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# WHY IS STABILIZATION SOMETIMES DELAYED? Reevaluating the Regime-Type Hypothesis

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Existing work on the politics of stabilization has failed to find compelling evidence of a regime-type effect. This article reformulates and reevaluates the regime-type hypothesis. It is argued that regime type does not have an independent impact on the timing of stabilization. Instead, regime type influences the extent to which societal opposition and distributive conflict will delay stabilization. Societal opposition and distributive conflict are likely to delay stabilization in democratic regimes, because governments must worry about maintaining power. Such societal dynamics are less likely to delay stabilization in authoritarian regimes. Using a sample of 92 high-inflation episodes, precisely these regime-specific dynamics surrounding the politics of stabilization were found. Governments in democratic regimes want to stabilize rapidly but often cannot overcome societal opposition and distributive conflict to do so. Authoritarian regimes are substantially less constrained by societal opposition and distributive conflict but have less incentive to stabilize rapidly.

*Keywords:* inflation; macroeconomic stabilization; distributive conflict

**M**acroeconomic stabilization, which can be thought of most simply as the reduction of high inflation, has been a relatively common phenomenon in developing countries. In assembling a data set for this article, I identified 106 episodes of high inflation and stabilization in developing countries between 1973 and 1998 with lengths that varied from 1 year to more than 20 years. In each of these high-inflation episodes, governments eventually changed fiscal and monetary policies to bring inflation back down, but they exhibited considerable variation in the speed at which they did so. In about two thirds of the episodes, governments stabilized relatively quickly, bringing inflation down in 2 to 3 years. In the remaining third of the episodes, however, inflation remained high for long periods of time, averaging 240% per year for an average of 15 years. This pattern poses a very simple question:

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Once confronted with high and rising inflation, why do some governments stabilize rapidly whereas other governments delay?

Most students of stabilization agree that politics play a critical, intervening role. Early work on the politics of stabilization focused almost exclusively on the regime-type hypothesis (e.g., see Haggard, 1986, 2000; Haggard & Kaufman, 1990; Haggard, Kaufman, & Webb, 1992; Kaufman, 1985; Nelson, 1984; Remmer, 1986; Skidmore, 1977; Thorp & Whitehead, 1979). The regime-type hypothesis states that authoritarian regimes are more likely than democratic regimes to stabilize rapidly. The logic behind this hypothesis is intuitive. Because stabilization is costly, at least in the short run, governments that are insulated from the political repercussions of costly economic policies can more easily stabilize. Governments in authoritarian regimes are insulated from such costs, whereas governments in democratic regimes are not. Considerable energy was invested in evaluating this hypothesis, but the accumulated body of evidence provided little indication that the hypothesized regime effect did, in fact, exist. Authoritarian regimes appeared no better at stabilizing than democratic regimes. As a result, the regime-type hypothesis has been largely abandoned.

This article argues that we should revive the regime-type hypothesis for three reasons. First, much of the existing empirical research suffers from selection bias. Small-*n* studies of the regime-type hypothesis draw conclusions from the most extreme cases of high inflation—those in which inflation rises to very high levels and persists for long periods of time (e.g., see Kaufman, 1985; Nelson, 1984; Skidmore, 1977). The few large-*n* studies of stabilization that have been conducted draw inferences from cases that have been selected based on country participation in stabilization programs supervised by the International Monetary Fund (IMF) (see Haggard, 1986; Remmer, 1986). Although studying extreme cases can be instructive, inflation rarely rises to extreme levels in the first year of a high-inflation episode, governments rarely turn to the IMF as a first resort, and high inflation does not persist for long periods whenever it occurs. Instead, whether inflation continues to rise depends upon how the government responds to the initial increase. If the government responds quickly and adopts a successful stabilization package, inflation will never reach extreme values. Indeed, inflation will reach extreme levels only if the government fails to stabilize early. In focusing only on extreme cases, therefore, scholars exclude all of those episodes in which governments have successfully stabilized.

This selection bias greatly reduces our confidence in the conclusion that regime type has no impact on stabilization. Selection bias causes researchers to draw inferences from the sample under study that may not be true of the population as a whole (Collier & Mahoney, 1996; King, Keohane, & Verba,

1994). The degree to which inferences will be incorrect depends upon the severity of the selection bias. If the dependent variable is restricted to a single value, the scholar can incorrectly conclude that the explanatory variable has no effect on the dependent variable (King et al., 1994, p. 129). When the dependent variable is truncated rather than restricted to a single value, the importance of explanatory variables will be underestimated (King et al., 1994, pp. 130-132). If, as the regime-type hypothesis suggests, authoritarian regimes are more likely to stabilize quickly and democratic regimes are more likely to take much longer to stabilize, then the exclusion of rapid stabilizations from data sets may have caused scholars to underestimate the importance of regime type.

Second, scholars have not accurately translated the theoretical argument that stands behind the regime-type hypothesis into an empirical model. The regime-type hypothesis is based on a three-part, theoretical argument. First, stabilization has specific economic consequences. Second, the economic consequences of stabilization (or the anticipation of these consequences) give rise to societal opposition and distributive conflict among groups within society and the state. Third, political institutions, or regime type, shape how a government responds to the opposition and distributive conflict generated by the economic consequences of stabilization. In the theory, therefore, the underlying political and economic dynamics interact with political institutions to determine whether societal opposition and distributive conflict cause a government to delay stabilization. In translating this theoretical dynamic into empirical work, however, existing studies have neglected the interaction between societal opposition and distributive conflict and regime type. Remmer (1986) ignored distributive conflict and societal opposition and looked exclusively for an independent regime effect. Veiga (2000) incorporated measures of distributive conflict and regime type into his empirical model but did not examine how the interaction between these variables affects the decision to stabilize. Thus, a test of the claim that societal opposition and distributive conflict are more likely to delay stabilization in democracies than in authoritarian regimes has yet to be conducted.

Finally, there is empirical support for the regime-type hypothesis once we reduce selection bias and translate the theoretical argument into the appropriate empirical model. The analysis reported here indicates that regime type affects stabilization in a manner that is consistent with but slightly more complex than the regime-type hypothesis suggests. In the absence of distributive conflict and societal opposition, governments in democracies are more likely than authoritarian regimes to stabilize rapidly. This beneficial effect of democracy is greatly reduced by societal opposition and distributive conflict. In democratic regimes, societal opposition and distributive conflict substan-

tially raise the probability that a government will delay stabilization. In authoritarian regimes, opposition and distributive conflict have little impact on the timing of stabilization. Thus, governments in democratic regimes are apparently willing to stabilize rapidly but often find it extraordinarily difficult to resolve distributive conflict and overcome societal opposition to do so. Authoritarian regimes are more inclined to delay stabilization even though their ability to stabilize is apparently not constrained by distributive conflict and societal opposition. In other words, governments in democracies want to stabilize rapidly but often cannot, whereas authoritarian regimes can stabilize rapidly but often do not want to.

The article is organized in three sections. Section one develops the regime-type hypotheses with a particular focus on the importance of the interaction between societal opposition, distributive conflict, and political institutions. Section two presents the empirical analysis. I explain how I generated the sample of high-inflation episodes used in this study and transformed this raw data into cases of rapid and delayed stabilization, describe the independent variables I used to translate the theoretical concepts into empirical measures, and present the results of the statistical analysis. The final section offers concluding comments.

### **THE REGIME-TYPE HYPOTHESIS AND THE POLITICS OF STABILIZATION**

Stabilization refers to policy measures adopted to correct an underlying macroeconomic imbalance. Typically, high and rising inflation is the most evident sign that such an imbalance exists. For reasons elaborated in a moment, high inflation indicates that the government is expanding the money supply too rapidly, and in many instances, high inflation also indicates the presence of a large government budget deficit. Reducing inflation requires governments to slow the rate of growth of the money supply and, in most instances, to reduce the size of the government budget deficit.<sup>1</sup>

1. It is important to distinguish stabilization from structural adjustment. Structural adjustment typically refers to changes in government policies that affect the operation of markets including trade barriers, rules governing the entry of multinational corporations, competition policies, state-owned enterprises, and other forms of regulation. Although both stabilization and structural adjustment have been prominent in developing countries during the last 15 years, because they are distinct policies designed to achieve distinct objectives, each might have quite distinctive political dynamics. This article focuses exclusively on the politics of stabilization and says nothing about the politics of structural adjustment.

Inflation in developing countries often reflects an underlying budget deficit, because many developing country governments rely on seignorage, an inflation tax, to finance a portion of their expenditures (e.g., see Cukierman, Edwards, & Tabellini, 1992; Edwards, 1994; Edwards & Tabellini, 1991; Roubini, 1991). Seignorage supplied an average of 11% of government revenue for a sample of 54 developing countries covering the period 1971 to 1982 (Cukierman et al., 1992). Of course, not all governments rely on seignorage to the same degree. The Mexican government, for example, raised 23.9% of its revenue from seignorage in this period, whereas the government in Cote d'Ivoire raised only 1.1% of its revenue from seignorage (Cukierman et al., 1992, p. 538). Many developing country governments rely upon seignorage because it provides a low-cost method of taxation that cannot be easily avoided—anyone who holds the local currency or assets denominated in the local currency is hit by the tax. Thus, inflation in developing countries can be linked directly to an underlying fiscal imbalance and to the financing of this imbalance through money creation.

A government's reliance on seignorage need not generate high inflation that necessitates stabilization. Instead, seignorage could generate a stable rate of inflation for an extended period of time. In Benin, for example, annual inflation averaged 13% between 1971 and 1976 and never rose above 15%. Stabilization becomes necessary only when inflation rises substantially above the normal rate of inflation that the government needs to generate through seignorage. To return to Benin, inflation began to rise in 1977 and averaged 34% over the next 5 years. This sudden escalation of inflation, in turn, generated the need for stabilization. Existing literature is largely silent on why inflation suddenly escalates. Most models assume that an exogenous shock reduces tax revenues or increases government expenditures thereby generating a larger fiscal deficit that must be financed through money creation (e.g., see Persson & Tabellini, 1990).<sup>2</sup> Stabilization requires the government to eliminate the fiscal imbalance to reduce inflation.

Once stabilization becomes necessary, politics influence how rapidly a government can bring inflation back down. The regime-type hypothesis suggests that governments in authoritarian regimes will eliminate the fiscal imbalances and stabilize the economy more rapidly than governments in democratic regimes. This hypothesis is based on a complex interactive dynamic

2. The lack of attention paid to the cause of inflation is a potentially important weakness of the existing stabilization literature, particularly if political factors that cause high inflation are the very ones that make the subsequent reduction of inflation difficult. Whether this weakness is important is an empirical question that cannot be resolved in this article. My effort to predict high-inflation episodes with the same political variables that complicate stabilization suggests that the assumption that random exogenous shocks trigger high inflation is reasonable.

that embodies assumptions about the nature of the underlying political economy problem governments face, the central political dynamic that arises from this political economy problem, and how political institutions shape the political dynamics to either facilitate or frustrate rapid stabilization. The central political economy problem has been conceptualized in two ways. The original regime-type literature focused on a *j*-curve economic trajectory. Stabilization initially worsens economic performance by reducing growth rates and raising unemployment before improving economic performance in the long run. Stabilization thus requires governments to adopt policies that create high costs in the short run and are rewarded for doing so only in the long run. A second approach conceptualizes the underlying political economy problem as distributive conflict. There are an infinite number of expenditure reductions and tax increases consistent with a balanced budget and low inflation. Each combination, however, will carry different implications for social groups. One program may impose high taxes on one group and no taxes on another; another may cut government programs that benefit one group while maintaining programs that benefit other groups. The government must select one combination of expenditure cuts and tax increases from the many that are possible thereby deciding how the costs of stabilization are distributed across groups within society.

The two conceptualizations of the underlying political economy problem give rise to different political dynamics of stabilization. Political dynamics in the *j*-curve model revolve around the interaction between the state and society (Haggard, 1986; Haggard & Kaufman, 1990; Haggard et al., 1992; Remmer, 1986; Skidmore, 1977). The image here is one of a unified state attempting to implement a stabilization package pit against a society unified in opposition to stabilization. As a consequence, the politics of stabilization are almost reducible to a matter of courage: Does the government have the courage to implement austerity in the face of strong societal opposition? This *j*-curve model generates a simple hypothesis that relates societal opposition directly to stabilization: The severity of societal opposition will determine how rapidly a government stabilizes. A government will be more likely to delay stabilization when confronting strong societal opposition. Rapid stabilization will be more likely when such opposition is absent.

Political dynamics in the distributive conflict model revolve around a war of attrition between social groups and the politicians that represent them (see Alesina & Drazen, 1991; Drazen, 2000; Drazen & Grilli, 1993). In contrast to the *j*-curve model, which assumes that society is unified in opposition to stabilization, this model assumes that all social groups prefer low inflation to high inflation. However, social groups are not indifferent about how to stabilize. Whereas the *j*-curve model implicitly assumes that all stabilization pro-

grams are alike, this model recognizes that one program can differ substantially from another. One program will impose higher taxes on one group or cut government expenditures on programs from which this group benefits. Another program will impose higher taxes on other groups or cut government expenditures on programs from which these other groups benefit. Each group naturally prefers that others incur the tax increases and expenditure cuts required to bring inflation down. Conflict between groups arises, therefore, over the precise details of the government's stabilization program. Each group blocks proposals that raise the taxes it pays or reduces government expenditures on programs from which it benefits. Such distributive conflict becomes a war of attrition as each group waits for others to concede and agree to bear the costs of stabilization. In this approach, therefore, the severity of distributive conflict determines how rapidly a government stabilizes. Distributive conflict among social groups delays stabilization; rapid stabilization is likely when distributive conflict is absent.

Neither model incorporates political institutions or regime type. In one model, the government delays stabilization because it is wary of the political implications of the short-run costs. In the other, delay results from distributive conflict that is not quickly resolved. If regime type matters, therefore, it matters through its interaction with the political dynamics emphasized by these two models. We can think about this interaction in two distinct ways. First, the amount of societal opposition and distributive conflict that occurs in a society may be conditional upon the type of regime in place. Opposition and distributive conflict might be more likely in political systems where such action can influence policy and be less likely in political systems where the possibility for such influence is limited. This leads to a simple hypothesis concerning the impact of regime type on stabilization. Societal opposition and distributive conflict are more likely to occur in democratic than authoritarian regimes. Consequently, governments in democratic regimes will be more inclined to delay stabilization.

Alternatively, the impact that societal opposition and distributive conflict have on government policy might depend upon the kind of regime in place. In this formulation, the severity of societal opposition and distributive conflict does not vary across regime types, but the two political systems encourage governments to respond to these identical social dynamics in different ways. In particular, governments in democracies will be more sensitive to societal opposition and distributive conflict than governments in authoritarian regimes. In democracies, social groups hold governments accountable for their economic policies, and governments intent on maintaining power must therefore be responsive to societal demands. Consequently, societal opposition is likely to cause democratic governments to search for alternatives

before adopting austerity packages. Because authoritarian regimes are not held accountable by a broad electorate, such governments can more readily disregard societal opposition. Societal opposition, therefore, would be more likely to cause a government to delay stabilization in democracies than in authoritarian regimes. Governments in the two regimes might also respond differently to distributive conflict. Competition between groups is an intrinsic component of democratic politics. Democracies allow distributive conflict to be brought into the political arena and lack a strong, independent actor to resolve such conflicts authoritatively. In authoritarian regimes, policy making does not involve a large number of competing groups, and there is no presupposition that stabilization must wait until social groups reach agreement on how the costs will be distributed among them. Distributive conflict is thus more likely to delay stabilization in democracies than in authoritarian regimes. This formulation suggests, therefore, that regime type mediates the impact of societal opposition and distributive conflict on stabilization. Authoritarian regimes will stabilize quickly, because government policy is not greatly influenced by societal opposition and distributive conflict. Governments in democracies will be more likely to delay stabilization, because they must be responsive to distributive conflict and societal opposition.

In short, the regime-type effect, if there is one, is an interactive effect. The anticipation of stabilization will trigger social reactions to the economic consequences of austerity. These reactions can emerge as societal opposition to any austerity measures or as distributive conflicts between social groups over the precise details of the government's stabilization program. These social reactions to the anticipations of austerity might themselves delay stabilization. If a regime-type effect does exist, it lies either in how regimes shape social groups' reactions to the prospect of austerity—by making societal opposition and distributive conflict more likely in democracies than in authoritarian regimes—or in how it shapes governments' responses to social opposition and distributive conflict. Societal opposition and distributive conflict might arise in both regime types, but they will be more likely to delay stabilization in democracies than in authoritarian regimes. We turn now to test these hypotheses.

## DATA AND ANALYSIS

### Case Selection and Estimation Strategy

The first empirical task is to identify high-inflation episodes. To do so, I adopted a mechanical approach in which I calculated a threshold rate of infla-

tion and then studied all country years in which inflation rose above this threshold (e.g., see Bruno & Easterly, 1996). I calculated the average inflation rate during the period from 1969 to 1999 for all countries whose rates of inflation were reported by the IMF *International Financial Statistics*. This produced an average rate of inflation of 12.99% per year. I then defined high inflation as inflation two standard deviations or more above this average. The standard deviation of the sample was 5.58 thus producing a threshold value of 24.15. All country years in which inflation rose above this threshold were defined as high-inflation years.

I then transformed the raw country-year observations into high-inflation episodes, each with a clear beginning and end. Determining how long a particular high-inflation episode persists is problematic. The basic complication is how to treat high-inflation observations in a given country in nonconsecutive years. Suppose, for example, that inflation in Argentina is above the threshold in 1980 and 1981, falls below the threshold in 1982, and then rises above the threshold in 1983 and 1984. Should this be treated as a single 5-year high-inflation episode or as two distinct 2-year episodes? I adopted the rule that a high-inflation episode ends only if the last year of above-threshold inflation is followed by 2 consecutive years of inflation below the threshold. If inflation rises above the threshold in the third year, this marks the beginning of a distinct episode.<sup>3</sup> Using this coding rule, the country-years of high inflation identified in step one yielded 106 discrete high-inflation episodes between 1973 and 1998 (see data appendix).

One further data transformation is required because of the estimation strategy I adopted. Survival analysis might seem the appropriate empirical technique, for it holds the promise of precise estimates of the empirical relationships between the independent variables and the length of high-inflation episodes. Survival analysis cannot deliver on this promise here, however. Exploiting the potential of survival analysis requires a stable linear relationship between the independent variables and the duration of high-inflation episodes. More acute distributive conflict, for example, must yield longer high-inflation episodes. Yet, the impact that distributive conflict has on the length of a high-inflation episode depends upon how the war of attrition to which it gives rise plays out. Unless wars of attrition play out identically in all cases, there will be no linear relationship between the severity of distributive conflict and the length of high-inflation episodes. Consequently, survival analysis may not reveal a systematic relationship between distributive conflict and the length of episodes. When it fails to do so, we will be unable to

3. In only one instance did this yield two episodes separated by 2 years: Paraguay from 1985 to 1986 and then again from 1989 to 1991. All other cases of multiple episodes in the same country are separated by at least 3 years.

determine if this means that distributive conflict has no effect on the timing of stabilization or whether, instead, it has an effect but one that is not easily modeled empirically.

For this reason, I adopted an alternative approach that ignores the long-run evolution of high-inflation episodes and focuses instead on a simpler division between rapid and delayed stabilizers. This approach does not assume a linear relationship between the explanatory variables and the length of episodes. It assumes only that some political characteristics make a government less likely to stabilize rapidly. An element of subjective judgment clearly enters into play in determining what constitutes a rapid stabilization and what constitutes a delayed stabilization. The data suggest that 3 years is the appropriate cutoff for a rapid stabilization. About 50% of the high-inflation episodes experienced above-threshold inflation for only 1 year, 66% experienced above-threshold inflation for only 2 years, and 70% experienced above-threshold inflation for only 3 years. For those countries that experienced above-threshold inflation for more than 3 years, the average length of a high-inflation episode is 15 years, and the next shortest episode is 7 years long. Thus, governments either stabilize within 3 years or they suffer high inflation for an extended period. Rather than fully prejudge the matter, however, I created three dependent variables. Each variable sets the break point between a rapid and a delayed stabilization at a different year. In one coding, rapid stabilization is above-threshold inflation for only 1 year; delayed stabilization occurs when above-threshold inflation persists for 2 or more years. In the second coding, rapid stabilization is 2 years or less of above-threshold inflation; delayed stabilization occurs when above-threshold inflation persists for 3 or more years. In the third coding, rapid stabilization is 3 years or less of above-threshold inflation; delayed stabilization occurs when above-threshold inflation persists for 4 or more years. Estimating the same models against all three measures should reduce concerns that the reported findings result from the adoption of 1 year as the cut point rather than another.

#### **Independent Variables**

The regime-type measure is taken from the Polity IV (2000) data set. Polity IV provides two indexes, one for democracy and one for autocracy. The index of democracy is based on information about “the competitiveness of political participation, the openness and competitiveness of executive recruitment, and constraints on the chief executive” (Marshall & Jaggers, 2000, p. 12). The autocracy index is based on information about the same three aspects plus evaluations of the regulation of political participation. The autocracy index is then subtracted from the democracy index to produce a

single measure of regime type in which high values (10 being the maximum) are strongly democratic and low values (-10 being the minimum) are strongly autocratic. I transformed this index into a dummy variable. Following standard practice, countries that scored 7 or above on this index were coded democracies and assigned a value of 1; countries that scored below 7 were assigned a value of 0.<sup>4</sup>

I use urban population as a share of total population as a proxy for societal opposition to stabilization. I use this measure rather than a measure of actual opposition, such as strikes or protests, because direct measures will be misleading if governments behave strategically. If politicians anticipate that stabilization will generate strikes, protests, and other forms of social unrest that could topple the government, they will not implement stabilization. If stabilization is not implemented, people will have little incentive to take to the streets. Thus, the amount of direct action might be quite low even when the threat of such action has caused the government to delay stabilization. Using the size of the urban population circumvents this problem by providing a measure of potential opposition to stabilization. Social opposition is more likely in highly urbanized societies than in rural societies. As Robert Bates (1988) noted,

Urban consumers are potent because they are geographically concentrated and strategically located. Because of their geographic concentration, they can be organized quickly; and because they control transport, communications, and other public services, they can impose deprivations on others. They are therefore influential. (pp. 346-347)

All else being equal, therefore, governments will be more likely to delay stabilization as the size of the urban sector increases.

I use two measures as proxies for channels through which distributive conflict can delay stabilization. First, I include a measure of government polarization as a proxy for distributive conflict within the ruling coalition. When multiple and ideologically distinct parties participate in the government, there is a greater chance that they will disagree over the specific elements of any stabilization program. Such intracoalition disagreement can generate a war-of-attrition dynamic that delays stabilization. When the parties that participate in the government are not ideologically polarized, there is less chance of disagreement about which groups will bear the costs of stabili-

4. Democracies account for 22 of the 92 cases, or 24%. In a larger developing country data set that I have assembled spanning the years from 1975 to 1998, democracies make up 30% of the total population. Thus, democracies appear in the current sample in roughly the same proportion as they occur in developing countries over the same period.

zation, and the government will be able to push the burden of stabilization onto groups excluded from the ruling coalition.<sup>5</sup> Consequently, delay becomes more likely as polarization increases. Government polarization measures the maximum difference in ideological orientation, as indicated by party affiliation, of the political parties that are members of the governing coalition. The variable ranges from 0 to 2 with higher values indicating greater divergence of preferences among the political parties that make up the ruling coalition. All else being equal, the probability of delaying stabilization should increase as government polarization increases.

Second, I use veto points to capture the possibility that stabilization is blocked by distributional conflict between branches of the political system. A veto point is a branch of government whose agreement is necessary for any policy change (Tsebelis, 1995, p. 293). The more veto points there are in the political system, the greater the number of actors whose consent to a specific stabilization package is necessary. The veto points variable is an index that assigns one point for the president (if one exists), one point for each legislative chamber, one point for each party in government in a parliamentary system, and one point for a prime minister. Thus, political systems with more veto points receive higher scores on the index. All else being equal, the probability that stabilization will be delayed should rise as the number of veto points rises.

I also control for the impact of external pressure. Maxfield (1997) argued that governments in developing countries must signal their credit worthiness to attract capital inflows. International financial market participants look at macroeconomic indicators as one measure of the risk attached to lending to a particular country. The emergence of a macroeconomic imbalance can thus cause new lending to dry up and might provoke large capital outflows. Losing access to external finance will, in turn, raise the costs of stabilization by forcing the governments to make larger cuts than would be necessary if access to international capital were maintained. The sensitivity of developing country governments to these market pressures will vary, however, with variation in their exposure to the global economy. Countries that have already borrowed heavily on international financial markets will want to maintain access to rollover short-term debt and attract additional financing. Countries that are deeply integrated into the world trade system will want to maintain access to financial markets to finance trade. To capture these pressures, I included foreign debt (measured as a percentage of gross domestic product [GDP]) and trade openness ( $(\text{imports} + \text{exports})/\text{GDP}$ ). In both cases, I

5. The appropriateness of this measure is suggested by Alesina and Drazen (1991) and Alesina (1994): "Stabilization will be delayed more in countries with less cohesion and with more political polarization" (Alesina 1994, p. 50).

expect a negative relationship. Deeper integration into the global economy will reduce the probability that a government delays stabilization.

Participation in an IMF stabilization program might also influence how rapidly a government stabilizes. Because access to IMF finance requires governments to agree to fiscal and monetary policy targets, governments that participate in such programs might be constrained when setting fiscal and monetary policies. An IMF program might also relax the resource constraint that governments face (Bienen & Gersovitz, 1985; Casella & Eichengreen, 1996; Haggard & Webb, 1994). Fund finance provides resources that allow adjustment to take place over a longer period thereby making it less severe than it would be otherwise. Because the short-term costs and the severity of the underlying distributive conflict are reduced, a government that participates in an IMF program may be more likely to stabilize rapidly. To control for this IMF effect, I created dummy variables for three separate IMF programs: stand-by arrangements, the Extended Fund Facility programs, and the Structural Adjustment Facility.

I also controlled for the inflation rate, although the expected sign on this variable is ambiguous. One might expect countries facing very high inflation to take longer to stabilize. Alternatively, a considerable body of work argues that economic crises precipitate reforms in which case high inflation would be associated with more rapid stabilization (e.g., see Bruno & Easterly, 1996; Drazen & Easterly, 2001; Drazen & Grilli, 1993; Rodrik, 1996). I controlled for the impact of inflation by including the inflation rate in the first year of the high-inflation episode.

Finally, I controlled for a number of country-specific factors that are not reported in the final models. These other controls included per capita income, the size of the economy (GDP), the economic growth rate, and the exchange rate regime. I also tested some alternative measures of distributive conflict including a measure of ethno-linguistic fractionalization. None of these variables approached statistical significance in any of the models I estimated. Moreover, the inclusion or exclusion of these variables, either singly or jointly, had no appreciable impact on the reported results. Consequently, these control variables were excluded from the models reported below.

## Results

I estimated two sets of models. The first set focuses on the independent effects of regime type, size of the urban sector, government polarization, and veto points. The second set examines the interactions between regime type on one hand and the measures of societal opposition and distributive conflict on the other. The results of the analysis for the first set of models are presented in

Table 1  
*The Politics of Stabilization*

|                               | When Delayed<br>Stabilization is<br>More Than 1 Year | When Delayed<br>Stabilization is<br>More Than 2 Years | When Delayed<br>Stabilization is<br>More Than 3 Years |
|-------------------------------|--|---|---|
| Inflation                     | 0.05* (0.03)   | 0.05** (0.02)   | 0.07*** (0.02)  |
| Structural Adjustment Program | -2.71*** (1.04)                                      | -2.72** (1.22)  | -4.19*** (1.49)                                       |
| Extended Facility Fund        | 0.61 (1.0)   | 0.57 (0.87)   | 0.26 (0.86)   |
| Stand-by arrangement          | -0.65 (0.56)   | -0.79 (0.61)  | -0.82 (0.73)  |
| Trade openness                | -0.03** (0.01)                                       | -0.03** (0.01)  | -0.04*** (0.02)                                       |
| Foreign debt                  | 0.01* (0.01)   | 0.02*** (0.01)  | 0.02*** (0.01)  |
| Government polarization       | 1.61* (0.88)   | 2.45*** (0.82)  | 2.00** (0.80)   |
| Size of the urban sector      | 0.02 (0.02)  | 0.05*** (0.02)  | 0.04** (0.02)   |
| Democracy                     | 0.47 (0.56)  | 0.57 (0.49)   | 0.98 (0.62)   |
| Veto points                   | -0.22 (0.35)   | -0.23 (0.37)  | -0.27 (0.41)  |
| Log likelihood                | -49.31   | -39.11  | -33.73  |
| Pseudo $R^2$                  | 0.22   | 0.35  | 0.40  |
| $\chi^2$                      | .02  | .004  | .0007   |
| $n$                           | 92   | 92  | 92  |

Note: Dependent variable is dichotomous where 1 = delayed stabilization and 0 = fast stabilization. Standard errors (in parentheses) are calculated using robust and cluster to correct for possible nonindependent observations.

\* $p < .1$ . \*\* $p < .05$ . \*\*\* $p < .01$ .

Table 1. The results indicate three conclusions about the overall fit of the three models. First, all three models fit the data reasonably well; in all cases we can reject the null hypothesis that the coefficients are jointly zero. Second, all three models do not fit the data equally well. Measures of goodness of fit improve as the definition of rapid stabilization is relaxed. Model 2, in which stabilization occurs within 2 years, is a better fit than Model 1; Model 3, in which stabilization occurs within 3 years, is a better fit than Model 2. This suggests that the factors that shape the timing of stabilization are most powerful at distinguishing between governments that stabilize in 3 years or less and those that take much longer to stabilize. Third, in spite of the differences in overall goodness of fit, all three models return broadly similar results for the independent variables. The estimated coefficients are reasonably stable across the three models. Moreover, in only one case is an explanatory variable that is statistically significant in any model not statistically significant in all three models. Thus, even though Model 3 is the strongest model, the results it suggests are evident also in the other two.

To facilitate interpretation and discussion of the individual explanatory variables, I used *Clarify* to evaluate how a change in each explanatory vari-

Table 2  
*Magnitude of Substantive Effects on Probability That Stabilization is Delayed*

| Variable                   | Change in X<br>(From, To) | Change in Probability<br>That Stabilization<br>Will be Delayed | Standard<br>Error |
|----------------------------|---------------------------|--|-------------------|
| Openness                   | Mean → 87.18              | -.17   | .05               |
| External debt              | Mean → 134                | .28  | .09               |
| Structural Adjustment Fund | 0 → 1                     | -.34   | .08               |
| Government polarization    | Mean → .68                | .20  | .08               |
| Size of urban sector       | Mean → 62.07              | -.18   | .06               |

Note: Based on Model 3 from Table 1. Calculated with *Clarify* statistical software (King et al., 2000; Tomz et al., 2001).

able alters the probability that a government delays stabilization (King, Tomz, & Wittenberg, 2000; Tomz, Wittenberg, & King, 2001). I used this procedure to calculate the change in the probability that stabilization will be delayed as a result of an increase in one explanatory variable from a low value to a high value while holding all other variables at their means.<sup>6</sup> I implemented this procedure for Model 3. The results are presented in Table 2.

A few of the control variables performed as anticipated. The rate of inflation in the first year of a high-inflation episode is highly significant and positive in all three models. All else being equal, governments with relatively high inflation were more likely to delay stabilization than governments with relatively low inflation. Some of the external pressure variables are also significant. Trade openness returned statistically significant coefficients in all three models. The negative sign on the coefficient indicates that deeper integration into the world trade system reduces the probability that a government will delay stabilization. This effect is relatively large. The probability that stabilization would be delayed fell by 17 percentage points as openness rises from the sample mean to 87%. This is consistent with the hypothesis that the need to maintain access to international financial markets to finance trade encourages governments to stabilize rapidly. External debt also returned a statistically significant coefficient in all three models, but the sign on the coefficient indicates instead that governments with large external debts are more likely to delay stabilization. The magnitude of this effect is also relatively large: increasing the ratio of external debt to GDP from the sample

6. For dichotomous variables, these changes were calculated across the 1 and 0 values. For the continuous variables, I varied the independent variable from the sample mean to one standard deviation above the mean.

mean to one standard deviation above the mean raises the probability that a government delays stabilization by 28 percentage points.<sup>7</sup>

There is some evidence of an IMF effect. The Structural Adjustment Program measure returned a large and statistically significant coefficient in all three models. The negative sign on this coefficient indicates that governments that participated in this program early in their high-inflation episode were substantially less likely to delay stabilization than were governments who did not participate in this program. The size of this effect was relatively large; having a Structural Adjustment Program in place during the first 2 years of high inflation increased the probability that a government would stabilize rapidly by 34 percentage points. Neither stand-by arrangements nor Extended Fund Facility programs returned statistically significant coefficients in any of the models. This was the case whether these other program dummy variables were included in a model along with the dummy for the structural adjustment program or in place of this dummy. Thus, the significant finding for the Structural Adjustment Program cannot be interpreted as a more general IMF effect. Instead, the effect appears to be quite specific to this particular program.

Turning to our variables of primary interest, notice first that regime type fails to return a statistically significant coefficient in any model. This indicates the absence of an independent regime-type effect. The coefficients for the measures of societal opposition and distributive conflict provide some evidence that these factors have an impact on stabilization independent of the type of regime in place. Size of the urban sector, our measure of potential societal opposition to stabilization, returns a highly significant coefficient in two of the three models. The positive sign on this coefficient indicates that governments are more likely to delay the implementation of stabilization packages when they face large urban constituencies. As the urban sector

7. Although this result is inconsistent with the financial market pressure hypothesis, it is consistent with an alternative hypothesis. Many developing country governments turned to international lenders to finance their budget deficits during the 1970s and early 1980s (e.g., see Frieden, 1991). Access to external finance thus enabled governments to run larger budget deficits with less inflation than would have been possible otherwise. When commercial banks stopped lending to developing country governments in 1982 following Mexico's default, governments were forced to choose between making large expenditure reductions and finding an alternative way to finance these expenditures (Edwards, 1995). Many governments did not reduce their expenditures quickly. Instead, many turned to the central bank to finance their expenditures. The result was a rapid increase in inflation and a deepening economic crisis. The positive sign on the external debt variable may well be tapping into this dynamic. This interpretation is slightly more than idle speculation. Regressing budget deficits on external debt for the 92 cases used in this study (controlling for other factors, as well) yields a statistically significant and negative coefficient. This indicates that large external debts allow governments to run larger budget deficits on average.

increases from the mean to 62% of the population, the probability that the government will delay stabilization increases by 18 percentage points. Government polarization, one measure of distributive conflict, is statistically significant in all three models. The positive sign on the coefficient for government polarization indicates that stabilization is more likely to be delayed when the ruling coalition is composed of parties from multiple and ideologically distinct political parties. A high degree of polarization increases the probability that stabilization will be delayed by 20 percentage points compared to more ideologically unified governments. Veto points, the measure of distributive conflict among branches of government, failed to return a statistically significant coefficient in any of the models. This may reflect the fact that the more important causes of delay lie in conflict between political parties. It should be noted, however, that veto points performs no better when government polarization is excluded from the analysis. Overall, the analysis suggests that the independent impact of societal opposition and distributive conflict is much more important than the independent impact of regime type. Rising distributive conflict over and potential societal opposition to stabilization increases the probability that the government will delay the implementation of austerity measures. Regime type has no independent impact on the timing of stabilization.

The significant coefficients for societal opposition and distributive conflict might be tapping into systematic differences in the level of these political dynamics across regime types. That is, distributive conflict and societal opposition might be substantially lower in authoritarian regimes than in democracies. Descriptive statistics fail to support this hypothesis. Democracies as a group are slightly more urbanized than the authoritarian regimes in the sample (45.7% compared to 40.4%) and slightly more polarized (.27 compared to .26). In neither case, however, is the difference statistically significant. There are more veto points, on average, in democracies than in authoritarian regimes (2.8 compared to 2.1), and this difference is statistically significant. However, this variable is not significant in any of the models. As a further test, I ran the model with the measure of regime type included but the measures of opposition and distributive conflict included. This analysis (not reported) failed to provide strong support for this hypothesis, as regime type was only weakly significant (at the .10 level) in only one of the three models, and the overall goodness of fit for these models was poorer than for the models reported in Table 1. Societal opposition and distributive conflict do not appear to be higher in democracies than in authoritarian regimes. There is little evidence, therefore, to support the first regime-type hypothesis.

If a regime-type effect exists, therefore, governments in democracies must be more responsive to societal opposition and distributive conflict than

Table 3  
*The Politics of Stabilization With Interaction Terms*

|   | When Delayed<br>Stabilization is<br>More Than 1 Year | When Delayed<br>Stabilization is<br>More Than 2 Years | When Delayed<br>Stabilization is<br>More Than 3 Years |
|---|--|---|---|
| Inflation                                 | 0.04** (0.02)  | 0.05*** (0.02)  | 0.06*** (0.02)  |
| Government polarization                   | 1.11 (1.03)  | 2.13*** (0.84)  | 1.48* (0.85)  |
| Veto points                               | -0.13 (0.40)   | -0.10 (0.40)  | -0.32 (0.41)  |
| Size of the urban sector                  | 0.01 (0.01)  | 0.04** (0.02)   | 0.03 (0.02)   |
| Regime type                               | -7.42*** (2.84)                                      | -5.22 (4.22)  | -35.33*** (6.76)                                      |
| Regime Type × Veto Points                 | 0.52 (0.70)  | 0.02 (1.03)   | 3.23*** (1.00)  |
| Regime Type × Government<br>Polarization  | 6.40*** (2.02)                                       | 0.42 (1.50)   | 6.75*** (2.34)  |
| Regime Type × Size of the<br>Urban Sector | 0.14* (0.07)   | 0.12** (0.05)   | 0.45*** (0.09)  |
| Foreign debt                              | 0.01* (0.005)  | 0.02*** (0.01)  | 0.02*** (0.01)  |
| Trade openness                            | -0.03** (0.01)                                       | -0.03** (0.01)  | -0.04** (0.02)  |
| Stand-by arrangement                      | -0.56 (0.59)   | -0.85 (0.64)  | -0.75 (0.80)  |
| Structural Adjustment Program             | -2.74*** (1.11)                                      | -2.12** (0.99)  | -3.21*** (1.12)                                       |
| Extended Fund Facility                    | 0.68 (1.03)  | 0.65 (0.86)   | 0.70 (0.93)   |
| Log likelihood                            | -46.88   | -38.62  | -30.81  |
| Pseudo $R^2$                              | .26  | .36   | .46   |
| $\chi^2$                                  | .0000  | .0000   | .0000   |
| $n$                                       | 92   | 92  | 92  |

*Note:* Dependent variable is dichotomous where 1 = delayed stabilization and 0 = fast stabilization. Standard errors (in parentheses) are calculated using robust and cluster to correct for possible nonindependent observations.

\* $p$  .1. \*\* $p$  .05. \*\*\* $p$  .01.

authoritarian regimes. To test this hypothesis, I included interaction terms between regime type, government polarization, veto players, and size of the urban sector. The results of this analysis are reported in Table 3. The inclusion of the interaction terms provides strong evidence of a regime-type effect. Regime type is now statistically significant. Yet, in contrast to what existing literature on stabilization hypothesizes, the negative sign on this coefficient indicates that democracies are less likely to delay stabilization than authoritarian regimes. Moreover, the size of this regime effect is substantial; setting the values for the interaction terms equal to 0, a shift from authoritarianism to democracy reduces the probability that stabilization will be delayed by 92 percentage points. I return to this point below. Thus, rather than being disadvantaged when it comes to stabilization, the analysis suggests that, controlling for other relevant factors, democratic governments are more likely than authoritarian regimes to stabilize rapidly.

The impact of regime type on the probability that a government will delay stabilization is conditional upon the amount of distributive conflict present in the political system and on the amount of potential societal opposition the government faces. The interaction terms Regime Type  $\times$  Government Polarization, Regime Type  $\times$  Veto Points, and Regime Type  $\times$  Size of the Urban Sector all return statistically significant coefficients. As a group, these interaction terms suggest that the impact of distributive conflict and societal opposition on stabilization is much more pronounced in democratic regimes than in authoritarian regimes. Analysis of each of these interaction terms, reported in Table 4, illustrates this general conclusion for each measure. In authoritarian regimes, government polarization, veto points, and size of the urban sector all fail to have statistically significant effects on the probability that a government will delay stabilization. The estimated standard errors for all three variables are substantially larger than the estimated change in probability thus indicating a lack of statistical significance.

In democratic regimes, however, all three variables have large effects on the probability that a government will delay stabilization. Increasing government polarization from 0 to the mean increases the probability that the government will delay stabilization by 37 percentage points. Increasing government polarization from the mean to one standard deviation above the mean further increases the probability of delay by an additional 47 percentage points. The impact of veto points on the probability that a democratic government will delay stabilization is also quite large. Increasing veto points from 0 to 1.39 (one standard deviation below the mean) increases the probability that the government delays stabilization by 73 percentage points. Increasing this measure again to the mean increases the probability of delay by an additional 20 percentage points. Further, increasing veto points from the mean to the maximum has no additional impact on the probability of delay. Thus, the shift from no veto points to a few veto points has a much larger impact than moving from a system with a few veto points to one with many veto points. Finally, the size of the urban sector also has a significant impact on the probability that a democratic government will delay stabilization. Most of the impact of urbanization arises in the shift from very rural to more urban societies. A shift from a fully rural society to a society in which 41% of the population lives in urban areas raises the probability of delay by about 97 percentage points. Further urbanization has no appreciable impact.

As a group, therefore, the interaction terms suggest that regime type does affect the timing of stabilization. However, they also indicate that the ability of governments in democratic regimes to stabilize rapidly is strongly influenced by the amount of societal opposition to and distributive conflict over stabilization. As the bottom panel of Table 4 indicates, when we simulate a

Table 4  
Interaction Effects

| Change in Value of Independent Variable   | Change in Probability That Stabilization is Delayed | Estimated Standard Error |
|---|---|--------------------------|
| In authoritarian regimes  |   |                          |
| Government polarization   |   |                          |
| Minimum → Maximum   | .01   | .03                      |
| Veto points   |   |                          |
| Minimum → Maximum   | -.02  | .06                      |
| Size of the urban sector  |   |                          |
| Minimum → Maximum   | .36   | .23                      |
| In democratic regimes   |   |                          |
| Government polarization   |   |                          |
| 0 → .26   | .37   | .12                      |
| .26 → .68   | .42   | .08                      |
| .68 → Maximum   | .06   | .07                      |
| Veto points   |   |                          |
| 0 → 1.39  | .73   | .15                      |
| 1.39 → 2.25   | .20   | .08                      |
| 2.25 → Maximum  | .03   | .05                      |
| Size of the urban sector  |   |                          |
| 0 → 21  | .96   | .07                      |
| 21 → 41.5   | .04   | .05                      |
| 41.5 → 62   | .0005   | .007                     |
| Impact of regime type at minimum and maximum values of veto points, government polarization, and size of the urban sector |   |                          |
| Maximum values  | -.00000003  | .00003                   |
| Minimum values  | -.92  | .12                      |

Note: Based on Model 3 from Table 3. Calculated with *Clarify* statistical software (King et al., 2000; Tomz et al., 2001).

high degree of societal opposition and distributive conflict by setting veto points, government polarization, and size of the urban sector at their maximum values, democratic and authoritarian regimes exhibit no difference in the probability that they will delay stabilization. Yet, when we simulate low distributive conflict and societal opposition by setting these three conditioning variables at their minimum values, a very substantial difference between democratic and authoritarian regimes is apparent. In the absence of societal opposition and distributive conflict, being a democracy reduces the probability that a government will delay stabilization by 92 percentage points.

Overall, the statistical analysis suggests two conclusions. First, regime type has no independent impact on stabilization. Independent of other factors, democracies are no more and no less likely to delay stabilization than authoritarian regimes. Second, regime type does have an important conditional effect on the politics of stabilization. In the absence of potential societal opposition and distributive conflict, democracies stabilize more rapidly than authoritarian regimes. Yet, as societal opposition and distributive conflict rise, governments in democratic regimes become more likely to delay stabilization. Equivalent increases in societal opposition and distributive conflict in authoritarian regimes have no impact on the timing of stabilization. Authoritarian regimes therefore appear to be better able than democracies to suppress opposition and resolve distributive conflict to implement stabilization packages.

#### **Robustness**

I evaluated whether the reported results are robust to changes in underlying assumptions about the causes of high inflation and the estimation technique used. Here I briefly discuss (but do not present) the results of this evaluation. First, the preceding analysis assumed that high-inflation episodes are exogenous events that occur independent of the political factors that determine how long a government takes to stabilize. If this assumption is not true, then I have a biased sample. Of particular concern is the possibility that democracies are less likely to experience high inflation and would thus be underrepresented in the sample. To evaluate this, I used a data set covering 90 developing countries from 1975 to 1998. I created a dependent variable called high inflation that codes as 1 each country year in which inflation is greater than the 24.15% threshold and codes all other country years as 0. I then used a logit model to predict high-inflation episodes. I used the same independent variables that are included in the models reported above (and a lagged dependent variable). The results provided no evidence that the political factors associated with delayed stabilization are also the cause of high-inflation episodes. None of the substantive variables—regime type, veto players, and government polarization—or any of the interaction terms returned statistically significant coefficients. The factors that cause high inflation thus appear to be distinct from those associated with the decision to implement a stabilization program.

I also used survival analysis to estimate the relationships presented above. Finding similar results with this alternative technique should strengthen confidence in the results reported above. The results from this analysis were consistent with, though weaker than, those reported above. First, the survival

analysis identified a statistically significant relationship between regime type and the length of high-inflation episodes. This relationship was identical to that reported above: Controlling for other factors, democracies experienced substantially shorter high-inflation episodes than nondemocracies. Second, the interaction term Regime Type  $\times$  Veto Players returned a statistically significant coefficient. This relationship was also identical to that reported above: In democracies, the high-inflation episodes lengthen as the number of veto players rises. There is no veto player effect in nondemocracies. Finally, government polarization, size of the urban sector, and their interaction terms with regime type failed to return statistically significant coefficients. This may reflect the absence of a relationship between these variables and the length of high-inflation episodes, or it may reflect the absence of a linear relationship between them. That is, these factors might cause governments to delay stabilization, but their impact on the precise timing varies across episodes. Survival analysis thus yields results consistent with those reported above but provides little insight into the impact that government polarization and societal opposition have on the length of high-inflation episodes.

## CONCLUSION

Regime type exerts a powerful yet conditional influence on the adoption of a stabilization program. Why did the research reported here find a regime-type effect when so many other competent studies have failed to do so? I suspect that the answer lies in the fact that existing work focuses almost solely on inflation outcomes, whereas the results reported here suggest that the critical difference lies in different political processes in the two regime types. The results reported here do not indicate that in the real world we will see different regime types stabilizing at different speeds. Although the analysis does suggest that in the absence of distributive conflict and societal opposition democracies will stabilize rapidly, distributive conflict and societal opposition are rarely absent. Consequently, authoritarian regimes and democratic regimes will both delay stabilization. If we then investigate, as most existing work does, whether democratic and authoritarian regimes stabilize at different speeds, we will find that they do not.

But the absence of a substantial cross-regime difference on the dependent variable does not mean that there are no differences across regime types. Instead, the difference between regimes lies in the political dynamics that generate these outcomes. Governments in democratic regimes want to stabilize rapidly, and in the absence of societal opposition and distributive conflict will do so. Yet the prevalence of societal opposition and distributive conflict

generate powerful incentives for governments in democratic regimes to delay stabilization. A different political dynamic is evident in authoritarian regimes. Societal opposition and distributive conflict are typically present in such regimes, but they impose few constraints on the ability of an authoritarian government to stabilize. Authoritarian political systems thus permit rapid stabilization. The statistical analysis reported here suggests, however, that authoritarian rulers rarely want to stabilize rapidly. The critical difference thus lies in distinct political processes that lead the two types of regimes to the same outcome. Governments in democracies want to stabilize rapidly but cannot, whereas governments in authoritarian regimes can stabilize rapidly but often do not want to.

The analysis therefore raises some important questions for further research. The most obvious is why are governments in democratic regimes more inclined to stabilize rapidly than governments in authoritarian regimes? Research into this question might begin by exploring how different underlying support coalitions create different political incentives. For example, because governments in democracies must be responsive to a broad electorate, they might have an incentive to minimize the cost that high inflation has on the average voter. Because governments in authoritarian regimes need not appeal to a broad electorate, they are likely to care more about how budget cuts will affect the interests of their narrow support coalition than about the impact of high inflation of the broader society. Less obvious, but of equal importance, it may be useful to begin to explore how regime-specific political dynamics influence the effectiveness of IMF conditionality programs. Casella and Eichengreen (1996) suggested that IMF loans can relax a government's budget constraint thereby raising the likelihood that stabilization is delayed. It might be the case, however, that this claim is more relevant for authoritarian regimes than for democracies. In authoritarian regimes, IMF assistance might simply provide resources the government needs to satisfy the demands of its narrow support group. IMF assistance might encourage stabilization in democratic regimes, however, where it can help reduce the social costs of austerity thereby reducing societal opposition and distributive conflict. Answering these questions will deepen our knowledge of how domestic and international politics interact to shape the macroeconomic policy choices that governments make.

## APPENDIX DATA SOURCES

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*Veto players.* An index that assigns one point for the president (if one exists), one point for each legislative chamber, one point for each party in government in a parliamentary system, and one point for a prime minister. From World Bank Research Group (1997).

*Government polarization.* Maximum difference of orientation among government parties (0 to 2). From World Bank Research Group (1997).

*Size of the urban sector.* Urban population as percent of total population. From Easterly & Yu (2001). <http://www.worldbank.org/research/growth/GDNdata.htm>

*Structural adjustment program.* From International Monetary Fund annual reports, various issues.

*Debt-to-GDP ratio.* External debt as a percentage of GDP. From Easterly & Yu (2001).

*Openness.* Imports + exports as percentage of GDP. From Easterly & Yu (2001).

*Inflation.* From International Financial Statistics.

*Democracy.* Democracy = 1 if democracy-autocracy is greater than or equal to 7; democracy = 0 if democracy-autocracy is less than 7. From Polity IV Project (2000).

*High Inflation Episodes, 1970 to 1995*

| Country                         | Years     | Country     | Years   | Country           | Years   |
|---------------------------------|-----------|-------------|---------|-------------------|---------|
| Algeria                         | 1992-95   | Honduras    | 1995    | Republic of Congo | 1994    |
| Angola                          | 1991-99   | India       | 1974    | Rwanda            | 1974-5  |
| Argentina                       | 1971-92   | Indonesia   | 1973-4  | Rwanda            | 1995    |
| Bahrain                         | 1974      | Iran        | 1977    | Senegal           | 1975    |
| Benin                           | 1994      | Iran        | 1981    | Senegal           | 1994    |
| Bolivia                         | 1973-74   | Iran        | 1992-96 | Seychelles        | 1974    |
| Bolivia                         | 1980-86   | Israel      | 1974-86 | Sierra Leone      | 1982-95 |
| Brazil                          | 1981-95   | Jamaica     | 1974    | Sudan             | 1974    |
| Burkina Faso                    | 1994      | Jamaica     | 1978-80 | Sudan             | 1979-97 |
| Burundi                         | 1979      | Jamaica     | 1984-85 | Tanzania          | 1975    |
| Burundi                         | 1996-7    | Jamaica     | 1991-96 | Tanzania          | 1980-95 |
| Cameroon                        | 1994      | Jordan      | 1989    | Thailand          | 1974    |
| Central African<br>Republic     | 1994      | Kenya       | 1992-4  | The Gambia        | 1975    |
| Chad                            | 1994      | Korea       | 1974-5  | The Gambia        | 1986    |
| Chile                           | 1973-80   | Korea       | 1980    | Togo              | 1994    |
| Chile                           | 1983-85   | Lebanon     | 1978    | Turkey            | 1977-99 |
| Colombia                        | 1974      | Lebanon     | 1985-92 | Uganda            | 1981-92 |
| Colombia                        | 1979-82   | Libya       | 1978    | Uruguay           | 1972-96 |
| Colombia                        | 1988-92   | Madagascar  | 1981-2  | Venezuela         | 1987-98 |
| Costa Rica                      | 1974      | Madagascar  | 1988    | Zambia            | 1986-97 |
| Costa Rica                      | 1981-83   | Madagascar  | 1994-5  | Zimbabwe          | 1992-93 |
| Costa Rica                      | 1991      | Malawi      | 1987-8  |                   |         |
| Cote d'Ivoire                   | 1977      | Malawi      | 1994-9  |                   |         |
| Cote d'Ivoire                   | 1994      | Mauritius   | 1974    |                   |         |
| Democratic<br>Republic of Congo | 1974-97   | Mauritius   | 1980    |                   |         |
| Dominican Republic              | 1985      | Mexico      | 1977    |                   |         |
| Dominican Republic              | 1988-91   | Mexico      | 1980-90 |                   |         |
| Ecuador                         | 1983-99   | Mexico      | 1995-96 |                   |         |
| El Salvador                     | 1986-87   | Nicaragua   | 1973    |                   |         |
| Equatorial Guinea               | 1994      | Nicaragua   | 1979-91 |                   |         |
| Ethiopia                        | 1976      | Niger       | 1994    |                   |         |
| Ethiopia                        | 1991      | Nigeria     | 1975-6  |                   |         |
| Gabon                           | 1975      | Nigeria     | 1984    |                   |         |
| Gabon                           | 1994      | Nigeria     | 1988-9  |                   |         |
| Ghana                           | 1975-90   | Nigeria     | 1992-6  |                   |         |
| Ghana                           | 1993-1997 | Pakistan    | 1974    |                   |         |
| Guatemala                       | 1986      | Paraguay    | 1974    |                   |         |
| Guatemala                       | 1990-91   | Paraguay    | 1979    |                   |         |
| Guinea-Bissau                   | 1988-97   | Paraguay    | 1985-86 |                   |         |
| Haiti                           | 1993-95   | Paraguay    | 1989-91 |                   |         |
| Honduras                        | 1991      | Peru        | 1976-93 |                   |         |
|                                 |           | Philippines | 1974    |                   |         |
|                                 |           | Philippines | 1984    |                   |         |

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