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Political Models of Macroeconomic Policy and Fiscal Reform

Alberto Alesina

Two forces affect the success of stabilization in both democratic and dictatorial systems: (1) the policymakers' incentive to retain power and (2) society's polarization and the degree of social conflict.

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Alesina explains how recent developments in political economics improve our understanding of macroeconomic policy — especially the timing, design, and likelihood of stabilization's success through monetary and fiscal reform.

Alesina reviews the literature on political business cycles and emphasizes several issues involving the relationship between the timing of elections and the timing of macroeconomic policies and outcomes.

He also addresses how models can be useful in studying nondemocratic systems. Two forces are crucial factors in both democratic and dictatorial systems, although they may manifest themselves differently: (1) the policymakers' incentive to retain power and (2) society's polarization and the degree of social conflict.

Alesina then analyzes why economic stabilization is delayed, even when it is obvious that sooner or later a stabilization program will have to be adopted. Some points made in the paper follow:

Certain institutional characteristics make quick and successful stabilization more or less likely. The more unequal the distribution of stabilization's costs, the more likely that stabilization will be delayed. An increase in the cost of postponing stabilization reduces the delay. Political institutions that make it easier for small interest groups to "veto" legislation make delay more likely.

If political and economic resources are unequally distributed, and it is obvious which group is stronger and has resources to wait longer, a "war of attrition" ends immediately, as there is no uncertainty about who will win it. Delay is more likely when information about who will bear the cost of delays is uncertain or unevenly distributed.

Delay is also more likely when there is agreement about the need for fiscal change but a political st alemate about distribution — about how the burden of higher taxes or spending cuts should be allocated.

Stabilization usually occurs when there is political consolidation. The burden of stabilization is sometimes unequal, with the politically weaker group (often the lower classes) bearing a larger burden (often regressive measures).

If it is in the interest of the current government to do nothing for fear of failure because of government incompetence, the public may have no incentive to vote for the opposition because the opposition may also do nothing; the crucial factor here is how aware the government is of its own incompetence and thus its reasons for not attempting reform.

Successful stabilization usually comes after several failed attempts, and the successful program is often very much like one that failed.

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Political Models of Macroeconomic Policy and Fiscal Reforms*

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1. Introduction

Economists typically study policymaking in models where a "benevolent social planner" optimally chooses economic policy instruments in order to maximize the welfare of a representative individual, given certain resource constraints.

From a *normative* point of view these models are an extremely important tool of analysis. From a *positive* point of view they cannot explain the occurrence of frequent and large departures from "first best" policies. In addition, models with a "social planner" cannot explain why different countries at different points in time exhibit extremely different economic performances even though they face similar economic problems, and have comparable resources.

A politico-economic approach takes into account the institutional constraints and rigidities in which policymaking occurs, by emphasizing the role of distributive conflicts, ideological and opportunistic incentives of the politicians, etc. Once these political variables are appropriately brought into the analysis, economic policy decisions which "prima facie" appear wildly incoherent and sub-optimal, can be interpreted as the rational outcome of a politico-economic equilibrium. Such an approach not only is valuable from a positive perspective, but also is rich of normative implications. In fact, it provides insights on how to design institutions which facilitate the achievement of efficient economic outcomes. Given the current process of transition to democracy of Eastern European countries, such problems of institutional design are truly at the heart of the current policy debate.

The purpose of this paper is to highlight how recent developments in political economics, help understanding macroeconomic policy,, and more specifically, the timing, design and likelihood of success of stabilizations through monetary and fiscal reforms.

In addressing these important issues, two basic, and very general forces will always appear as crucial factors: 1) the policymakers' incentive to retain power; 2) society's polarization and degree of social conflict. These two elements of the analysis play a crucial role in both democratic and dictatorial systems, although they may manifest themselves differently in different institutional contexts.[1]

The paper is organized as follows. Section 2 discusses the role of "rationality" in politico-economic models and other related methodological issues. Section 3 addresses the issue of the timing of macroeconomic policy in general, and fiscal reforms in particular in relation to the timing of "elections". The focus of this section is how ideological and opportunistic considerations influence the choice of when to implement certain policies. This section reviews the literature on "opportunistic" and "partisan" political cycles and emphasizes what one can learn from this literature which is relevant for countries simultaneously engaging in policy reforms and democratization. Section 4 analyzes the related issue of why stabilizations are delayed. The emphasis here is on why sub-optimal economic outcomes such as hyperinflations and "out of control" budget deficits are not corrected for extended periods of time, even when it is totally obvious that something will have to be done about these problems sooner or later. This section will also emphasize which politico-institutional features are more likely to lead to the timely adoption of successful stabilization programs. The last section briefly concludes.

2. Why "Rational" Models?

Politico-economic models are often invoked to explain observations which seem in conflict with standard economic rationality. Thus, one is immediately tempted to abandon

altogether the notion of "rational behavior", defined as the maximization of individual utility under constraints, which also implies the efficient use of all the available information in forming expectations. Much too often, politico-economic models hold the view that societies can be characterized by a bunch of crooks (the politicians) who manipulate a bunch of idiots (the citizens). It is often too easy to explain apparent departures from efficient collective behavior with "stupidity", lack of understanding of basic economic relationships, short-sightedness, forgetfulness, incoherence, etc. Interpretive schemes and models in which non-rational behavior and non-rational expectations play a crucial role should be used only as a "last resort", after having considered other explanations.

Two compelling arguments justify this view. The first is that economic rationality (i.e., maximization of individual utility under constraints) underlies our basic economic models. Why should we be ready to assume that our economically rational investors, consumers, workers become suddenly dumb voters and naïve citizens?

The second argument is that one of the most important contribution that the political-economic approach has to offer is to provide explanations for the observed large differences in economic performance of countries with similar economic problems, resources and level of development. If the basic explanation for the observed outcomes is "lack of rationality", than one has to believe that, what differentiates various countries in the world is the degree of rationality of their citizens, consumers, voters and leaders. This view is rather unappealing.

The most common objections to the assumption of rationality in politico-economic models can be summarized as follows:

1) Voters have no incentive to gather information, and empirical evidence show that they know very little about politics.

First of all, "rationality" simply requires that an agent uses efficiently all the information which he has; "rationality" has nothing to do with the amount of available information. The vast literature on decision theory under uncertainty and game theory with imperfect information, show how the behavior of a poorly informed "rational" agents, can be very different from that of naïve agents, (see Tirole (1989)). Second, in many political models very little is required to the voters, for instance in several spatial models of elections, all that is required is that the voters know which party is on the left of the other.

2) Even economists are studying models with "limited or near rationality".

In fact, several economists[2] have studied models which emphasize how "small" departures from rational behavior can lead to significant economic effects. This idea is quite interesting. However, the kind of irrationality often invoked in politico-economic model is not "small"; on the contrary, it is very "large" and of a completely different order of magnitude than that of "near rational" models in economics. For example, in traditional models of "fiscal illusion" (for instance Brennan and Buchanan (1980)) voters are not supposed to understand that more public goods imply higher taxes sooner or later. In the traditional political business cycle models pioneered by Nordhaus (1975), voters are not supposed to learn from the past that incumbents manipulate the economy before each election. These are definitively not examples of "near rationality".

3) Individuals are not only self-motivated, they have "ideologies" and may care about their fellow citizens, or at least some of them.

This is not inconsistent with rationality. In fact, Section 2 discusses models in which "partisan" politicians act as if they followed an ideology, in addition to being self-interested. All that is required by a "rational approach" is that political and economic behavior is not inconsistent with given preferences, constraints and information. Furthermore, an "ideology" can be interpreted as a systematic statement of preferences concerning political outcomes which are related to the resources and constraints of different actors.

4) You cannot expect individuals to make all the necessary and complicated calculations needed to act "rationality".

We do not require that consumers can take partial derivatives in order to compute marginal rates of substitutions when they shop in supermarkets. Nevertheless, we believe in basic consumer theory, and in the idea that demand curves are downward sloping. The same arguments apply to politics.

5) Leaders are not capable of acting rationally, because they and their advisors do not have enough technical preparation to adopt the correct policy decisions.

In most cases the crucial ingredients of policy reforms are very simple. The real difficulties are political; for instance, how to share the burden of the adjustment, how to implement the program without creating social unrest, and so on. Political issues are much more difficult than technical issues of how to design the "perfect" program, from the point of view of economic theory. This is not meant to deny that good "technical" advice to leaders is not important; nevertheless, political conflicts and constraints are often much more difficult to overcome than technical difficulties. Otherwise, one would be led to the conclusion that, for instance, the much below average economic performance of Latin America is due to a below

average competence of the economic advisors of Latin America, a rather unappealing hypothesis. This does not mean, however, that government "competence" is relevant. More competent governments are more likely to minimize the costs of adjustments. (See Section 4 for more discussion of this point.)

3. Political Cycles and Economic Cycles[3]

This section reviews the theory and the empirical evidence of political cycles in economic policy making. Most of this literature has been developed with reference to advanced democracies, but subsection 3.6 discusses how this line of work provides insights for analyzing non-democratic systems and systems in transition to democracy.

Different models of political cycles emphasize either the "opportunistic" or the "partisan" incentives of policymakers. In "opportunistic" models, the policymakers maximize only their probability of reelection, or, more generally, their probability of "survival" in office. In "partisan" models, different political parties represent the interests of different constituencies and, when in office, follow policies which are favorable to their supporting groups. Traditionally, left wing parties have been more concerned with the problems of unemployment, while the right wing parties are relatively more willing to bear the costs of unemployment to reduce inflation.

This literature has developed in two clearly distinct phases. The first one, in the mid-seventies, is due to the work by Nordhaus (1975) and Lindbeck (1976) on "opportunistic" cycles and by Hibbs (1977) on "partisan" cycles.. These papers share a "pre-rational expectations"

model of the economy and are based upon the existence of an exploitable "Phillips curve", relating inflation and unemployment.

The second phase took off in the mid-eighties as a branch of the game-theoretic approach to the positive theory of macroeconomic policy pioneered by Kydland and Prescott (1977) and Barro and Gordon (1983). Cukierman and Meltzer (1986), Rogoff and Sibert (1988), Rogoff (1990), and Persson and Tabellini (1990) develop rational "opportunistic" models; Alesina (1987) develops a rational partisan model. These models depart from their predecessors in two important dimensions. First, the assumption of economic agents' rationality makes real economic activity less directly and predictably influenced by economic policy in general, and monetary policy in particular. Second, voters' rationality implies that they cannot be systematically "fooled" in equilibrium. That is, a repeated, openly opportunistic behavior would be "punished" by the voters.

3.1 The "Political Business Cycle"

The assumptions underlying Nordhaus' "political business cycle" (henceforth PBC) can characterized as follows:

A.1) The economy is described by a stable Phillips curve, in which growth (and unemployment) depend upon unexpected inflation.

A.2) Inflation expectations are adaptive; that is, current expected inflation depends only upon past inflation.

Combining A.1) and A.2) leads to the result that an increase in inflation *always* leads to a reduction of unemployment (and an increase in growth); this is because, since expectations are adaptive, they catch up with a lag to actual inflation.

A.3) The policymaker controls the level of aggregate demand by means of monetary and fiscal instruments.

A.4) Politicians are "opportunistic": they only care about holding office, and they do not have "partisan" objectives.

A.5) Voters are mainly "retrospective". They judge the incumbent's performance based upon economic performance during the incumbents' term of office, and heavily discount past observations. Also the voters cannot distinguish between good economic conditions caused by "luck" or by skillful policies.

Under these assumptions, Nordhaus derives the following testable implications: (i) every government follows the same policy; (ii) towards the end of his term of office, the incumbent stimulates the economy, to take advantage of the "short run" more favorable Phillips curve; (iii) the rate of inflation increases around the election time as a result of the pre-electoral economic expansion; after the election, inflation is reduced with contractionary policies.[4] Thus one should observe high growth and low unemployment before each election and a recession after each election.

3.2 "Rational" Political Business Cycle Models

Work by Cukierman and Meltzer (1987), Rogoff and Sibert (1988), Rogoff (1990), Persson and Tabellini (1990) has developed the "political business cycle" model in a rational direction.

In a nutshell, this line of work removes assumption A.2 and substitutes it with:

A.2′) Economic agents have rational expectations concerning all the relevant economic variables.

A.2″) Voters cannot perfectly asses the level of "competence" of the incumbent; that is, they can only imperfectly distinguish between the effects of "unlucky shocks" to the economy from the effect of the government's lack of competence in handling the economy.

Assumption A.5), which implies naive retrospective voting behavior, is substituted by:

A.5′) Each voter chooses the candidate which is expected to deliver the highest utility for himself, given his rational expectations of post-electoral economic outcomes. In particular, the voters, try, as best as they can, given their information, to disentangle the effects on the economy of exogenous shocks from the effects of economic policy.

Policymakers' "competence" is defined as their ability in reducing "waste" in the budget process, in promoting growth without inflation or in their ability to quickly react to unexpected shocks. Also, an important component of "competence" is the degree of corruption of government officials.

The basic assumption of this model is that policymakers are more informed than the citizens about their "competence". By taking advantage of this informational asymmetry, and by trying to appear as competent as possible, politicians behave in a way leading to a Nordhaus

type PBC. However, given voters' rationality and awareness of politicians' incentives, the latter are limited in their "opportunistic" behavior. If politicians appear too openly as "opportunistic", they might in fact be punished by the voters. Thus, the electoral cycles in these "rational" models, are more short lived, smaller in magnitude and less regular than in Nordhaus' model.

For example, Rogoff and Sibert (1988) and Rogoff (1990), consider a budget problem, and have empirical implications on opportunistic cycles on monetary and fiscal variables, rather than on unemployment and output. Specifically these papers suggest that before elections monetary and fiscal policies should be relatively loose. Fiscal stabilizations with tax increases would tend to be postponed to after the election, while spending program and transfer payments would be anticipated before the election. However, these short run budget manipulations may not have any effects on GNP growth or unemployment.

3.3 The "Partisan Theory"

A strong version of the "partisan theory" Hibbs ((1977), (1987)), based upon a non-rational expectation mechanism, adopts assumptions A.1, A.2, and A.3. Assumptions A.4 and A.5 are substituted by:

A.4') Politicians are "partisan", in the sense that different parties maximize different objective functions. Left wing parties attribute a higher cost to unemployment relative to inflation than right wing parties.

A.5''') Each voter is aware of the partisan differences and votes for the party which offers the policy closer to her most preferred outcome.

The assumption of partisanship is justified by the distributional consequences of unemployment. Hibbs shows that, in the U.S., in periods of high unemployment, low growth and low inflation the relative share of income of the upper middle class increases and vice versa. Obviously, since both inflation and unemployment are "bads", both political parties will proclaim that if elected, they will fight both of them. The "partisan" model does not require that, say, the right party actually *prefers* high unemployment to low unemployment. It simply requires that the right is willing to bear more costs in terms of unemployment to achieve a reduction of inflation. Hibbs (1987) discusses at length, how, in the US, the official electoral platforms of the two major parties reveal differences of emphasis on the costs of unemployment and inflation.

Thus, this model implies that different parties choose different points on the Phillips curve: output growth and inflation should be permanently higher and unemployment permanently lower when the left is in office than with right wing governments. More generally, fiscal policy will have a "partisan bias"; for instance capital taxation will be used more extensively by the left, etc.

3.4 "Rational Partisan Theory"

Alesina (1987) and (1988) develops a "rational partisan theory", by adopting assumptions A.1, A.2′, A.3, A.4′ and A.5′′′.

This model generates a political cycle if nominal wage contracts are signed at discrete intervals (which do not coincide with the political terms of office) and that electoral outcomes are *ex ante* uncertain. The basic idea of the model is that, given the sluggishness in wage

adjustments, changes in the inflation rate associated with changes in government create temporary deviations of real economic activity from its natural level.

More specifically, the following testable implications can be derived from the model: (i) at the beginning of a right wing (left wing) government output growth is below (above) its natural level and unemployment is above (below); (ii) after expectations, prices and wages adjust, output and unemployment return to their natural level; after this adjustment period, which should last for no more than a couple of years, the level of economic activity should be independent of the party in office; (iii) the rate of inflation should remain higher throughout the term of a left wing government. That is, the time consistent (but sub-optimal) inflation rate remains higher for left wing parties even after the level of economic activity returns to its natural level because of a "credibility" problem. The public knows that the left has a strong incentive to follow expansionary policies to reduce unemployment. Thus expected inflation is high when the left is in office. In particular, because of rational expectations, after the initial adjustment to the new regime expected inflation is high enough so that the government does not have an incentive to inflate more. Thus, actual inflation is equal to expected inflation and unemployment is at its natural level. See Persson and Tabellini (1990) for a recent survey of these "credibility" models.

In summary, this "rational" model differs from the traditional "partisan" one because it emphasizes how differences in growth and unemployment associated to changes of government are only temporary. For example, a left wing or a "populist" government, strongly committed to reducing unemployment by means of expansionary aggregate demand policies is bound to "succeed" only in the short run. After a brief period in which unemployment may actually fall,

such a government will find itself "trapped" in a high inflation equilibrium with no benefit on the unemployment side. According to Hibbs' model a left wing government could permanently lower the rate of unemployment by permanently increasing the rate of inflation.

3.5 Empirical Evidence for OECD Democracies

Three recent papers by Alesina (1989), Alesina and Roubini (1990) and Alesina, Cohen and Roubini (1991) have provided several tests of political cycle models on a sample of all the OECD democracies for the period 1960-1987. Their conclusions can be summarized in two general points: (1) the new "rational" approaches to modelling opportunistic and partisan cycles are much more successful empirically than their predecessors; (2) partisan effects are rather strong on economic outcomes, such as growth, unemployment and inflation;[5] "opportunistic" effects are small in magnitude and appears only on policy instruments, particularly budget deficits.[6]

The traditional PBC model by Nordhaus is generally rejected quite strongly and unambiguously on growth and unemployment. On the contrary, same evidence of opportunistic budget and monetary electoral cycles is found. These findings are consistent with the "rational view", which emphasizes the limit in the latitude available to policymakers in systematically fooling the voters by appropriately timing recessions and expansions.

The data also seem to be better explained by a "rational" version of the partisan theory rather than the traditional Hibbs' specification of this theory. In fact, difference in growth rates and unemployment have a "partisan" connotation, but are observable only in the short run, for about 18 to 24 months after a change of government. In this period the difference in growth and

unemployment between left wing and right wing governments are quite substantial. However, these differences completely disappear about two years after the government change. Furthermore, Alesina and Roubini (1990) find that the "partisan theory" of macroeconomic policy fits better and is more appropriate for countries which either have a two-party system or, at least, have two clearly identifiable "right" and "left" coalitions, with clearly marked shifts from one to the other. For instance, the countries which provide a better fit for the theory include the U.S., the U.K., Germany, France, Australia and New Zealand. On the contrary, this approach is not very successful in describing countries with large "middle of the road" coalition governments, such as Italy or Belgium.

3.6 Political Cycles in Non-Democracies and the Problem of Transition to Democracy

Empirical research on political cycles in non-OECD democracies is much more limited and, therefore, any new results in this area would be very valuable. It is important to emphasize a distinction between dictatorships and periods of transition to democracy: I shall begin with dictatorships.

Dictatorships are a very heterogeneous group. First of all, one should distinguish between "strong" and "weak" dictators. Strong dictators are those whose survival is not seriously threatened, given a certain domestic and international political and military balance. Strong dictators are themselves heterogenous. Some of them have promoted economic growth and macroeconomic stability in their countries. Others have wrecked their economies. Given such heterogeneity, any attempt to show that dictatorships as a group exhibit a superior (or inferior) economic performance relative to democracies as a group usually ends up with

inconclusive results. More generally, that vast literature on democracy and growth has not reached conclusive evidence regarding their relationship.[7]

"Weak" dictators are those in danger of being overthrown: In fact, if social discontent increases, the dictator's "probability of survival" decreases.[8] When a dictator is in such danger, his incentives may not differ too much from those of an incumbent president or prime minister in a democracy, before an uncertain election. Thus, one may look for "opportunistic" policies and loose fiscal policies when "weak" dictators are in danger of being overthrown. Ames (1986) studies opportunistic behavior of Latin American rulers, with particular reference to "budget cycles" and the opportunistic use of fiscal and military policies. This author shows that Latin American dictators have followed fiscal policies which, in some respects, are a magnified example of the kind of opportunistic policies described in Sections 3.1 and 3.2 above. Ames documents how public expenditure was used to please key constituencies and, in particular, the military sector, when a ruler felt in danger of begin overthrown.

In fact, immediately before dictators are overthrown, the "worst" opportunistic and self-interested policies may be observed, for two reasons. First, collapsing dictators are struggling for survival, and are willing to do "anything", since they feel that they have no future. Any consideration of "good" economic management is secondary to the goal of remaining politically (and physically!) alive. Second, if a dictator becomes convinced that his time horizon in office is very short, he may simply decide to steal from the country's wealth for his own personal gain and for his close supporters.

As a result, collapsing dictators are likely to bequeath to their successors economies with serious macroeconomic imbalances; thus, new democracies inherit very difficult economic

problems. In addition, new democratic governments may feel particularly strongly the "partisan" pressures for "doing something" for the social groups who have recently obtained a voice in the political arena. Furthermore, new democracies are particularly subject to the risk of being overthrown, more so when the groups and constituencies supporting the old regime have a voice and political or military influence. As a result, new democracies face a difficult problem of survival and may find it particularly difficult to follow "though" policies implying short run economic costs: c.c.n new democrac' may have to be opportunistic to "survive". Unfortunately, as argued above, new democracies may come to office exactly at the time when "though" policies are called for and cannot be postponed.

Haggard, Kaufman, Sheriff and Webb (1990) analyze both opportunistic and partisan cycles in a sample of middle income countries with particular emphasis on periods of transition to democracy. Haggard and Kaufman (1989) convincingly argue that transitional democracies face the most difficult pressures and show the worst economic outcomes, relative to both established democracies and dictatorships. Some recent results on economic growth is consistent with this observation. Alesina, Özler, Roubini and Swagel (1991) show that, on average, the growth performance of dictatorships and democracies is indistinguishable. Also, they find that a high probability of a government collapse reduces growth. These observations are consistent with the view that highly unstable "transitional" periods are worse for the economy than periods of stability.

Finally, it is important to highlight that the "partisan" theory implies a positive relationship between the degree of political and social polarization and the variability of macroeconomic policies which in turn affects the variability and level of economic outcomes.

In fact, as emphasized above, the "partisan" theory is based upon the view that because of different distributional preferences, different parties have different preferences of macroeconomic policies (Hibbs 1987). The more different are these distributional preferences, the more volatile is macroeconomic policy. From this perspective, "populist" cycles in Latin America can be viewed as a magnification of "partisan" cycles in OECD democracies. Populist policies are in fact defined as the use of aggregate policies (monetary and fiscal) in order to achieve substantial redistribution of income and wealth (Dornbusch and Edwards (1992)). Populist governments are often followed by right wing regimes which attempt to reverse the populists' redistributions.

These macroeconomic policy cycles often introduce a very large variance and unpredictability in expectations of future policies. Such uncertainty is likely to be associated with poor economic performance by making long run planning more difficult. Recent results by Özler and Rodrik (1991) and Alesina, Özler, Roubini and Swagel (1991) suggest links between the degree of political uncertainty and instability and the level of investments and growth in large samples of countries which include Latin America.

4. Delays in Policy Reforms

One of the most puzzling observations in political economics is that several countries follow policies for extended periods of time which are recognized as being infeasible in the long run. In particular, rapidly accumulating public debts with skyrocketing debt to GNP ratios and hyperinflations. These observations are particularly puzzling for those cases, which are quite common, in which the more a country waits the more costly will be the stabilization program

when finally adopted. Similar arguments apply to the apparently inexplicable delays in trade reforms to eliminate socially inefficient forms of protection. In its most general terms the puzzle is the following: why certain reforms which are "efficient" in the sense that they increase aggregate welfare are delayed?

Clearly, no single model can explain every case of delay in policy reforms. Different explanations may play a role in different cases, although certain arguments appear, in general, more convincing than others. I shall begin by reviewing some of what I consider the least compelling explanations.

The first one is that countries which delay reforms do not understand that such reforms are unavoidable. This is unconvincing since in most cases the macroeconomic imbalances are so macroscopic that no one in his right mind could deny the need for a monetary and fiscal stabilization. "Reasonable persons" can, in some cases, disagree about the speed, urgency and design of a stabilization program for "technical" reasons. Most often, however, these "technical" discussions are, in reality, the reflection of underlying distributional conflicts. (See below.)

A second explanation is that governments wait to stabilize until some exogenous shocks make the stabilization program less costly. Thus, there is an "option value" in waiting as suggested by Orphanides (1990). Such an approach leaves unexplained why, as is often the case, countries do not stabilize as soon as favorable shocks occur and why many actual stabilizations take place without any prior realization of particularly favorable economic shocks.

A third argument is that since stabilizations are costly in the short run, they are postponed until "things get really bad". This is irrational, since the more a country waits the more costly

is the stabilization. According to this model, different countries' experiences would be explained by different degrees of rationality, an argument which is hardly convincing.

Explanations which are not based upon collective irrationality or lack of understanding of basic economic relationships are more sound. In the remainder of this section, I shall highlight a few, organized in four different types of models:

1) "war of attrition" models based upon an uncertain distribution of the costs of delaying the stabilizations;

2) models which focus upon the conflicts of interests of specific social groups, such as labor and capital;

3) models which emphasize the uncertainty about the outcome of the stabilization;

4) models which emphasize the role of certain institutional arrangements, such as the degree of independence of the Central Bank.

4.1 Stabilizations as "wars of attrition"

Alesina and Drazen (1991) argue that, often, the process leading to a monetary and fiscal stabilization can be described as a "war of attrition" between socio-economic groups with conflicting distributional interests.

The basic idea is the following. Consider an economy, where, for whatever reason, a budget deficit appears. A stabilization is defined as an increase in "regular" income taxes which eliminate the deficit. For simplicity and without loss of generality, government spending is assumed to be constant.

Before a stabilization occurs, government spending and the interests on the external debt are paid for by the government in part by borrowing abroad, and in part by means of a highly distortionary tax. For concreteness, the pre-stabilization tax is thought of as an inflation tax, and it is assumed to be more distortionary than regular income taxes. In such a situation, a "social planner" managing an economy populated by identical individuals would not delay the stabilization program. In fact, delays are socially costly for two reasons: first, until the stabilization occurs, distortionary means of taxation are used; second, the longer one waits, the more the debt accumulates, the higher is the interest bill for the government.

Even though a "social planner" would stabilize immediately, the political conflict between heterogenous groups over the allocation of the burden of the stabilization leads to "rational" delays. Suppose that the burden of the stabilization is not divided equally between groups. In particular, assume that there are two competing groups, and the "loser" will pay a share of the stabilization costs (i.e., a share of income taxes) higher than 1/2. Suppose, further, that the two groups are not identical: in particular, they differ in the utility loss which they suffer in the pre-stabilization period. For instance, the "high cost" group is the one for which the costs of living in an "unstable" economy are particularly high. An important element necessary to obtain delayed stabilizations is that each group's costs of delaying the stabilization are private information. Each group only knows its own cost, and has a probability distribution over the opponent's costs.

The stabilization occurs when one of the two groups "concedes", that is, it accepts being the "loser" and paying a high fraction of the taxes needed to eliminate the deficit. Stabilizations do not occur immediately because each group has a "rational" incentive to wait, hoping that the

opponent will concede first. In equilibrium, the group with the highest costs of waiting will concede, but it is the passage of time which will reveal which is the high cost group. The concession time is determined by the condition that the marginal cost of not conceding, i.e., the cost of remaining in the unstable economy for another "instant" is equal to the marginal gain from remaining, which is given by the probability that the opponent will concede in the next instant, multiplied by the gain of being the "winner", i.e., paying less than 1/2 of the costs of stabilization. Note how important is the asymmetry of information in generating the delay. If it is known from the start which group has the highest cost of waiting, then the "loser" is known from the start. Thus, the "loser" concedes immediately, in order to avoid the costs of delays.

This "war of attrition" can be generalized to the case of n groups, with $n > 2$. This extension is immediate if the game ends with the first concession of one of the groups. The extension is more complicated and technically more demanding if after the first group "concedes" and pays a high fraction of the costs, a new "war of attrition" begins between the remaining (n-1) groups, fighting over the allocation of the remainder of the stabilization costs.

Alesina and Drazen (1991) derive several results concerning the expected time of stabilization, which make this "war of attrition" model useful for empirical analysis.

1) Political cohesion: The more unequal is the distribution of the stabilization costs, ceteris paribus, the more the stabilization is delayed.

If these costs are shared equally, stabilization occurs immediately since there is no gain from being the "winner". The more unequal is the distribution of costs, the higher is the gain from being the "winner" and the higher the incentive to "wait the opponent out". This result suggests that stabilizations should be delayed more in countries with less cohesion and more

political polarization and instability, in which it is more difficult to reach an equitable "social contract", with a "fair" allocation of costs.

2) Costs of delaying: an increase in the costs of postponing the stabilization reduces the delay.

This somewhat obvious result becomes rather interesting if one thinks of these costs not only as the economic costs of inflation but also as "political" costs. For instance, the costs of political action that each group needs to "pay" in order to avoid being imposed upon the larger share of the costs of the stabilization. These costs of political action may be the loss in wages and leisure time incurred by striking urban workers, the risks incurred by armed insurrectors, the monetary costs incurred by the "capitalists" financing their representative in the legislature, etc. This interpretation suggests that political institutions which make it easier for even small interest groups to "block" the legislative process by "veto power", are conducive to delayed stabilizations. For instance, strictly proportional electoral systems are more likely to generate coalition governments in which legislative action requires the consensus of a large number of parties, each one of which can "veto". Thus even a small interest group can "veto" a stabilization program, and procrastinate the "war of attrition".

3) Income distribution: The degree of income inequality has ambiguous effects ont he amount of delay in the following sense.

If political and economic resources are very unequally distributed, so that it is immediately obvious which group is stronger and has more resources to wait longer, the "war of attrition" ends immediately since there is no uncertainty about the identity of the winner. However, if the dispersion of resources across groups is increased, maintaining the asymmetric

information distribution concerning relative costs, then more dispersion of costs and resources lead to longer delays.

Alesina and Drazen (1991) argue that this "war of attrition" model is consistent with three elements which are very often (but not always) observed in stabilization processes:

1. "There is an agreement over the need of a fiscal change, but a political stalemate over how the burden of higher taxes or expenditure cuts should be allocated. In the political debate over the stabilization, this distributional question is central".

2. "When stabilization occurs it coincides with a political consolidation. Often, one side becomes politically dominant. The burden of stabilization is sometimes quite unequal, with the politically weaker group becoming a larger burden. Often this means the lower classes, with successful stabilizations being regressive".

3. "Successful stabilizations are usually preceded by several failed attempts; often a previous program appears quite similar to the successful one".

Further progress in an empirical direction can be made by defining more clearly what exactly is meant by a "concession". In theory, a "concession" is simply the acceptance by one of the groups of the role of the "loser". In practice, a "concession" may take different forms. One is a clear electoral victor of one side. This may make the legislative action easier for the winning side, and raise to an unsustainable level the political costs for the opponent to "veto" stabilization plans. A second form is the acceptance of one side to grant extraordinary powers to the government, to avoid legislative deadlocks. A third one is the recall of strikes, riots and other forms of political actions of the workers' movement, if it is perceived that they are too costly and unsustainable. A fourth one is the achievement of a compromise accepted by all parts

on the allocation of the burden of stabilization. Alesina and Drazen (1991), Alesina (1988), Eichengreen (1989), De Long and Eichengreen (1991), and Casella and Eichengreen (1991) discuss various case studies of successful and failed stabilizations from the point of view offered by the "war of attrition" model, and discuss various forms of "concession".

Drazen and Grilli (1990) extend the "war of attrition" model by emphasizing the possible benefits of economic crises. They show that if an exogenous shock aggravates the economic conditions it may anticipate the resolution of the "war of attrition" by making the costs of not stabilizing even higher. In some cases such "crises" increase aggregate welfare: in fact, the costs of the adverse shock are more than compensated by the benefits of the anticipated stabilization.

Finally, it should be emphasized that the "war of attrition" idea is applicable not only to for delays in fiscal stabilizations, but for many other cases of delays in adoption of "efficient" reforms, such as removal of price controls or trade restrictions, etc. The key element for a "war of attrition" to occur, is that the proposed reform has substantial distributional effects and that there is some uncertainty *ex ante* about the relative "strength" of the various groups.

4.2 Class conflicts

Different classes may have different preferences over the urgency of a stabilization, and some may actually "gain" from delaying the stabilization. That is, an unstable economy provides benefits for some groups.

For instance, Perotti (1991) suggests that stabilizations may be delayed if the asset holders perceive that they can escape taxation by exporting their assets abroad. He considers

an economy with three broadly defined classes: i) capital owners; ii) middle class or "skilled" workers; iii) unskilled workers. Suppose that because of a fiscal imbalance, aggregate demand is high and inflation is increasing: a "social planner", once again, would choose to stabilize immediately. However, a political equilibrium may lead to postponements for the following reason. Suppose that in the period of high aggregate demand and high inflation profits are increasing and the wage of the unskilled workers are indexed, thus they are approximately constant in real terms. Profits are increasing with aggregate demand in an economy with "increasing returns" to capital.

The capitalists would like to postpone the stabilization, if they think that they gain first, because of the "increasing returns" and then they can bring their profits abroad to escape the tax increase needed to stabilize. The unskilled workers are too poor to be taxed after the stabilization. Thus, the cost of the stabilization falls mostly, or exclusively, on the "middle class". While the latter would prefer to stabilize immediately to minimize the overall costs, the capitalists and the "unskilled workers" may prefer to postpone the stabilization. If the "capitalists" and the unskilled workers, together have enough political influence, stabilizations are delayed.

This model captures two important insights, which are much more general than the specific example: first, not everybody loses during the pre-stabilization period; second, the very rich and the very poor may be on the same side "against" the middle class. In fact, it is well known that in several cases of hyperinflation, the "middle class" has suffered the most.

Alesina and Tabellini (1989) present a model somewhat related to Perotti's. Even though they do not focus explicitly upon stabilizations, they show that the possibility of exporting capital

leads to socially inefficient policies. Governments "close" to the capitalists' interests would borrow abroad and "redistribute" resources to the capitalists. Then, the latter would "escape" taxation by exporting capital, leaving to the rest of the economy the interest bill on the government's foreign borrowing.

In summary, these type of models suggest that there may be cases in which certain coalitions actually benefit from a macroeconomic imbalance and manage to postpone the adjustment for their own advantage.

4.3 Uncertain outcomes of the stabilization

Fernandez and Rodrik (1991) consider the case of policy reform which makes the majority of the population better off. For concreteness, they think of the removal of a tariff as the reform under consideration. All the producers in the export sectors are better off with the reform; a fraction of the producers in the import competing sector will have to move to the export sector and will be better off after the reform and their move. Suppose that these two groups are a majority of the population. However, because of an ex ante uncertainty about which agents in the import competing industry will end up benefitting from the reform, a majority of the population may vote against the reform. For certain parameters values, even though, ex post, a majority of the population is better off with the reform, ex ante there is not a majority in favor of it. This result holds even in the case of risk neutrality, but it is reinforced in the case in which agents are risk averse.

Thus, this model emphasizes that uncertainty concerning the identity of the losers from a proposed reform may lead to a bias towards maintaining an inefficient status quo. Even

though Fernandez and Rodrik (1991) consider a trade reform, clearly their approach is much more general and applicable to fiscal reforms as well.

Milesi-Ferretti (1991) suggests another reason based upon uncertain outcomes, for why monetary and fiscal stabilizations may be postponed. He considers a model in which the costs of stopping inflation are uncertain, and depend upon how "competent" the government is in managing the reform. That is, there are "competent" governments which manage to stabilize with small economic costs and "incompetent" ones, which also are capable of stabilizing, but at higher costs.

If a stabilization is started and it is learned that the government is "incompetent", the public may choose to elect the opposition which is expected to be more competent. Instead, if the government does not begin a program, nothing is learned about the government's competence. In this case, if the public favors the opposition, the latter would have to solve the same problem faced by today's government. Thus, if it is in the interest of the current government to do nothing for fear of "failure" because of incompetence, the public may have no incentive to vote for the opposition because the latter would do the same, when in office. What is crucial, here, is that the *government itself does not know its own level of competence*, otherwise the choice of doing something or nothing would reveal some of the government's private information concerning its own competence.

This model is particularly appropriate for cases in which a policy reform is relatively new, and has never been attempted before, so that it is difficult to predict its costs and the government competence on such grounds. The case of policy reforms in Eastern Europe comes immediately to mind. More generally, the case of new democratic governments facing economic

crises, may be a good example for this model. A new democratic leadership may be reasonably "unknown" to the public, since the new leadership was never in office before. At the same time the new democratic opposition is also new to the political arena. Thus, there might be very little available information on both the new democratic government and the new opposition.

4.4 Institutions

Different institutional arrangements may be more or less conducive to macroeconomic management and to a swift reaction to economic crises, needing a stabilization.

In the discussion of "wars of attrition" it was alluded that multiparty systems with coalition governments may find it difficult to quickly achieve agreement on how to stabilize. This is because each member of a coalition government may have a "veto power" and block any program which is disliked by a certain (even small) constituency. Coalition governments are more often observed in parliamentary democracies with proportional representation. Therefore, the institution of proportionality may not be conducive to swift fiscal reform when they are needed. Empirical results by Roubini and Sachs (1989a,b) and Grilli, Masciandaro and Tabellini (1991) on OECD democracies are consistent with these observations. They show that prolonged periods of fiscal imbalance leading to the accumulation of relatively high debt/GNP ratios have been common in parliamentary democracies with large coalition governments. On the other hand, single party governments have reacted more quickly to prevent persistent deficits.

These arguments are not directly applicable to dictatorships. However, they are somewhat related to the previously mentioned discussion of "strong" versus "weak" dictators. A "weak" dictator may be the analog of a "weak" coalition government in a democracy. A

"weak" dictator may have to please several constituencies with conflicting interests in order to survive. Therefore, he would find it difficult to act promptly to resolve a fiscal crisis.

A second institutional feature which may affect fiscal management and the implementation of fiscal reforms is the possibility of intra-state or intra-bureaucratic conflicts over the allocation of spending and taxation. Fiscal federalism, that is, geographic decentralization of fiscal decisions may make it difficult to act quickly when quick action is needed. First of all, if local authorities can, up to a point, "transfer" locally generated deficits to the federal system, they may choose to do so in time of need. That is, one may observe a "prisoner's dilemma" situation, in which different states or regions act non-cooperatively. Second, there might be, once again, a "veto power" from various states or regions blocking stabilization plans decided at the federal level.

A similar argument may apply to intra-bureaucratic conflicts. Obviously, the relevance of these conflicts would depend upon the degree of "independence" of the bureaucracy from elected officers.

A third institutional feature which could be very important in the context of a discussion of monetary and fiscal stability, is the degree of political independence of the Central Bank. A Central Bank independent from the Treasury and firmly committed to monetary control, reduces the degree of monetization of budget deficits. This has two effects. First, it keeps inflation under control. Second, it forces the government to find other sources of financing, and ultimately, forces the government to raise taxes or cut spending.[9]

Several authors have noted how, within industrial economies, countries with low inflation have independent Central Banks. Furthermore, such low inflation has not been accompanied by

high unemployment, high real interest rates or other undesirable "real" consequences. That is, Central Bank independence seems to have helped monetary stability with very small "real" costs. These observations emerge from work by Bade and Parkin (1982), Alesina (1988, 1989), Alesina and Summers (1991), Grilli, Masciandaro and Tabellini (1991) and Alesina and Grilli (1992). Clearly, the difficult part of this empirical analysis is the classification of the degree of independence of different Central Banks. While this body of research has reached a reasonable degree of consensus on a reliable classification of the degree of Central Bank independence for advanced industrial economies, much work remains to be done for all the other countries. Work in progress by Cukierman, Webb and Neyapti (1991) is addressing this very important question.

Although a Central Bank with an established reputation of independence may improve policymaking, the process of establishing such reputation may lead to period of policy instability. In fact, suppose that the treasury runs budget deficits and does not raise taxes in the an attempt to induce the Central Bank to monetize. The latter refuse to do so, precisely to establish a reputation of independence and induce the Treasury to raise taxes and cut spending. This situation may lead to a sort of "war of attrition" between the Treasury and the Central Bank. Both institutions pursue their uncoordinated policies, in order to force the opponent or "concede", as in models by Sargent and Wallace (1981), Tabellini (1986) and Loewy (1988). Before one of the two players gives in, taxes are not raised and the deficit is not monetized; such a combination leads to a rapidly growing debt/GNP ratio. Institutional arrangements which guarantee Central Bank independence should insure that such an institutional "war of attrition" does not occur because the Treasury knows that the Central Bank will not "concede". On the

other hand, a "war of attrition" will not occur when the Central Bank has no independence at all, and the Treasury can obtain as much monetarization as it is desired.

4.5 Inflation, taxation and political stability: empirical evidence

There are three ways of testing politico-economic models of inflation, deficits, stabilizations, or lack thereof. The first one is case studies. The second one is a comparative method in which several cases are examined jointly. A third one is multi-country econometric studies.

The first two approaches have been adopted mostly (but not exclusively) by political scientists. The third one has been used mostly (but not exclusively) by economists. A survey of the empirical literature is, obviously, well beyond the scope of this paper. In what follows I will highlight some very recent cross section econometric analysis with large samples of countries.

Haggard, Kaufman, Shariff and Webb (1990) examine the statistical relationships between political regime type the ideological nature of different government and economic outcomes, such as inflation, budget defeats and the adoption of stabilization programs. They find that periods of transition from authoritarian regimes to democracy are often associated with economic instability. New democracies have a particularly difficult time in implementing stabilization programs. This finding is quite consistent with a "war of attrition" model. After the collapse of an authoritarian and repressive regime, conflicting distributional claims of various socioeconomic groups are likely to emerge. Legislative deadlock and inaction are typical of such situations.

Cukierman, Edwards and Tabellini (1990) and Edwards and Tabellini (1991) show that, after controlling for various economic determinants of inflation, one observes a strong association between government instability and the use of seignorage as a source of tax revenues. That is, "weak governments" are less capable of using non-inflationary taxes to cover government spending.

Roubini and Sachs (1989a,b) and Grilli, Masciandaro and Tabellini (1991) find that within OECD democracies, the high debt countries are almost exclusively parliamentary democracies with a highly proportional electoral system; conversely almost all the countries with such electoral systems have high public debt. This evidence is broadly consistent with the "war of attrition" model: in strictly proportional parliamentary systems, "wars of attrition" are more likely to occur because of the "veto" power of each coalition member. Similar evidence for developing countries is found by Özler and Tabellini (1991). They show external debt in a large panel of developing countries for the period 1973-82 is positively related to their reasonable indicator of political instability.

An important problem in this literature on government instability as an explanatory variable for inflation and fiscal imbalance is that of joint endogeneity. It is certainly true that government instability may be a cause of inflation. However, high inflation and, more generally economic instability may lead to government collapse. In the context of a study of the correlation between economic growth and coup d'etat Londregan and Poole (1990) have shown how to deal econometrically with this problem of joint endogeneity. Alesina, Özler, Roubini and Swagel (1991) have used this method for a study of the joint determination of economic growth and government changes in both democracies and non-democracies. They find that both

directions of causality are present: a high probability of a government collapse reduces growth; conversely, low growth increases the likelihood of a government change.

A similar analysis which accounts for joint endogeneity issues would be desirable for the study of inflation and fiscal imbalances as well.

5. Conclusions

This paper has reviewed some recent formal developments in political economics which study the relationship between the timing of macroeconomic policy and political institutions. Two important issues have been the focus of this review: political business cycles and monetary and fiscal stabilization policies.

Rather than reviewing the results described in the previous pages, this section highlights several issues open for further research.

1) While we now have a reasonably sound and extensive body of theoretical and empirical research on political business cycles in advanced industrial democracies, much less has been done for LDCs. This research should tackle difficult issues, such as how to test for such cycles in non-democracies.

2) The transition periods from dictatorships to democracies are extremely interesting situations for studying politico-economic interactions. Researchers should devote careful and specific attention to such periods.

3) Authoritarian regimes appear to be a non-homogeneous group. Some of them have promoted growth and economic stability and have done better than the "average" democracy.

Other authoritarian regimes have destroyed their economies. A further understanding of what explains these large differences is likely to have very high intellectual returns.

4) The "normative" aspects of political economy should also be very high in the research agenda. Should a new democracy be asvised to adopt majoritarian systems, set up independent central banks, to include budget balanced clauses in the Constitution, to limit the number of times in which incumbents are allowed to run, delegate fiscal authority to local authorities to have a bicameral system, to elect the President directly?

These are only a few of the many questions which new democracies face.

Notes

1. It should be emphasized at the outset, that this paper is not meant to be an exhaustive survey of the literature. For recent surveys of the literature on "political business cycles" the reader is referred to Alesina (1988) and Nordhaus (1989). For a survey of the literature on the political economy of development in LDCs, see Roubini (1990). For a survey of the theoretical contributions in the "new political macroeconomics", with emphasis on fiscal policy see Persson and Tabellini (1990) and Alesina and Tabellini (1992). For a survey of the traditional Public Choice literature see Mueller (1989).

2. See Akerlof and Yellen (1985a,b) for applications of "near rational models" to product and labor markets.

3. This section is largely based upon Sections 1 and 2 of Alesina and Roubini (1990).

4. Whether inflation starts to increase before the election or only after the election, depends upon the exact specification of the model. See Lindbeck (1976) for a discussion of this point.

5. The United States is quite a good case for this theory. For a general theoretical and empirical model of macroeconomic outcomes and elections in the US see Alesina, Londgregan and Rosenthal (1990).

6. Alvarez, Garret and Lange (1991) have investigated the role of labor organizations in a "partisan" model of macroeconomic policy.

7. See Roubini (1990) for a recent survey of this literature.

8. See Grossman (1991) for an interesting formalization of the probability of successful insurrections against dictators.

9. See Rogoff (1985), Lohmann (1991) and Alesina and Grilli (1991) for theoretical discussions of the benefits of Central Bank independence.

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