownership and strengthening the implementation of programs."[4]

While the consequences of program noncompliance are widely recognized, there has been less agreement on its causes. The IMF has traditionally attributed incomplete implementation to a lack of political commitment to a program by the borrowing governments.

However, this characterization does not explain why such a commitment may be lacking, or why governments enter these agreements. It also neglects the role of the IMF itself in designing the programs.

This paper presents and tests a model of the implementation of IMF programs. The next section summarizes the record of IMF program completion, and the literature that has dealt with this issue. Section 3 presents the model, which attributes incomplete compliance to asymmetries between the Fund and borrowing countries in their evaluations of the benefits of a program. The IMF adopts a "globalist" position, while the domestic government has a "nationalist" perspective, or in some cases, an "autocratic" stance. The following section explains the data used in the empirical tests. Section 5 offers an empirical analysis of the determinants of program completion, using a sample of programs in place between 1975 and 1999. The results indicate that economic and political openness, ideological cohesion and the duration of a regime affect program completion. The last section summarizes the results and draws some policy inferences.

2. IMF Program Conditionality

2.1 IMF Programs

The purposes of the IMF appear in the IMF's Articles of Agreement, and include international monetary cooperation, the growth of international trade, exchange stability and the establishment of a multilateral system of payments as goals. More recently, Guitián (1992) declared that the "… fundamental purpose of the institution would be to foster, and monitor the observance of, a code of conduct in international exchange and financial affairs on the part of member countries."[5] Fisher (2000) stated that the IMF sought to "… make the system work better by helping countries improve their domestic policies because those spill over into the

behavior of the international system."[6] The IMF, therefore, undertakes to advance international welfare through its lending programs.

The IMF provides financial assistance to its members through a variety of facilities. A Stand-By Arrangement (SBA) is designed for countries with balance of payments problems that can be addressed in the short-term (i.e., one to two years). Countries with external deficits due to structural problems can obtain assistance over a medium-term period (three years) through the Extended Fund Facility (EFF).

In 1986 the IMF established the Structural Adjustment Facility (SAF) to provide resources on a concessional basis to low-income countries. It was succeeded by the Enhanced Structural Adjustment Facility (ESAF) in 1993, which in turn was renamed the Poverty Reduction and Growth Facility in 1999. Loans granted under this facility are disbursed over a three-year period to support policies of economic reform designed to remedy structural imbalances and promote growth.

The Fund has recently instituted two new facilities, the Supplemental Reserve Facility (SRF) and Contingent Credit Lines (CCL). The SRF provides assistance for exceptional balance of payments difficulties due to financial market crises. The CCL was instituted for countries that are concerned about the possible fallout of a financial market crisis, and want credit to be available if needed.

Conditionality is the compensation mechanism that allows the IMF to monitor behavior and provide incentives for compliance with the policies that are part of its programs. The actual provision of IMF assistance is linked to a government's implementation of a program of specific policies. The conditions are specified in a "Letter of Intent" signed at the initiation of a program.[7] The Fund utilizes performance criteria to ascertain whether a country has complied with a

program's macroeconomic policies and structural measures. The macroeconomic criteria usually involve the management of aggregate demand, while structural conditions seek to increase the efficient use of resources.

Structural conditionality has been an integral part of SAF, ESAF and PRGF arrangements, but such conditions also appear in SBAs and EFFs. Structural conditions have often dealt with public finance issues, such as tax reform, and the regulation of the financial sector. In the last two decades structural benchmarks, which are designed to provide assessments of program compliance but are seen as less crucial than performance criteria, have become prevalent in the design of programs.

The IMF monitors adherence to the policy conditions on a quarterly or semi-annual basis. In addition, prior actions that require policy changes before an arrangement is initiated can be stipulated. The Fund also uses program reviews to assess compliance with the structural benchmarks and the overall adequacy of the program. The IMF does grant waivers if noncompliance is due to factors outside the control of a borrowing country. The IMF can modify an existing program in response to changes in external conditions, or cancel an existing program and replace it with a new one.

2.2 Record of Program Compliance

While the record of compliance with IMF program conditionality has been evaluated many times, there is no one metric utilized for assessing the relative implementation or completion of a program. Reichmann and Stillson (1978) analyzed 79 programs that were in effect between 1963 and 1972 and their impact on policies and objectives. They reported that the principle purposes of the programs were successfully achieved in 76 percent of these programs.

Later analyses investigated the extent of compliance with specific types of conditions. Beveridge and Kelly (1980) examined 105 programs that took place between 1969 and 1978, and reported that fiscal performance provisions were met in 54 percent of the programs that contained them and bank credit ceilings in 55 percent. Edwards (1989) investigated the conditions utilized in 34 programs in place during the years 1983 through 1985. Polak (1991) summarized those findings as showing that fiscal targets were attained in 36 percent of the programs and credit ceiling targets in 44 percent. Polak (1991) also updated this record to include programs in place between 1988 and 1989, and reported compliance figures for the fiscal and credit targets of 40 percent for the 17 SAF programs and 60 percent for the 5 ESAF programs.

Killick (1995) undertook an examination of 305 programs that took place between 1979 and 1993. He used the proportion of credit actually disbursed by the end of a program relative to the amount initially committed as a standard to measure program completion, and defined a successful program as one in which at least 80 percent or more of the credit was eventually disbursed. By that criterion, only 47 percent of all the programs were successfully completed.

In a comprehensive study of the IMF's programs, Mussa and Savastano (2000) reported the proportions of drawn credit by quartiles for 615 programs over the period 1973 to 1997. They reported that half or more of the committed funds were disbursed in 63 percent of the programs. They agreed that partial disbursement of less than half of the committed funds could represent a deviation in a country's policies from those that the government had agreed to undertake. However, they also pointed out that programs might not be fully implemented because of external shocks. In such cases the original agreement is often cancelled and replaced by a new

program, and the partial implementation of the first program should not be interpreted as evidence of lack of commitment.

Other criteria have been utilized as measurements of compliance. Mecagni (1999) used the incidence of program interruptions, defined as a period over six months between arrangements or delays in completing a program review, in his study of SAF/ESAF program implementation. He found that there were program interruptions in 28 of the 36 countries studied. Similarly, Edwards (2001a) utilized the occurrence of program suspension as a criterion for measuring implementation. He reported that the governments were eligible to receive all the drawings stipulated in the original letter of intent in 208 of 347 programs initiated between 1979 and 1995, a compliance rate of 60 percent.

Recently the IMF has begun to track program compliance through its Database for Monitoring Fund Arrangements (MONA). It includes information on Fund programs approved since 1993, including the conditions for their disbursement, and is used to calculate two indexes, the Structural Benchmark Index and the Index of Fund Program Implementation (IFI). The former measures compliance with the structural benchmarks for each program, and the latter compliance with the performance criteria. Mercer-Blackman and Unigovskaya (2000) report that the IFI ratings for 24 transition economies over the period of 1993 to 1997 ranged from 50 for Bulgaria to 100 in Estonia, with a mean rating of 84.

2.3 Models of Conditionality

The use of conditionality by the international financial institutions has been the subject of a number of theoretical studies. Mosley (1987, 1992), for example, analyzed conditionality in the context of a two-party game between the lenders and the borrowing countries. The degree of

program compliance depended on the borrowing country's need for external assistance and its ability to implement the conditions of the loan. White and Morrissey (1997) extended this analysis to allow alternative assumptions regarding donor and recipient preferences regarding the granting of aid and policy reform.

Bird (1998) considered policy conditionality within the framework of the political economy of policy reform. He pointed out that a government that seeks to retain power will only implement a program after comparing its benefits and costs. Poor compliance may reflect changes in the benefits or costs after the program is initiated.

Killick (1996, 1997, 1998) and Hermes and Schilder (1997) offered analyses of conditionality within the context of a principal-agent model. In a principal-agent relationship, the agent agrees to undertake a set of activities that are desired by the principal in return for compensation. Problems can occur when there are differences in the utility functions of the two parties and/or incomplete information regarding whether the agent is fulfilling the agreement.

In this case, the international financial institutions such as the IMF are the principals representing the major quota-holders, and they seek to influence the behavior of borrowing countries.[8] Killick demonstrates that there are points of conflict between the international agencies and the borrowing countries, since they have different constituencies and goals. Consequently, compliance tends to break down as countries exercise their national sovereignty in policymaking, and the problem is exacerbated by resentment of foreign intervention.

Mayer and Mourmouras (2002) presented a model of program implementation in which special interests play a key role. In their model, special interest groups that oppose welfare-enhancing reforms contribute funds to the government to ensure the continuance of such distortions. Assistance from an international agency enables the government to pursue less

distortionary policies. Drazen (2002) offered a similar analysis of the circumstances that would justify the use of conditionality in a lending program. In his model, conditionality can enhance welfare if the program's assistance directly benefits the special interest groups that oppose reform.

2.3 Empirical Analyses of Program Compliance

The record of compliance (or non-compliance) with IMF program conditionality has been the subject of a number of empirical studies.[9] Edwards (1989) and Polak (1991) attributed the decline in compliance during the 1980s to negative external shocks. Killick (1995) found that program completion rates were positively linked to the amount of credit committed relative to a country's current account deficit. Bird (2001b) and Goldstein (2003) have both suggested that the decline in compliance over time may be inversely linked to the increase in the number of conditions, particularly structural. The IMF (2001c), however, has denied that there is a link between the number of measures included in a program and the rate of implementation.

Studies from the Fund itself of its programs have pointed to the importance of political factors in implementation. Schadler et al. (1995), for example, in a review of the record of SBAs and EFFs pointed out that there was a large variation among the countries in their commitment to carrying out reform measures, while Mecagni (1999) attributed a major proportion of the interruptions in SAFs and ESAFs to political changes and civil instability. The IMF's (2001b) own study of the literature on program implementation concluded that:

> This diverse body of work surveyed strongly suggests that national commitment to reform programs—a factor largely outside the control of the Fund or the

Bank—is critical in the success or failure of Bank or Fund-supported adjustment programs.[10]

Edwards (2001a) studied the effect of variables representing international power and influence on the suspension of IMF programs. He found that the Fund was less likely to suspend a program in countries with larger quotas, and offers two interpretations of this result. The IMF may treat larger states differently because of their impact on world economic activity; alternatively, the IMF may keep lending to larger states in order to maximize its own expenditures and attain some bureaucratic goal. Edwards (2001b) also reported evidence that the IMF was more likely to suspend programs in democratic states with proportional representation electoral systems or highly fractionalized legislatures. Dreher (2002) found that program interruptions are less likely to occur in an election year, which he attributes to the Fund's reluctance to become involved in domestic politics as well as a government's desire to avoid the stigma associated with the breakdown of a program.

In Stone's (2002) analysis of the IMF's lending credibility, countries that have foreign supporters such as the U.S. deviate from program conditions more frequently and have more inflationary policies, but are subject to shorter periods of program suspension. He tested this model with data from the transition economies and found that strategic importance, as measured by the receipt of U.S. aid, does affect the duration of program suspension. He also reported that the number of coalition partners in a government increases the probability that a program will be interrupted.

Ivanova, Mayer, Mourmouras and Anayiotos (2003) have undertaken an empirical analysis of program completion based on the model of Mayer and Mourmouras (2002). Their results indicated that the strength of special interests in a country's legislature adversely affects

the probability that a program will be successfully implemented, as their model suggests. A high degree of cohesion within a government increases the probability of successful program implementation, while political instability lowers it.

3. Model of Policy Implementation

A basic model of program implementation is first introduced. This model is then extended by introducing a distinction between the evaluations of a program's benefits by the IMF and the borrowing country. A second iteration of the model differentiates between the programs evaluations of democratic and autocratic governments. Finally, it is shown that threshold effects in the benefits that accrue to the country implementing a program can result in dual equilibria in the implementation rates.

3.1 Basic Model

When a government evaluates a program it compares its benefits (B) and costs (C). The benefits are based on the level of program compliance (P), which ranges continuously from zero to full completion (P^F). The benefits derive from the financial assistance provided by the Fund, the decline in the external sector imbalance as the country undertakes the program's policies, and the outcome of any reform measures that are part of a program. The program's Marginal Benefit (MB) declines as the rate of implementation increases and the country moves closer to a sustainable external sector position.

$$B = B(P) \tag{1}$$

$$MB = B_P > 0, B_{PP} < 0 \tag{2}$$

The costs of a program's implementation also vary in response to the degree of program completion. Stabilization policies, for example, may lower employment and output due to

nominal rigidities. Similarly, structural policies that seek to increase competition threaten the welfare of special interest groups. The Marginal Cost (MC) of a program increases as the country implements additional policy conditions. The impact of macroeconomic policies designed to lower inflation may rise as a country moves from hyper-inflation to lower inflation rates. The effect on domestic interest groups increases as trade liberalization proceeds or institutional changes are undertaken. [11]

$$C = C(P) \tag{3}$$

$$MC = C_P > 0, C_{PP} > 0 \tag{4}$$

Since the disbursement of funds is phased over time, a country can evaluate the Marginal Benefits and Costs of each stage. To achieve the greatest net gain from a program, a country fulfills a program's conditions up to that level where the Marginal Benefit of a program is equal to its Marginal Cost:

$$MB = MC \tag{5}$$

This condition is shown in Figure 1. The MB schedule intersects the MC schedule at the level of program compliance, P^*. There is no reason to assume that P* is equal to the full implementation rate, P^F.

3.2 Asymmetries in Evaluations of Benefits

This basic model can be extended to illustrate differences between the goals of the government of the borrowing country, the "nationalists," and the IMF, the "globalists." The domestic government wants to maximize national economic welfare in order to increase the standard of living and/or as a means to remain in office. The IMF is concerned with the welfare of all its members, as well as the stability of the international economic system. This divergence

in goals leads to different evaluations of the benefits of a program and the optimal level of program compliance. [12]

The Marginal Benefit of a program that a domestic government evaluates consists of the national benefits discounted over time:

$$MB^N = \sum_{i=1}^{m} \frac{MB^N_{t+i}}{(1+j)^i} \tag{6}$$

The IMF, on the other hand, evaluates the discounted global benefits:

$$MB^G = \sum_{i=1}^{n} \frac{MB^G_{t+i}}{(1+k)^i} \tag{7}$$

There are three sources of discrepancy between the borrowing country's evaluation of the benefits and the IMF's. First, the IMF takes into account both the national and international benefits of a program. Consequently, it will perceive more benefits coming from a program than does the national government, i.e., $MB^N < MB^G$. Second, a domestic government will have a shorter time horizon than the Fund ($m < n$), since it wants to avoid removal from power through elections or other means, and its survival is based in part on economic performance during its current term of office. The Fund, on the other hand, can employ a longer view of the impact of policies. Finally, the government will have a higher discount rate ($j > k$) than does the Fund, since it prefers more immediate results in order to deter potential opposition. Consequently, the Fund systematically evaluates the benefits from a program as higher than the borrowing country.

This divergence in the Marginal Benefit schedules is the basis of the difference between the design and the implementation of a program. The IMF's evaluation of the situation establishes the program's goals and conditions. Countries are usually in a state of crisis with no alternative private suppliers of funds when they approach the Fund, and consequently the IMF

can effectively dictate the size and terms of the program. Moreover, since there appears to be no penalty for incomplete compliance besides non-disbursal of the remaining funds, there is no reason for a government not to agree to the largest available amount. Once a program is initiated, however, the government decides on how much of the available credit it actually wants to draw. Since it sees less benefits accruing from the program than does the IMF, it does not implement the entire program, but only the portion where the domestic benefits outweigh the costs.

This situation is shown in Figure 2. The IMF's schedule, MB^G, exceeds the MC schedule, and full program compliance is optimal at P^F. On the other hand, for the domestic government with its marginal benefit schedule, MB^N, partial program completion at P^N is most advantageous.

The domestic government's assessment of the benefits that accrue from a program depends on its own goals. A government that seeks to integrate its economy with the global economy will have a perspective that is similar to the Fund's, and a higher program implementation rate.

A government's ability to undertake comprehensive stabilization and reform policies is also constrained by its own domestic political position. A government divided among competing factions or political beliefs will be less able to formulate a consensus on enacting reform measures. While the executive may be prepared to adopt a program, for example, the legislature may not be willing to pass the necessary legislation. This reluctance may be due to the existence of special interests or polarization along ideological lines. Similarly, officials who face reelection in the near future may be reluctant to undertake new initiatives that could hinder their chances of retaining power.

3.3 Democrats and Autocrats

The model can also be used to differentiate between democratic governments that seek to maximize national welfare and autocratic regimes that function solely for the benefit of those who hold power and their supporters.[13] In the latter cases, the borrowing government is only interested in the credit made available by the IMF that is used to finance consumption and maintain its control of the country. These governments can also be characterized as "kleptocracies,"[14] and include such regimes as those of Marcos in the Philippines, Mobutu in Zaire (Democratic Republic of the Congo) and the Duvaliers in Haiti. These governments also evaluate the benefits of a program:

$$MB^{A} = \sum_{i=1}^{p} \frac{MB^{A}}{(1+r)^{i}} \qquad (8)$$

The financial benefit of an IMF program to an autocracy is less than the economic and social improvements that are part of the domestic national benefits, $MB^{A} < MB^{N}$. However, the autocratic government may have a longer time horizon than a more representative government, since it does not face the constraint of regularly scheduled elections. Therefore, it is not clear whether the planning horizon (p) of the autocrat is greater or less than that of the representative government (m). The relationship of the autocrat's discount rate (r) to that of an elected government (j) is also ambiguous. Democratic governments may feel the need to show quick results in order to deter potential opposition, while the autocratic ruler may feel more secure in his grasp of power. Consequently, it is not clear a priori whether an autocratic government would have a lower program completion rate than that of a democratic regime.

Figure 3 shows the situation where the autocratic government's MB schedule (MB^A) falls below that of a representative government (MB^N), and as a result the program completion rate is lower ($P^A < P^N$); however, it is possible that MB^A could fall between MB^N and MB^G, as would the completion rate ($P^A > P^N$). [15] In either case, however, the IMF's evaluation of the benefits of a program would be greater than the domestic evaluation.

3.4 Dual Equilibria

If there are discontinuities in the Marginal Benefit schedule, then it is possible that there may be more than one optimal implementation rate. Such threshold effects can take place if some benefits are realized only after the country fulfills some base level of conditionality, P^T. Mody and Saravia (2003), for example, have shown that an IMF program will have a positive catalytic effect on private capital flows only if the program leads to policy reform.

The Marginal Benefit schedule that the country faces in these circumstances, MB^T, would have a "jump" at P^T, as show in Figure 4.[16] The Marginal Cost schedule intersects it at two places, yielding two optimal implementation rates, P^L and P^H. If there is imperfect information about its choices, a government may select P^L, not aware that greater benefits accrue if the country implements more of the program.

3.5 Hypotheses

Table 1 summarizes the differences in the parameters of the evaluations of a program's benefits. The model yields a number of testable hypotheses:

First, program completion will be higher in countries that are more globally integrated.

Second, program completion will be lower when governments are internally divided among different factions or parties.

Third, program completion will be lower when a government has held office for an extended period of time.

Finally, the type of government in power, i.e., democracy vs. autocracy, may affect the degree of completion, but the nature of the relationship is ambiguous.

4. Data

Data on 89 developing countries that had begun and finished IMF programs during the years 1975-1999 were collected for the empirical analysis. The sample included a wide range of countries, diversified by income, geography and other criteria. Small countries with populations below one million and several countries with missing data were excluded. The choice of dates for the sample period was guided by data availability. After deleting observations with missing data, there were 362 programs in the final sample: 261 SBAs, 27 EFFs, 24 SAFs and 50 ESAFs. The countries in the sample are reported in the Appendix, as are the definitions of the variables and their sources.

The *Annual Reports* of the IMF were consulted for program commitments signed by these countries during this period. Initially all the regular credit programs were aggregated, i.e., the SBA and the EFF programs, as well as the concessional facilities for low-income countries, i.e., the SAF and ESAFs. The results for only the SBAs and EFFs taken together are also presented.

The disbursal rates of the programs were used as the measurement of program implementation, in part because the data are available to the public in the Fund's *Annual*

Reports. Ivanova, Mayer, Mourmouras and Anayitas (2003) utilized several indicators of program implementation including the disbursal rate, and reported that all the measures were correlated.

However, precautionary programs and those programs that were cancelled were excluded from the sample, since their inclusion would bias downwards the measurement of implementation. Precautionary programs are not intended to be enacted; if they are initiated because of a change in circumstances, it is not evident that the government will want to draw down all the credit. Mussa and Savastano (2000) state that programs that are cancelled and immediately replaced represent situations where it is impossible to achieve the original goals of a program due to a change in circumstances, but a new plan can be put into place. Programs may also be cancelled for reasons that do not reflect an unwillingness of the government to implement its conditions.

The average disbursal rate in our sample was 70%, almost identical to the 71% reported by Ivanova, Mayer, Mourmouras and Anayitas (2003), who also excluded precautionary and cancelled programs from their sample. The frequency distribution of the disbursal rates are shown in Figure 5.

5. Empirical Results

The empirical analysis reported in this section is designed to test the hypotheses of the model, and does not include other possible determinants of program completion that could be utilized in future work. The results are reported in Table 1.

Since the dependent variable is truncated at zero and 100 percent, the Tobit model was used for the empirical analysis. The values of the explanatory variables during the first year of a

program were utilized, with two exceptions noted below. The variables were added sequentially beginning with the first set of explanatory variables; insignificant variables were dropped and significant variables kept as new variables were tested. The estimations included time dummy variables.[17].

The first set of variables tested in Equation 1 includes measurements of the extent of integration with the global economy. These include OPEN, the sum of exports and imports divided by GDP, and XCAP, exports per capita. The values of these two variables were entered lagged to avoid reverse causality. There are also two "structural" variables included in the equation. The first, PRIM, takes the value of unity for economies where primary goods represent over 50 percent of total exports, as these economies lack a diversified trade base. A dummy variable for the transition economies, TRANS, was also included, as these countries were not initially integrated with the global economy.

The results indicate that a country's trade flows do affect its ability to complete a Fund program, but its status as a primary good exporter or a transition economy do not. An increase in trade openness, OPEN, raises the probability that a country will comply with a program's conditionality, and the coefficient is significant. A country entering a program with a relatively open economy may receive a large amount of benefit from measures intended to increase its competitiveness. Moreover, the presence of a sizeable domestic commercial sector based on foreign trade may provide political support for the measures contained in the program.

The model was then estimated (Eq. 2) with measures of political cohesiveness and polarization taken from the World Bank's *Database of Political Institutions.*[18] The first, COH, is based on Roubini and Sachs (1989), and takes the value of zero when the same party controls the executive and legislative branches. It takes the value of one in a presidential system when the

branches of government are split, and the values one, two or three when there are coalitions or minority governments in parliamentary systems. The second variable, POLAR, is based on an assignment of orientation values (left equals zero, center one and right-wing two) to the two veto players, and taking the absolute difference between these values.[19] The third variable, MAJ, measures the fraction of legislative seats held by the government.

The cohesiveness variable is not significant. This result is surprising, since Ivanova, Mayer, Mourmouras and Anayitas (2003) had used the same variable in their work, and found it to be significant. The proportion of seats held by the government is also not significant. However, the polarization variable has a negative coefficient that is highly significant. A government that is split between veto players that are ideologically at odds will find it difficult to implement the policies of a Fund program.[20]

Several variables that tested the impact of different time frames were then added in Equation 3. These include TEN, the number of years that the chief executive has been in office; EXEL and LEGEL, dummy variables that take the value of one if an executive or legislative election were held in the year that the program was initiated; and DUR, the number of years since the last regime transition (or 1900).

The number of years that the chief executive was in power at the time when the program began is insignificant, as are the election variables. However, the duration variable is negative and significant. A regime that has been in power for an extended period of time may find it politically difficult to impose contractionary macroeconomic policies or market-oriented reforms. The existing distributional coalitions would resist any attempts at change that could result in redistributive outcomes, as Olson (1982) suggested.

Finally, measurements of the nature of the government in power were added. Since these are collinear, they were introduced separately. The variable in Equation 4, POLITY, is an indicator of relative democracy reported by the *Polity IV Project*, and ranges in value from +10 (high democracy) to –10 (high autocracy). The estimated coefficient is positive and significant. The variable was then replaced in Equation 5 with EIEC, an index of executive competitiveness from the World Bank's *Database of Political Institutions* that ranges from one to seven with higher values indicating more competitive elections. This variable is also positive and significant. Finally, PLUR, a composite indicator of political pluralism, based on measurements of the effectiveness of the legislature and reported in *Cross-National Time Series*, was used. This coefficient on this variable is also positive and significant.

These results, therefore, consistently indicate that governments that are politically open have better records in implementing the policies associated with an IMF program. This finding differs from the results of Ivanova, Mayer, Mourmouras and Anayiotos (2003), who reported that electoral competitiveness was not significant in predicting program success.[21] Dollar and Svensson (2000), on the other hand, found that the presence of a democratically elected government raises the probability of the successful completion of a World Bank program, and Stone (2002) reported that authoritarian countries are more likely to have IMF program suspensions.

There are several channels that could explain this connection between the type of a political regime and program completion. Democratic governments, for example, may be more willing to make sacrifices and implement policies with long-term benefits than autocracies would be. This is consistent with Olson's (1991) suggestion that elected governments have a broad "encompassing" interest in a country's prosperity that dictators do not. In addition,

Rivera-Batiz (2002) presents evidence that democratic regimes have positive effects on governance. Identifying the nature of this linkage is a matter that merits further research.

The results in Table 2 are based on the full sample of 362 programs. It is possible, however, that the factors that govern the completion of concessionary programs may differ from those that affect the non-concessionary programs, and a dummy variable in the empirical analysis that indicated whether or not a program was a concessionary program was significant. Therefore, the concessionary SAF and ESAF programs were deleted from the sample, and the models reestimated with only the 288 SBA and EFF programs.

These results are presented in Table 3, and are similar to those reported in Table 2. Most of the variables that are significant in the first set of results remain significant in the second, although the trade openness variable loses significance as the model is respecified. The exception is DUR, which is not significant in any of the equations. The reason for this distinction may be based on the structural reform measures, which are more commonly included in the concessionary programs. If the effect of DUR reflects the resistance of domestic special interest groups to reform, than its impact would be limited in nonconcessionary programs.

6. Summary

The model presented and tested in this paper is a response to Drazen's (2002) insight that "…it is basically impossible to justify conditionality in the absence of a conflict of interests of sorts."[22] The conflict of interests in this case is based on discrepancies between the borrowing country and the IMF over the assessment of the benefits that flow from IMF programs. The IMF will always take a broader view of the nature and scope of these benefits, and therefore will seek

more extensive changes than a country may want to implement. Blaming incomplete completion on a lack of political resolve misses the reasons for its absence.

Countries that have extensive trade with the world are more likely to comply with a program's conditions. Ideological polarization matters, although lack of cohesion per se does not. A government divided among different groups is more likely to fail to complete a program if the division lies across ideological grounds. The results also show that program completion is higher in countries with democratic political regimes.

Our results can also yield insights on the circumstances that would increase a country's "ownership" of a Fund program. The divergence between the IMF's appraisal of a program's benefits and a government's will be smaller in countries with open economic and political systems, and the program therefore more likely to succeed. When a government's ability to act is constrained by internal ideological opposition or long-standing special interests, there is little the IMF can do to improve the chances of program implementation. If programs are to succeed, the IMF must take into account the policy goals of the governing regime and its political status, and devise programs that are in accordance with these factors.

NOTES

[1] See, for example, the reports of the Council on Foreign Relations (1999) and the International Financial Institution Advisory Commission (2000).

[2] See Bird (2002) for a review of these issues.

[3] See, for example, Khan and Sharma (2001) and Boughton and Mourmouras (2002).

[4] IMF (2001d), p. 5.

[5] Guitián (1992), p. 4.

[6] Fischer (2000), p. 2.

[7] See Mussa and Savastano (2000) for a description of how Fund-supported programs are negotiated, and IMF (2001b, 2001c) for explanations of how programs are monitored.

[8] Kapur (2000) and Martin (2000) have analyzed the situation where the IMF and its management act as an agent for its principals, the major creditor countries.

[9] This is a different issue from the question of whether the policies associated with Fund programs are effective in meeting their economic goals. For reviews of that body of literature see Haque and Khan (1998) and Bird (2001a).

[10] See IMF (2001b), p. 52.

[11] See Naim (1995) on the different stages and levels of difficulty of economic reform.

[12] While there may be some spillover effects on other countries arising from the impact of stabilization policies, the costs are assumed to be manifested primarily in the domestic country.

[13] See Olson (1991) and McGuire and Olson (1996) for analyses of the different incentives that democratic and autocratic regimes face, and the implications for economic welfare. Przeworki and Limongi (1993) review the literature on the impact of different political regimes on growth.

[14] The *American Heritage® Dictionary of the English Language* (2000) defines a kleptocracy as a government characterized by rampant greed and corruption. It is possible to identify situations of autocracies that are committed to economic liberalization (Pinochet in Chile), but such cases are relatively rare.

[15] Another source of indeterminacy would arise if the autocrat considered only the costs that he directly experienced, MC^A, if he implemented the program, which would be less than the national Marginal Cost schedule.

[16] The IMF's "global" MB schedule is not included here to simplify the exposition.

[17] The values of the constant and time dummy variable are not included in the tables, but are available from the author.

[18] See Beck, Clarke, Groff, Keefer and Walsh (2001) for a description of this database.

[19] See Keefer and Stasavage (2003) on the use of the polarization variable.

[20] Edwards and Tabellini (1991) provide evidence that the success of stabilization policies is linked to political stability.

[21] Ivanova, Mayer, Mourmouras and Anayitas (2003) transformed the *Database of Political Institutions'* measurement of executive competitiveness to a binary variable, which equaled one if the index was equal to seven and zero otherwise.

[22] Drazen (2002), p. 41.

Figure 1

Program Implementation

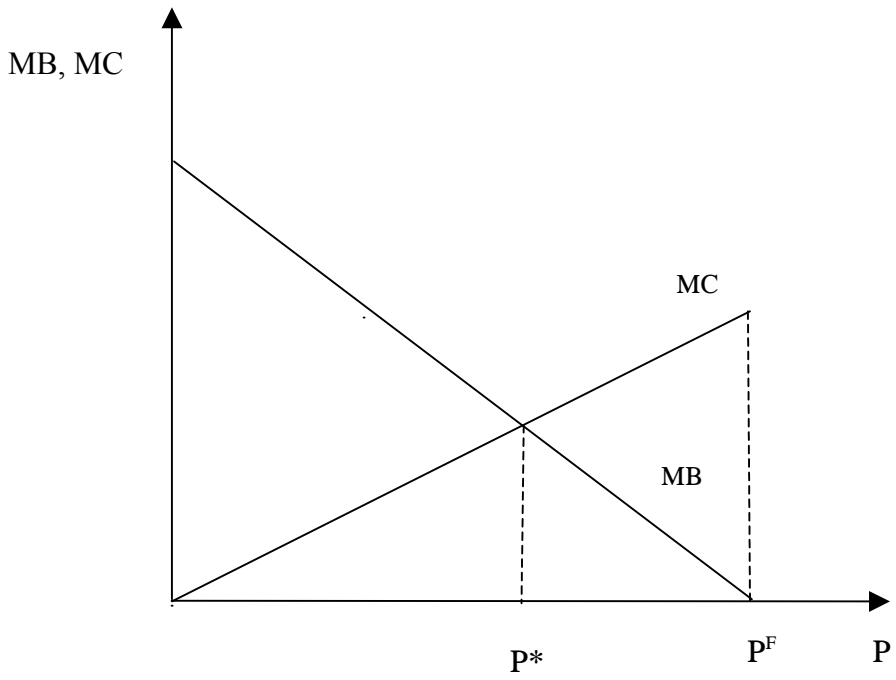

Figure 2

Program Implementation with
MB^N vs MB^G

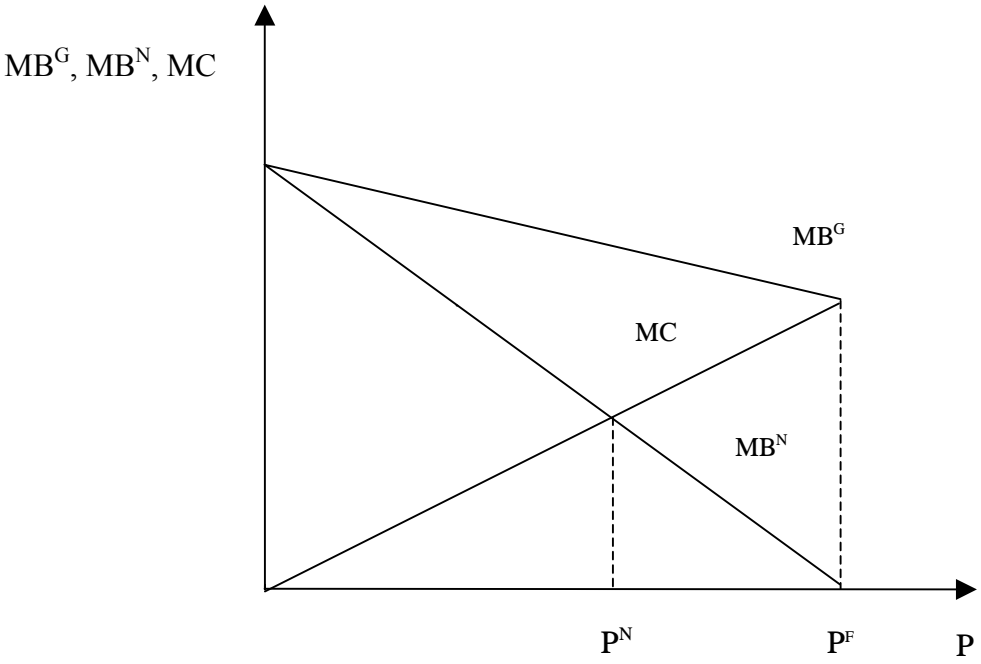

Figure 3

Program Implementation with
MB^N, MB^A and MB^G

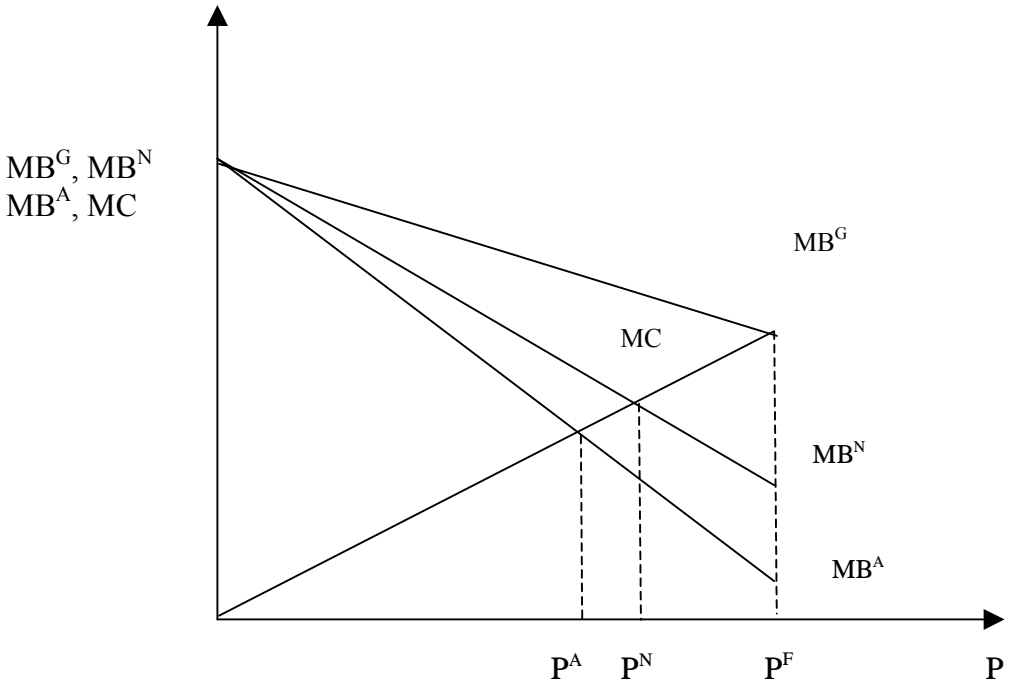

Figure 4

Program Implementation with MB^T

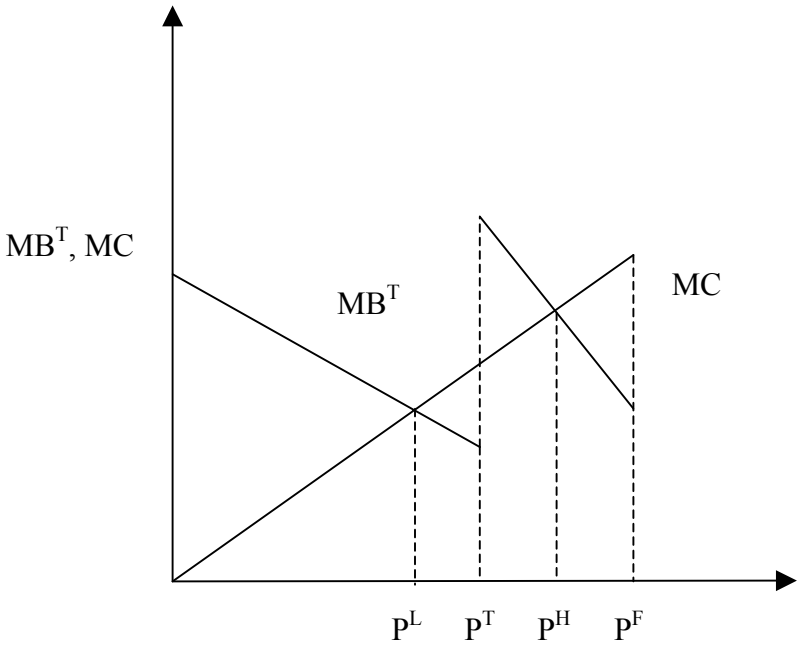

Figure 5

Frequency Distribution of Program Completion Rates

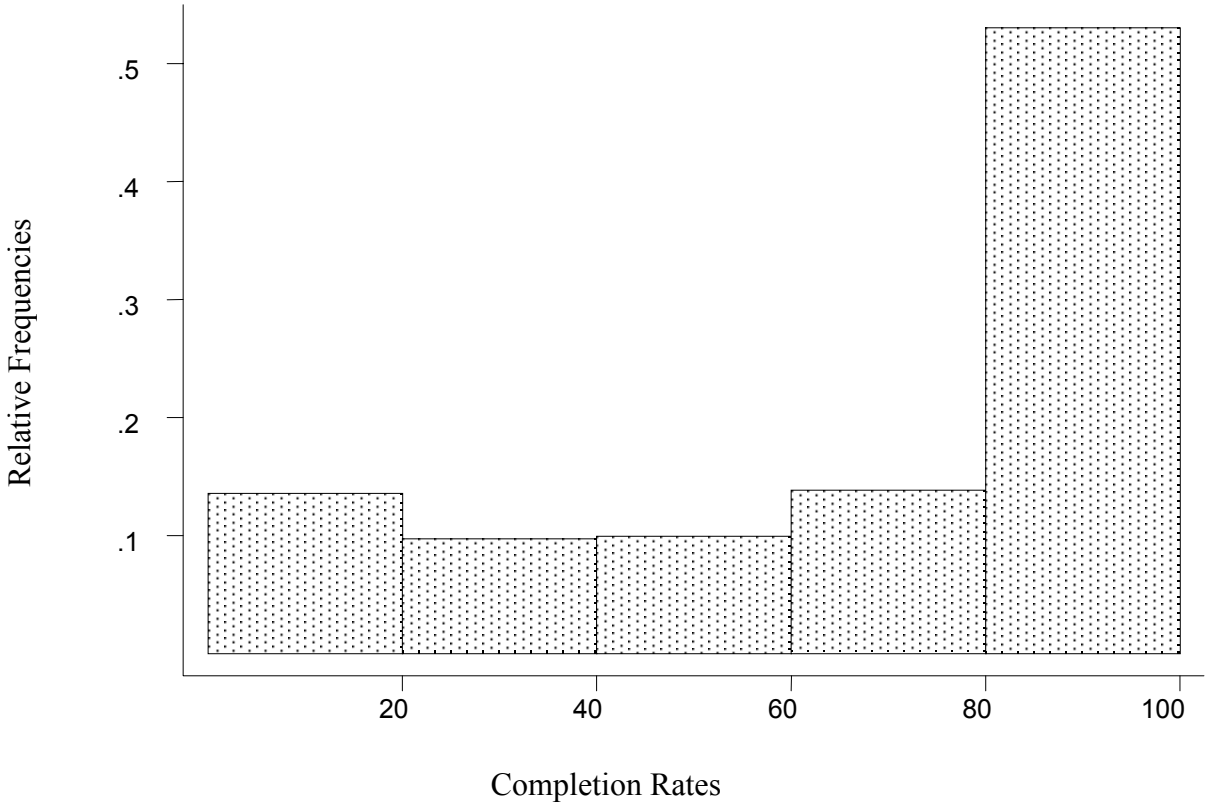

Table 1

Differences in Assessments of IMF Program's Benefits

	Autocrats		*Nationalists*		*IMF*
Marginal Benefits	MB^A	<	MB^N	<	MB^G
Time Frame	p	?	n	<	m
Discount Rate	r	?	j	>	k

Table 2

Results for All IMF Programs

Variable	Eq. 1	Eq. 2	Eq. 3	Eq. 4	Eq. 5	Eq. 6
OPEN	**0.27** (0.13)	**0.26** (0.13)	**0.29** (0.12)	**0.26** (0.12)	**0.28** (0.12)	**0.28** (0.12)
XCAP	-0.00 (0.00)	-	-	-	-	-
PRIM	9.08 (8.29)	-	-	-	-	-
TRANS	8.87 (15.48)	-	-	-	-	-
COH	-	0.08 (7.35)	-	-	-	-
POLAR	-	**-17.74** (7.32)	**-19.92** (6.51)	**-26.25** (7.08)	**-24.18** (6.80)	**-23.44** (6.81)
MAJ	-	-0.61 (12.32)	-	-	-	-
TEN	-	-	-0.20 (0.47)	-	-	-
DUR	-	-	**-0.66** (0.22)	**-0.63** (0.22)	**-0.65** (0.22)	**-0.69** (0.22)
EXEL	-	-	18.76 (13.75)	-	-	-
LEGEL	-	-	-8.22 (10.44)	-	-	-
POLITY	-	-	-	**1.42** (0.61)	-	-
EIEC	-	-	-	-	**4.08** (1.90)	-
PLUR	-	-	-	-	-	**2.30** (1.12)
χ^2	**23.91**	**27.07**	**38.80**	**41.63**	**41.38**	**41.73**
Pseudo R^2	0.01	0.01	0.02	0.02	0.02	0.02
Obs	347	297	362	355	362	351

Note: Standard errors in parentheses. Bold indicates significance at 5 percent level; italics indicate significance at 10 percent.

Table 3

Results for SBAs and EFFs

Variable	Eq. 1	Eq. 2	Eq. 3	Eq. 4	Eq. 5	Eq. 6
OPEN	**0.30**	*0.24*	0.17	0.13	0.14	0.13
	(0.14)	(0.14)	(0.13)	(0.13)	(0.13)	(0.13)
XCAP	-0.00	-	-	-	-	
	(0.00)					
PRIM	-0.27	-	-	-	-	-
	(9.46)					
TRANS	-5.04	-	-	-	-	-
	(17.39)					
COH	-	-7.34	-	-	-	-
		(8.11)				
POLAR	-	**-25.12**	**-28.30**	**-37.69**	**-36.55**	**-34.13**
		(9.81)	(9.15)	(9.69)	(9.50)	(9.30)
MAJ	-	-27.55	-	-	-	-
		(17.24)				
TEN	-	-	-0.27	-	-	-
			(0.55)			
DUR	-	-	0.18	0.33	0.34	0.28
			(0.35)	(0.35)	(0.35)	(0.35)
EXEL	-	-	25.72	-	-	-
			(16.96)			
LEGEL	-	-	-7.99	-	-	-
			(12.36)			
POLITY	-	-	-	**2.02**	-	-
				(0.73)		
EIEC	-	-	-	-	**6.59**	-
					(2.25)	
PLUR	-	-	-	-	-	**3.59**
						(1.31)
χ^2	**17.31**	**29.23**	**27.10**	**34.39**	**33.42**	**32.46**
Pseudo R^2	0.01	0.02	0.02	0.02	0.02	0.02
Obs	283	226	288	285	288	285

Note: Standard errors in parentheses. Bold indicates significance at 5 percent level; italics indicate significance at 10 percent.

APPENDIX

Countries in IMF Programs

Algeria
Argentina
Azerbaijan
Bangladesh
Belarus
Benin
Bolivia
Brazil
Bulgaria
Burkina Faso
Burundi
Cameroon
Central African Republic
Chad
Chile
Dem. Rep. of Congo (Zaire)
Republic of Congo
Costa Rica
Cote d'Ivoire
Croatia
Czech Republic
Dominican Republic
Ecuador
Egypt
El Salvador
Ethiopia
Gabon
Gambia
Georgia
Ghana
Guatemala
Guinea
Guinea-Bissau
Haiti
Honduras
Hungary
India
Jamaica
Jordan
Kazahstan
Kenya
Korea
Kyrgyz Rep.
Latvia
Lesotho
Liberia
Lithuania
Macedonia
Madagascar
Malawi
Mali
Mauritania
Mauritius
Mexico
Moldova
Morocco
Mozambique
Nepal
Nicaragua
Niger
Nigeria
Pakistan
Panama
Papua New Guinea
Peru
Philippines
Poland
Russia
Rwanda
Senegal
Sierra Leone
Slovak Republic
Somalia
Sri Lanka
Sudan
Tajikistan
Tanzania
Thailand
Togo
Trinidad & Tobago
Tunisia
Turkey
Uganda
Ukraine
Uruguay
Uzbekistan
Venezuela
Zambia
Zimbabwe

Definition of Variables and Sources of Data

Variable	Definition	Source
COH	Measure of political cohesion. Equals zero in presidential system if the same party controls executive and legislative branches, and one otherwise. In a parliamentary system, it takes value of zero for a one-party majority government, one for a coalition government with two parties, two for a coalition government with three or more parties, and three for a minority government	World Bank *Database of Political Institutions 2.0*
COMP	Disbursement of credit as a proportion of committed amount	IMF *Annual Reports*
DUR	Number of years since last regime transition (or 1900)	*Polity IV Project*
EIEC	Executive index of electoral competitiveness, with values from zero (least competitive) to seven (most competitive)	World Bank *Database of Political Institutions 2.0*
EXEL	Indicator of whether executive election was held in first year of IMF program	World Bank *Database of Political Institutions* 2.0
LEGEL	Indicator of whether legislative election was held in first year of IMF program	World Bank *Database of Political Institutions* 2.0
MAJ	Proportion of legislative seats held by government	World Bank *Database of Political Institutions* 2.0
OPEN	Exports and imports/GDP, lagged	*Global Development Database*
PLUR	Measurement of political pluralism, based on effectiveness of legislature, competitiveness of nominating process, party coalitions, party legitimacy and index of seats held by largest party	*Cross-National Time Series*

Variable	Definition	Source
POLAR	Indicator of partisan polarization in a government. Equals negative one to identify left-wing orientation, zero centrist, and one right-wing. In a presidential (parliamentary) system, it takes the value of zero if the president's (prime minister's) party has an absolute majority; otherwise, it is maximum difference between the orientation of the values of the three largest government parties and the largest opposition party	World Bank *Database of Political Institutions* 2.0
POLITY	Indicator of type of regime. Ranges from –10 (high autocracy) to 10 (high democracy)	*Polity IV Project*
PRIM	Indicator of countries with non-fuel primary exports. Equals one if primary products account for more than 50% of all exports	*Global Development Database*
TEN	Number of years chief executive has been in power	World Bank *Database of Political Institutions 2.0*
TRANS	Indicator for transition economies	*Global Development Database*
XCAP	Exports divided by population, lagged	*Cross-National Time Series*

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