

Freezing in the Tropics: Explaining Party-System Volatility in Latin America

Michael Coppedge

Paper presented at the 1995 Meeting of the Midwest Political Science Association, Chicago, April 6-8; also a manuscript revised for resubmission to the American Political Science Review. The title of the original version was "Democratic Consolidation and Party-System Volatility in Latin America."

Freezing in the Tropics: Explaining Party-System Volatility in Latin America

Abstract

It is important to understand what factors promote or hinder institutionalization of party systems because volatility can threaten emerging democratic regimes. Latin American party systems display a wide range of volatility across countries and over time, and are therefore better suited to answer this question than the well-studied but "frozen" party systems of Western Europe. One might suppose that party systems are more volatile in Latin America because the economies of the region are more volatile. A model of volatility in 117 pooled elections from 11 Latin American countries, however, finds no support for this hypothesis. Instead, volatility is best understood as the product of "supply-side" shocks, such as proscriptions, boycotts, and splintering, superimposed on constant and cumulative attrition of party support. Attrition rates, which primarily reflect party identification, vary for each country and can be strengthened by repression and expanding turnout, or weakened by poor regime performance.

Freezing in the Tropics: Explaining Party-System Volatility in Latin America

Ever since the publication of Lipset and Rokkans's Party Systems and Voter Alignments (1967), scholars have debated the thesis that European party systems were "frozen" in the 1920s and have changed little since. The "freezing hypothesis" is important in part because the nature of the party system is one of the most fundamental characteristics of any democratic political system. Freezing is also important because it is one of the most obvious signs of the institutionalization of a democratic regime. Lipset, for example, has argued that "a crucial condition for a stable democracy is that major parties exist that have an almost permanent significant base of support" (Lipset 1994, 14). Similarly, Diamond, Linz, and Lipset found that "All of our cases call attention to the institutional strength or weakness of parties as a determinant of success or failure with democracy" (Diamond, Linz, and Lipset 1989, 21).

It is strange, then, that the institutionalization of party systems has been studied least where it matters most. Institutionalization has almost always been studied in OECD countries, where it is already present to a high degree (Lipset and Rokkan 1967; Rose and Urwin 1970; Pedersen 1979; Wolinetz 1979; Maguire 1983; Dalton, Flanagan and Beck 1984; Bartolini and Mair 1990; Brown 1991; see Powell 1982, ch. 5 for a partial exception). By contrast, there has been very little systematic study of the institutionalization of party systems in Latin America, a region where there is a clear association between party-system volatility and regime instability.¹ Conclusions based on the stable party systems therefore may not be relevant for the high degree of instability that is most threatening to regime stability. This article develops an explanation for party-system change in Latin America, which offers a far wider range of variation than is found in Western Europe or the United States, and therefore promises to be more relevant for understanding the evolution of the often less institutionalized party systems of the developing world and former communist states.

Latin American party systems differ from those of Western Europe in two basic ways: (1) elites interfere more with the choices available to voters, by banning parties or boycotting elections, and (2) levels of party identification vary considerably from country to country and are usually lower than in Western Europe. Both factors contribute to a much higher average volatility in Latin America. This article argues that volatility rates in Latin America can be understood as the product of these elite-initiated disturbances superimposed on a fairly constant baseline of party identification that is different for each country and modifiable by military repression, regime performance, and voter turnout.

Party System Volatility in Latin America and Europe

All of the analysis reported here is based on 139 20th-century elections in Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Ecuador, Mexico, Peru, Uruguay, and Venezuela. Volatility is operationalized as the most common index, V , on the basis of votes rather than seats and parties rather than blocs.² Intuitively, V is the percentage of the national vote that is gained or lost in the aggregate by all parties from one election to the next. V ranges from 0 to 100. If $V = 0$, it means that no party gained or lost any of its share of the vote between the two elections; if $V = 100$, it means that all of the parties in the first election disappeared and all of the parties in the second election were new. (The appendix contains a full explanation of this index and operationalization criteria.)

The most thorough comparative study of volatility, Bartolini and Mair's Identity, Competition, and Electoral Availability (1990, 55-67), found that, contrary to the prevailing belief that Western European party systems are becoming "unfrozen," there was no secular trend in either direction. They recorded a rise in volatility in the period since 1966, but argued that this increase was not particularly large or significant when compared with the changes that have taken place since 1920, when European party systems supposedly became "frozen" (Lipset and Rokkan 1967).

No comparable arguments have been made about any secular trend towards either greater or lesser stability in Latin American party systems, but the same null finding applies. Average volatility per decade has remained surprisingly stable in Latin America since at least the 1930s (the first decade in which a second election was held in more than two countries)--26.2 in the thirties, 27.0 in the forties, 29.2 in the fifties, 29.6 in the sixties, 31.1 in the seventies, and 29.3 from 1980 to 1992.³ The dramatic changes in Mexico in 1988, Brazil in 1989, and Colombia and Peru in 1990 drew international attention to volatility in Latin America. The fact is, however, that just as many countries were registering declines in volatility at the same time, and none of these recent dramatic changes were as large as some that have occurred in the past, such as those coinciding with the birth of Peronism, the 1966 MNR boycott in Bolivia, and military manipulation of the Brazilian party system.

One difference between Europe and Latin America, however, is quite clear: just as the conventional wisdom long held, Latin American party systems are, on average, much more volatile than European party systems. The average V for Latin American elections is 26.6 by the counting criteria used here, or 24.7 if splinter parties are not counted.⁴ The average drops to 21.3 if the 27 post-authoritarian elections are omitted from the sample, as would be necessary to make the data strictly comparable to Bartolini and Mair's. But even the lowest figure is far higher than the average volatility of 8.6 for Europe (Bartolini and Mair 1990, 68). However, averages hide considerable variation in volatility from country to country. In three Latin American countries--Uruguay, Colombia, and Mexico--party system volatility is well within the European range. At the same time, in Argentina, Bolivia, Brazil, Chile, and Ecuador, mean volatility is far above the Latin American average. In fact, only Venezuela and Costa Rica have rates close to the regional average.

Averages also hide variation within countries over time. In six of the eleven countries, there is a gap of at least forty points between the highest and the lowest values of V. Again, this temporal volatility can be measured by the standard deviation of V. Figure 1 plots mean volatility against standard deviations for the eleven countries in Latin America and thirteen in Western Europe, illustrating the strong inter- and intra-regional contrasts.⁵ After glancing at Figure 1, it is easy to appreciate the difficulties faced by Europeanists in accounting for the small cross-national differences in volatility found in their region. Latin American volatility is much more noticeable, and much more easily explained.

[Figure 1 about here]

The cases can be seen as clustering into four groups. In the first are the countries with low (under 10 percent) average volatility--Uruguay, Colombia, and Mexico, in addition to Ireland, Italy, the Netherlands, Denmark, Belgium, Norway, Sweden, Britain, Switzerland, Finland, and Austria. The second group contains those with moderately higher (10-25 percent) volatility--Venezuela and Costa Rica, along with France and Germany. Argentina and Chile belong in a third group with high (>25 percent) mean volatility but moderate (<15 percent) temporal volatility. Finally, Ecuador,

Peru, Bolivia, and Brazil have experienced both high mean and high temporal volatility. Ecuador's average of 48.5 percent is equivalent to the extreme reached in a hypothetical system in which parties winning nearly half of the vote disappeared and were replaced in every election. The diversity of Latin America is clearly well suited for exploring reasons for success and failure in the institutionalization of party systems.

Demand-Side Explanations

Literature on voting behavior in the industrialized countries has developed many specific and subtly distinct explanatory models, but underlying all of them are two general models of voting behavior. One can be called the Michigan or party identification model, in which voters identify with political parties, forming lasting loyalties that make their voting choices relatively unresponsive to the short-term political environment (Campbell et al. 1960). Voters' imperviousness to contemporary events could result from ignorance, as a party loyalty allows them to believe that they are making good choices even while minimizing information costs, or from the party loyalty acting as a filter that enables them to interpret new information in a way that reinforces their preexisting loyalty. A second view of voting behavior is the economic voting model, in which voters do not form lasting loyalties. Rather, they consider all the issues anew at each election, without a predilection for any one party, and then pick the party that best represents their own positions and interests at the time. Their choices therefore respond to the issues of the day, most likely economic performance (Kramer 1975, Hibbs 1977, Tufte 1978, Erickson 1989, Remmer 1991).

The identification model leads to one set of expectations about volatility and the economic voting model leads to a very different set. If all voters were pure identifiers, volatility would be very low because each voter would vote for the same party in every election. Some aggregate volatility would be possible only because there is some turnover in the electorate, and only to the extent that new voters have different loyalties than former voters. Owing to the demographic origins of such volatility, the rate of change would be quite steady and would cumulate with the passage of time.⁶

If all voters practiced economic voting then volatility would be much better explained by economic performance than by the passage of time. Volatility would mimic the steady, cumulative pattern of the identification model only if economic performance were steadily good and there were no other salient issues. Because these conditions have never held in the long run for any country, one would expect a higher and more variable rate of volatility under the assumptions of the economic voting model. Naturally, every electorate, as well as every individual, is motivated by a mixture of party identification and economic voting; but to the extent that identifiers predominate, volatility should be low, steady, and cumulative; to the extent that economic voting predominates, volatility should be more variable and correlated with economic performance. Either model could account for the gap in average volatility between Europe and Latin America. Under the party ID model, high volatility is the result of weak party identification, while under the economic voting model volatile party systems are the product of volatile economies.

But a good model should also account for variation within Latin America, and in this context these two models suggest two divergent patterns. If Latin Americans are economic voters, then volatility should rise with poor economic performance and decline with good performance. Volatility should be directly proportional to inflation, devaluation, and economic contraction. And if the party identification model is correct, then volatility should cumulate steadily between elections, and the rate of cumulation should vary in accordance to the strength of party identification in each country. (More volatility should accumulate before some elections than before others because

election dates can be irregular in Latin America.) Much of the early literature on Latin American party systems emphasized weak party identification (Scott 1966, Chalmers 1972). But there is also scattered evidence that in some Latin American countries party identification is strong. In Colombia and Uruguay, for example, loyalties are reported to be so well defined that citizens are "born" identifying with one party or the other (Hartlyn 1988, González 1986). Similar claims are sometimes made about Chile (Valenzuela 1994), Costa Rica (Booth 1989), and Venezuela (Baloyra and Martz 1979, Del Aguila 1979). It would be prudent, then, to expect different levels of party identification in different countries.

Levels of party identification may also change. As with any other aspect of political culture, the normal expectation is that identification changes rarely, slowly, or not at all; but as recent work emphasizes, political culture does change sometimes, and analyses of culture must be able to recognize when it changes, by how much, and if possible, why (Diamond 1993, 411-12). Possible causes of change in party identification are regime performance, military repression, and uncertainty arising from low turnout and past high volatility. Uncertainty can increase volatility by discounting the expected benefit to voters of remaining loyal to one party. It is not rational for a voter to invest much loyalty (to say nothing of time, energy, and material resources) in a party that may not exist after the next election. In an environment of uncertainty, therefore, voters are likely to form only weak, contingent attachments to parties, and to defect frequently, raising the volatility rate. Low voter turnout is one characteristic of the electoral environment that increases uncertainty, because the behavior of the many potential first-time voters is unpredictable. The prospect of a military coup invalidating an election would create even more uncertainty. A high rate of volatility in past elections also creates uncertainty, because it leads voters to expect that the outcome of the current election will be very different from that of the previous one.⁷

Supply-Side Explanations

Because both identifier and economic voting models deal with the demands that voters bring to the electoral marketplace, both can be classified as "demand-side" explanations. Any observer of Latin America should notice that there are other factors that must affect volatility that are not captured by demand-side models of voting behavior. These models are limited to the choices of voters, holding constant the party alternatives among which the voters choose. In Latin American practice, these alternatives often have not been constant. Rather, some parties are banned, some splinter, and occasionally a party boycotts an election. When elites take these unilateral actions, citizens cannot vote for their first preference. Some voters choose to abstain in such situations, but many more simply vote for a less-preferred party instead, and volatility necessarily increases when they do; there is no way boycotts, bans, and splits could not affect volatility. Unilateral elite actions, therefore, should be considered in any explanation of the sources of party-system volatility. Explanations that hold voter preferences constant and focus on variation in the alternatives offered to the electorate can be called "supply-side" explanations (Schedler 1993).

Evidence from the Demand Side

The hypotheses presented above were tested with multivariate regression models using pooled data from eleven Latin American countries. Table 1 presents the best of many models, one that is fairly comprehensive, accounting for nearly 90 percent of the within-country and cross-national variance of volatility in Latin America. On the demand side, these estimates provide strong

support for the identification model and no support for economic voting. Party identification appears to be strong in certain Latin American countries and weak in others, but in every country the strength or weakness of party ID is extremely useful for explaining volatility rates. Economic performance, on the other hand, has no significant association with volatility. On the supply side, the factors that force voters to defect clearly increase volatility. The significant supply-side factors are particularly useful in accounting for dramatic short-term fluctuation in volatility, while the demand-side factors account better for cross-national differences and cumulative inter-election increases in volatility within countries. Latin American volatility, therefore, is best understood as the result of supply-side disturbances superimposed on country-specific baselines of party identification.

[Table 1 about here]

Economic Performance

Measures of economic performance are absent from this model despite previous research finding that volatility in Latin America is very significantly associated with inflation, devaluation, and economic contraction (Remmer 1991). Remmer's findings are very plausible in light of the fact that some of the countries that had the highest inflation and the greatest declines in GDP in the 1980s--namely, Peru, Argentina, Brazil, and Bolivia--also suffered from the highest volatility. Her conclusion is also consistent for Mexico 1988 and 1991, Peru 1980-90, Brazil 1966 and 1982, and Uruguay 1989. However, Latin America also offers instances of rising volatility coinciding with good economic performance, as in Venezuela 1973 and Chile 1989, as well as falling volatility coinciding with bad economic performance, as in Chile 1973, Argentina 1983, Bolivia 1985, Ecuador 1980-86, and Venezuela 1988. The raw data, therefore, do not encourage the expectation of a strong relationship.

For a more rigorous test, data were collected on GDP growth (in the last year, in the last 2 years, and since the last election), per capita GDP, per capita GDP growth since the last election, and devaluation (in the last year, in the last 2 years, and since the last election).⁸ (See appendix for sources.) Due to the lack of Latin American economic data before 1953, some cases had to be dropped from the normal sample for this analysis, but the subset consisted of 83 cases, or more than 70 percent of the total. When added singly to the Table 1 model, as shown in Table 2, none of these indicators of economic performance had a significant association with volatility at the .05 level. Only two were even close--per capita GDP (at $p = .056$) and annual devaluation (at $p = .059$. . . in the wrong direction!). None of the other six indicators was significant at a level of better than .22.⁹ Such estimates practically require economic performance indicators to be omitted from the model.

[Table 2 about here]

How then can these results be reconciled with Remmer's? It seems that Remmer's model is (a) underspecified, and (b) based on too few cases in a short span of time, which makes her results vulnerable to historical coincidence. First, Remmer's only non-economic independent variable is a rough indicator of party-system fragmentation--the vote for the two largest parties. At a minimum, her model should also include boycotts, bans, and splits--the supply-side variables that necessarily have an impact on volatility because they leave voters no choice but to defect. And given the superior performance of the party ID variables when included alongside indicators of economic

performance as in Table 2, it now seems necessary to presume that the former should be included as well. Second, Remmer's estimates are based on 21 elections in 12 countries--not really enough observations to run regression in the first place. And with an average of 1.75 elections per country, it is certainly not enough to test a theory about economic change causing electoral change; inevitably, the estimates reflect cross-sectional variation more than longitudinal variation. What Remmer's estimates tell us (to the extent that they are valid) is that in the 1980s, the countries with worse economic performance (and more fragmented party systems) experienced higher volatility. Table 2 tells us that if we have a long enough time series to control for past volatility, the apparent effect of economic performance vanishes. (See, however, the discussion below of regime age effects in Peru and Ecuador.) Instead, the factors that explain Latin American volatility best, in the 1980s or before, are the ones to which we now turn.

Party Identification

Helpful as it would be to have survey evidence about levels of party identification in Latin America, such evidence is not and never will be available for most of the elections in the sample analyzed here. In order to test the identifier model, therefore, it was necessary to create an indicator that would behave like voter loyalty (or its negation, voter defection). What was needed was a proxy for a rate of attrition from party loyalty that remained fairly constant for each country and allowed defections to accumulate annually between elections, only to be reset to zero after each election. A very simple measure behaves exactly this way: the passage of time, or more precisely, the number of years elapsed between elections. This solution follows in the tradition of Converse (1969).

This measure cannot be interpreted literally as the rate of defection because (1) it is an aggregate measure, and therefore does not reflect cross defections;¹⁰ (2) in addition to defections, it reflects turnover in the electorate; and (3) turnover itself can be caused in practice by abstention.¹¹ Aggregation itself is not really a problem because the volatility index is also an aggregate measure; in a sense, this is a better measure than actual individual defections because aggregate defection is exactly what we want to explain. Turnover and abstention, however, do muddy the interpretation of this variable. Strictly speaking it should be interpreted as an "annual rate of aggregate defection, abstention, and turnover," but here it will be called simply the rate of attrition. Fortunately, the complex nature of this variable makes it a truer proxy for the identification model than a straightforward indicator of party ID would be without separate measures of abstention and turnover. Attrition is operationalized as a separate variable for each country, which allows the regression to estimate a different rate for each country, in accordance with conventional expectations discussed earlier.

As Table 1 shows, the attrition estimates are all strongly significant, and they cover a fairly wide range: the rate is nearly 2.5 times greater in Brazil (9.92) than it is in Colombia (4.08). Moreover, the extremes are consistent with the conventional wisdom about levels of party identification in Latin American countries. Colombia, where people were "born" Liberal or Conservative for decades, not surprisingly has the lowest rate of attrition, while Brazil, where even legislators defect from parties, has the highest rate (Hartlyn 1988, Mainwaring 1995). Neither is there any surprise in the fact the Uruguay, Argentina, and Venezuela are estimated to have lower than average attrition, while Bolivia and Ecuador are above average. Attrition in Chile undoubtedly would be lower if this were a model of bloc, rather than party, volatility. The rankings of Mexico and Peru, which appear rather anomalous in these estimates, will be clarified after two other

variables are discussed.

To express the significance of the attrition estimates more concretely, it is useful to multiply each by 4, the usual number of years between elections. This operation enables one to say that at the low extreme, Colombia, parties lose approximately 16 percent of their voters from one election to the next, while at the high extreme, Brazil, approximately 40 percent of the voters are lost to attrition.¹² The rate of party constancy (non-attrition from one election to the next) would be these figures subtracted from 100 percent, or 84 percent in Colombia and 60 percent in Brazil. This means that in some Latin American countries, voters appear to be very loyal to their parties, and even in the worst case, they are more loyal than not over a four-year period, other things being equal. The identifier model is therefore useful for understanding volatility within every country of the region, and is especially useful for explaining variation in volatility across countries.

The model in Table 1 does not fully explain why party identification is very strong in some countries and far less strong in others. Party ID, like other aspects of political culture, is the legacy of processes and events in the past. Some of the likely processes and events lie in the distant past, before any of the elections in this sample took place (Coppedge 1995). Two of the countries with very low attrition are Colombia and Uruguay, which are the two countries where the wars of the nineteenth century lasted longest. Endless fighting polarized the entire population into Liberal vs. Conservative and Blanco vs. Colorado camps; when these caudillo bands began to channel their struggles into electoral competition early in this century, these antagonisms were transformed into partisan loyalties. In no other country did the fighting last so long or come so close to overlapping with the era of electoral mobilization. Others, such as strong party organization, have not yet been operationalized for Latin America. Venezuela until recently possessed the best-organized and most thoroughly penetrative parties in Latin America (Coppedge 1994). An unusually high percentage of the Venezuelan population belonged to political parties and identified strongly with them, not because of historic enmities, but because of effective party organization, which is therefore the most likely explanation of its relatively low attrition rate. Finally, such conditions as a stable democratic environment with a positive role for parties to play, which probably favored strong party identification in Costa Rica and Chile, are diffuse and perhaps impossible to operationalize. Qualitative and historical evidence for these explanations lies beyond the scope of the model and this article.

To summarize the empirical evidence for the demand side: (1) Regression analysis finds strong support for an explanation of volatility built around varying levels of party identification, and (2) virtually no support for economic voting in Latin America. (3) The level of party identification is very high in Colombia, and above or equal to the regional average in Argentina, Costa Rica, Peru before 1980, Uruguay, and Venezuela; and it is below the regional average in Bolivia, Chile, Ecuador (even *moreso* after 1979), Mexico, and especially Peru after 1980 and Brazil.

The model also contains a dummy variable for Argentina that is highly significant and does not clearly belong to either the demand or the supply side. Its coefficient means that this model, which fits the other ten countries quite well, systematically underpredicts Argentine volatility by a startling 28 points. Why this should be so is a mystery, and the only clues are that this dummy captures the effect of some factor that does not cumulate like defections and is not associated with any of the other independent variables. It may have something to do with the oddity of Peronism, or with alternating abstention by proscribed Radicals and Peronists. Or it could be a strong bandwagon effect by a large group of swing voters who responded strategically to the tercios

electoral system or to some other institution unique to Argentina.¹³

Evidence from the Supply Side

In Latin America, there are several instances in which governments simply proscribed some or all of the existing parties. Victims of such proscriptions have included the Peronists from 1957 to 1965, the entire party system of the Brazilian Second Republic after 1965 and the parties of the military regime after 1979, and the Venezuelan PCV and MIR in the 1960s. There have also been instances in which certain parties have boycotted elections, as the Paz Estenssoro wing of the Bolivian MNR did in 1966. The variable created to capture these actions is equal to the percentage of the vote won by boycotting or banned parties in the preceding election, or the percentage won by previously boycotting or banned parties when restored.

Party splits are another good example of a supply-side factor. Where prior to a split the party's supporters had one party to vote for, after a split they have two. The splinter is counted as a new party, and all of its votes go straight into the volatility index. At the same time, the mother party usually loses votes, and its lost votes also add to volatility. Another variable was created reflecting the percentage of the vote won by any splinter parties in the first election after the split.

These variables were included with some reluctance because their impact on volatility is so obvious. It is better, however, to include them than to resort to either of the two alternatives. The simplest alternative would be to exclude from the database any election in which party bans, boycotts, or splinters played a role. This solution would reduce the database to only 87 elections, sacrificing most of the Argentine and Chilean elections and considerable theoretical reach. It is better to include these elections while in some fashion controlling for preemptive manipulation of the party system by elites.

A second alternative therefore would be to use as the dependent variable an adjusted index of volatility equal to the original index minus the component of volatility attributable to party bans, boycotts, and splinters. This alternative is unsatisfactory for two reasons. First, it goes to the extreme of redefining volatility simply to avoid simple explanations, when we should recognize and welcome simple explanations when they can be found. Second, the degree to which the proscription, boycott or division of a single party increases aggregate volatility depends on a variety of mediating factors, such as how well the proscribed or boycotting party would have done if it had contested the election, how many of the voters frustrated by these actions turn to new splinters rather than established parties and how the proscription of one party affects the rate of cross-defection among other parties. Consequently there is no necessary one-to-one relationship between these elite preemptive actions and aggregate volatility.

The best solution is to include party bans, boycotts, and splinters as independent variables, which (1) allows all elections to be included, (2) controls for these obvious causes of volatility, and (3) does not assume that these obvious causes have an unmediated impact on volatility. Care must be taken not to exaggerate the significance of the good fit made possible by these factors, but they should not be dismissed as mere controls, either, for they remind us that volatility sometimes is not chosen by the voters, but thrust upon them by party leaders and governments.¹⁴

As shown in Table 1, both variables have a significant impact. In fact, boycotts and bans are by far the most statistically significant variable in the estimate. For every ten percent of the vote won previously (or upon restoration) by a boycotting or banned party, volatility increases 6.9 points, and for every ten percent won by a new party splinter, volatility increases 4.2 points. The effect of

these elite actions, therefore, can be quite large--enough to single-handedly raise volatility above European levels. If a party that last won a quarter of the vote decides to boycott or is banned, it raises the predicted volatility by 17.3 points; if such a party is a recent splinter, volatility increases by more than ten points. Some of the parties banned or boycotting elections in Latin America have been larger (Peronists, MNR), with correspondingly greater impact.

Sources of Changing Party Identification

The model also sheds light on several factors that may affect the development of party identification--military repression, regime performance, turnout, and past volatility. The "years of repression" variable in Table 1 measures the number of years in which political parties were outlawed or persecuted since the last election was held.¹⁵ Contrary to initial expectations, repression of parties actually reduces volatility, by 4.23 points for each year of repression. While this result may be counterintuitive, it is a very large, significant, and robust effect, so there can be little doubt that it is true. In fact, this effect is so large that it cancels out much of the normal attrition in party loyalty between elections in some countries. Since both the repression variable and the attrition rate are calibrated in years, the two coefficients can be summed to estimate net attrition under authoritarian rule. The negative coefficient for repression means that the rate of change of party systems actually slows down during repressive authoritarian regimes, compared to the rate during democratic rule. When repression of parties occurs only between democratic regimes, the most plausible interpretation is that repression hardens loyalties to the existing parties, either because they are forced into a heroic resistance role or because they are spared the ravages of competition. Repression is therefore one of the events that can raise levels of party ID. This finding agrees with occasional observations that some party systems have changed very little during lengthy authoritarian regimes, notably Uruguay 1973-84, Colombia 1953-58, Argentina 1973-83, and Venezuela 1948-58.¹⁶

A slightly different interpretation pertains to the two periods in which party repression was practiced under authoritarian regimes that held elections--Brazil 1964-1979 and Mexico 1961-1991. For these two regimes, the model should be interpreted as saying that party identification remained weak (as indicated by attrition rates of 9.92 and 8.67, respectively), but aggregate volatility was low because repression made it difficult or imprudent to vote for any but the one or two official parties. Mexican party identification probably really is as weak as the estimate indicates; the attrition rate appears high only because discrimination against opposition parties keeps the actual overall volatility low.

A preliminary model included the age (in years) of the regimes as an explanatory variable, and its estimates suggested that party systems have a moderate tendency to become more stable in the first generation of the regime. However, this model did not control for past volatility (i.e., it omitted the lagged dependent variable). Subsequent analysis showed that when past volatility is controlled for, the age of the regime generally has no significant relationship with volatility. Regime age merely seemed to matter because only the regimes with low-to-moderate volatility survived more than 20 years. Apparently, either volatility is one cause of regime instability, or both are caused by an unknown third factor. Before abandoning regime age completely, however, it was broken up into separate variables for each country so that the effect of regime age could vary for different countries. According to these estimates, regime age does matter very significantly for two regimes--Peru 1980-90 and Ecuador 1979-90--but in the opposite direction! The longer these regimes lasted, the more

volatility grew, other things being equal.

Since these coefficients are also calibrated in years, they can be added to attrition estimates to produce a net attrition rate for each regime. For Peru, this means that the 5-year cumulative defection rate was relatively small (26.7 percent) until 1980, when it accelerated, hitting 46 percent in 1985 and nearly 66 percent in 1990. This account explains the model's surprisingly low estimate for attrition in Peru. Attrition should have been low during the early years of APRA, which was one of the best organized parties in Latin America, and during the prime of Acción Popular, which carried Fernando Belaúnde to the presidency twice. But by all accounts, both APRA and AP were massively repudiated after their governments in the 1980s, leaving Peru with one of the weakest party systems in the region by the 1990 election of Fujimori. The regime age estimate reflects this change. For Ecuador, the net attrition rate means that the 2-year cumulative defection rate, which was already high at 17.2 percent in 1980, doubled to 34.5 percent by 1990.

While the causes of these increases are far from clear, they have to be processes that coincided closely with the decade of the 1980s in these two countries. Furthermore, they are not likely to be economic performance unless there is some reason why the economy affects volatility in Peru and Ecuador but not elsewhere in the region. The cause is more likely to be some other aspect of regime performance such as ungovernability or the breakdown of public order. For example, the eighties were exactly the peak years of terrorist activity by the Shining Path in Peru, experienced by Peruvians as frequent blackouts, car bombings, strikes, and assassinations. During the same period Ecuador experienced acute symptoms of ungovernability, including executive-legislative stalemate, impeachment of ministers, fighting on the floor of congress, frequent strikes, and widespread civil disobedience.

Two additional variables are included in the model to represent uncertainty in the electoral marketplace. The first, lagged volatility, turns out not to be strictly significant ($p = .074$) but because (1) it was strongly significant in many similar preliminary models, (2) its inclusion substantially affects some of the other independent variables, and (3) it corrects for serial autocorrelation that must be presumed to exist in a dataset of this type, it is included in the model anyway. According to the estimated coefficient, volatility increases by about 0.09 points for each percentage point of volatility in the previous election. At low levels of volatility, the impact of this factor is negligible; but at higher levels it creates a tendency for volatility to escalate. Thus the higher volatility gets, the harder it is to bring down.

The second variable is voter turnout. Volatility is estimated to be 2.4 points lower for every 10 percent of the population that votes. The most plausible interpretation of this relationship is that at lower levels of turnout, there is greater uncertainty about which parties will survive the election, and consequently less incentive to form psychological attachments to parties. Voters defect more often because of the insecurity of the electoral marketplace. But at high levels of turnout "political space" is full; election outcomes are not perceived as vulnerable to an influx of new unfamiliar voters, so voters are more confident of the election results, have a great incentive to form loyalties to parties and are less likely to defect. Again, it is not an actual change in the composition of the electorate that explains this relationship, otherwise the change in turnout would have been significant. Rather, it is the uncertainty about the expected benefit of supporting any party that matters.

To summarize: party identification is relatively constant in each country, but not immutable: it can be modified by traumatic processes and events. Authoritarian regimes intensify party

identification, poorly performing democratic regimes undermine it, and adequately performing democratic regimes have no discernible consistent impact; and volatility is reduced somewhat as participation is fully expanded, filling political space.

Discarded Hypotheses

Several hypotheses tested by other scholars in other regions are not included in this model. First, some writers have found it appealing to argue that party systems are destabilized when large numbers of new voters participate in elections for the first time (Huntington 1968, 397-403). Their reasoning is that new voters are less constrained by loyalty to existing parties than experienced voters, and are therefore more likely to back new parties or upset the distribution of power among the old parties. So far, however, most research has disconfirmed this otherwise persuasive hypothesis. Adam Przeworski's first major test, using European cases, found the hypothesis valid only for Germany (Przeworski 1975). More recently, Bartolini and Mair discovered a small effect, but only when there was a large change in turnout (at least four percent of adult population) in countries where turnout had previously expanded to a relatively high and stable level (Bartolini and Mair 1990, 174-81). This finding suggests that no similar result should be expected in Latin America because turnout levels stabilized only recently in any of these countries and have yet to stabilize in most.

Effects of expanding participation were examined by including changes in voter turnout in trial estimates of the model.¹⁷ In no case were changes in turnout significant or useful in explaining the variance of V; when added to the basic model, changing participation is insignificant at $p=.82$. A simple explanation for the invalidity of this appealing hypothesis is that new voters may not, in fact, be less politicized than experienced voters. It could be that the culture is so thoroughly politicized that citizens take on party loyalties long before they have a chance to vote. Anecdotal evidence about being "born into" one party or another lends weight to this hypothesis in the cases of Colombia and Uruguay. It is also possible that experienced voters have such low levels of party loyalty that new voters start off on nearly equal footing. This explanation makes more sense for countries that are known through other means to have poorly institutionalized parties, such as Brazil, Ecuador, and Bolivia.

Second, Bartolini and Mair found that, in a bivariate analysis, both an index of disproportionality between seats and votes and a dummy variable reflecting a variety of changes in electoral law that affect proportionality were associated with party system volatility.¹⁸ When included in their fully specified model, however, the index of disproportionality ceased to be significant. Similarly, neither disproportionality nor change in proportionality was significant when included in the fully specified equation of Table 1. In the case of disproportionality itself, the lack of significance was probably due to the small magnitude of the difference. Disproportionality may tend to increase volatility, but not by enough to matter. The insignificance of change in proportionality could well be due to the small number of cases, as only five of the 128 elections in the database took place following such a change.¹⁹ It would be too harsh to conclude that these two factors do not increase volatility. For example, it is possible that a more complex model based on a system of equations would show that institutions such as disproportionality and concurrent presidential elections affect volatility indirectly by reducing the number of parties.

Third, following Bartolini and Mair's lead, the association between party system fragmentation and volatility was also investigated. Some experimentation was required, as there are

several indices of fragmentation in use. A very simple measure--the number of parties receiving at least two percent of the vote--was more strongly and significantly related to volatility in Latin America than any of the others--Rae's index of fractionalization, Laakso-Taagepera's N, Molinar's NP, and the total number of parties (Rae 1970, Laakso and Taagepera 1979, Molinar 1991). The relative performance of these indices seems to suggest that what matters for volatility is the number of alternatives to voting for the largest one or two parties, rather than the overall fragmentation of the vote. At any rate, the significant-parties index performs very much the same function in the model as the measure of party splinters. The splinters variable is included on the grounds that its interpretation is more straightforward, which leaves the relationship between fragmentation and volatility inconclusive.

Finally, one other very plausible institutional cause of volatility is the presidential system. Powell (1982, 97, 103) found some support for a positive association between presidentialism and volatility based on 28 democracies in the early 1960s after controlling for agricultural population and levels of economic development. No such test can be conducted using a purely Latin American dataset because all the cases are presidential systems, but readers should assume that presidentialism accounts for some of the gap in volatility between most of Europe and most of Latin America.

Conclusions

Latin American party systems are, on average, far more volatile than any in OECD countries. They are so volatile that one might expect party identification to be nonexistent. In a region with volatile elections and volatile economies, economic voting would seem to be a very plausible explanation. This study shows, however, that volatility sometimes takes place before citizens even reach the ballot box, as proscriptions, election boycotts, and the splintering of parties deny voters the opportunity to vote how they please. When this unilateral elite interference with the party system is controlled for, the remaining changes in voting behavior are beautifully consistent with the Michigan model of longterm party loyalties eroded by relatively constant and cumulative attrition between elections. Although the rates of attrition vary a great deal within the region and most must be higher than those in European countries, they explain volatility in Latin America much better than a model based on economic voting. Some freezing takes place even in the midst of turbulence, but the end-product is often soft--more like ice cream than a solid block of ice.

Further research will be required to understand more fully why levels of party identification vary from country to country. This model suggests that identification is strengthened by party resistance to authoritarian rule and weakened by acute ungovernability, and becomes more fixed when participation is fully expanded; but these observations are only a start. Many of the factors that may be found to reduce volatility will be either very difficult to achieve, such as good governance, or too heinous to try, such as war and repression. Nevertheless, it is clear that voters often lack the opportunity to vote for the same party in election after election. Therefore, in emerging democracies that aspire to consolidate their party systems, government and opposition elites could help significantly by welcoming broad participation and refraining from manipulating their party systems needlessly.

Appendix

Operationalization of Volatility

Measures of volatility may seem dubious at first glance because they do not measure directly the phenomenon that implicitly or explicitly concerns the theorist--change in voter loyalties, that is, volatility at the individual level. Hard evidence of individual shifts can be obtained only through panel studies, which means that the evidence available is limited to a handful of the more developed countries and only the most recent elections. For this reason, all studies of historical or cross-national patterns of volatility have necessarily relied on aggregate measures of volatility, which can be based on the more readily available election returns. Aggregate volatility is not strictly the same as individual-level volatility, but there is little reason to question most inferences about the individual level that are drawn from aggregate data, because all of the available research comparing simultaneous individual and aggregate shifts has found that the two are so strongly correlated that one is very nearly a linear function of the other (Bartolini and Mair 1990, 27-34).

It is important to keep in mind, however, that there are different measures at different levels of aggregation, for while the measures vary together, they remain at different absolute levels. In general, the more the data are aggregated, the lower the index of volatility. Therefore, an index of individual-level volatility is not comparable with an index of party volatility. It is also possible to calculate indices of volatility at the factional or bloc (Left/Center/Right, Catholic/Protestant, etc.) level. Bartolini and Mair (1990) used measures of both party volatility and bloc (labor/other) volatility. Since there is no simple way to aggregate Latin American parties into blocs as one can with Western European parties, this analysis deals with party volatility only. This decision leads to a higher index for Chile than one based on Left/Center/Right blocs would be, but party volatility will be used for consistency because there is no other country in the region with such clearly defined blocs on the Left-Right dimension.

Measures of volatility may also be based on either seats or votes, for both reflect change in party systems. The index used in this study is based on votes since its purpose is to explain the causes of party volatility, which must arise in part from voter preferences. A study more concerned with the effects of volatility on, for example, executive-legislative relations would be based more appropriately on seats. The only other study that reports many volatility rates for Latin America (Mainwaring and Scully 1995) uses seats for this reason.

Even with the options limited to party volatility based on votes, there is more than one way to operationalize volatility.²⁰ Nevertheless, the simplest and most common index, and the one used here, is

$$V = 1/2 \sum_{i=1}^P *P_{i,t} - P_{i,t-1}*,$$

where $P_{i,t}$ is the percentage of the vote won by party i in the election at time t .

Volatility rates can be quite volatile themselves. For example, Bolivia's volatility in 1960-62 was 11.4, but in the next pair of elections, 1962-66, it soared to 79.0. This kind of volatility, which could be called "temporal volatility," can be measured by the standard deviation of a country's V 's in a series of elections. Since this study seeks to explain both cross-national variation and within-country variation over time, the causes of temporal volatility are considered as well.

The Database

The analysis is based on 139 elections in Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Ecuador, Mexico, Peru, Uruguay, and Venezuela (Table 3).²¹ With a few exceptions, the database includes all of the 20th-century Chamber of Deputies elections in these eleven major countries, as long as they were contested by more than one party and were considered reasonably fair.²² Mexican elections were included only tentatively at first due to known electoral fraud. When included in the model as elections taking place under conditions of repression, however, their volatility turned out to be just as predictable as that of elections elsewhere, possibly because the degree of fraud remained roughly constant during the 1961-91 period. The models' interpretation of Mexico as a country with weak party ID disguised by repression is also very plausible. Mexican elections have therefore been retained in the analysis. It is interesting to note that the standard error of the attrition estimate for Mexico in Table 1 is nearly twice as large as that of any other country, perhaps reflecting manipulation of the Mexican vote. The number of elections actually used in the regression analysis is 117 rather than 139 because the first election in each country serves as a benchmark for calculating V , and the second must be dropped in order to include a lagged dependent variable on the right-hand side.

Some judgment is required when calculating V . For the purpose of regression modelling, when a party divided I counted the smaller fragment as a separate party in the first election it contested, unlike Bartolini and Mair, who counted splinters as separate only in the second election after the division. This coding was necessary to test for the impact of splits. Like Bartolini and Mair, however, I counted parties that merged as a single party in the election prior to their merger. In addition, I treated each of the numerous interparty coalitions in Brazil during the Second Republic as a separate microparty, since voters' loyalties did not seem to transcend individual candidates. In view of the model's success in fitting the Brazilian case, this seems to have been the correct solution. The many provincial splinters of the UCR and the Peronists in Argentina were also treated as separate parties even though an index of volatility based on these rather obvious blocs probably would have been easier to model.

Economic data were collected by Rafael de la Dehesa from the following sources: GDP--United Nations, Statistical Yearbook for Latin America and the Caribbean (1981, 1985, and 1991), deflated to 1970 dollars; exchange rates and percentage change in GDP--James Wilkie and Carlos Alberto Contreras, eds., Statistical Abstract of Latin America (UCLA Latin American Center Publications, 1992); population figures used to calculate per capita GDP came from Volume 28 of the Statistical Abstract of Latin America. In a few cases, recent economic data not available in the above sources was taken from Inter-American Development Bank, Pocket Profiles (IDB, 1992).

References

- Baloyra, Enrique A., and John D. Martz. 1979. Political Attitudes in Venezuela: Societal Cleavages and Political Opinion. Austin: University of Texas Press.
- Bartolini, Stefano and Peter Mair. 1990. Identity, Competition, and Electoral Availability: The Stabilization of European Electorates, 1885-1985. Cambridge: Cambridge University Press.
- Booth, John A. 1989. "Costa Rica: The Roots of Democratic Stability." In Diamond, Larry, Juan J. Linz, and Seymour Martin Lipset, eds., Democracy in Developing Countries: Latin America, pp. 386-422. Boulder, Colo.: Lynne Rienner.
- Brown, Courtney. 1991. Ballots of Tumult: A Portrait of Volatility in American Voting. Ann Arbor: University of Michigan Press.
- Campbell, Angus, Philip Converse, Warren Miller, and Donald Stokes. 1960. The American Voter. New York: Wiley.
- Chalmers, Douglas A. 1972. "Parties and Society in Latin America." Studies in Comparative International Development 7: 102-28.
- Conaghan, Catherine. 1993. "Loose Parties, Floating Politicians, and Institutional Stress: Presidentialism in Ecuador, 1979-88." In Juan J. Linz and Arturo Valenzuela, eds., The Crisis of Presidential Democracy: The Latin American Evidence. Baltimore: The Johns Hopkins University Press, forthcoming.
- Converse, Philip E. 1969. "Of Time and Partisan Stability." Comparative Political Studies 2:2 (July 1969): 139-171.
- Coppedge, Michael. 1994. Strong Parties and Lame Ducks: Presidential Partyarchy and Factionalism in Venezuela. Stanford: Stanford University Press
- . 1995. "The Evolution of Latin American Party Systems." In Arturo Valenzuela, ed., Politics, Society, and Democracy: Latin America. Boulder: Westview Press.
- Dalton, Russell J., Scott C. Flanagan, and Paul Allen Beck, eds. 1984. Electoral Change in Advanced Industrial Democracies: Realignment or Dealignment? Princeton: Princeton University Press.
- Del Aguila, Juan Manuel. 1979. "Economic Opinion and Peripheral Capitalism: A Survey of Mass Attitudes in Urban Venezuela." Ph.D. dissertation, University of North Carolina, Chapel Hill.
- Diamond, Larry. 1993. "Introduction: Political Culture and Democracy." In Larry Diamond, ed., Political Culture and Democracy in Developing Countries, pp. 1-33. Boulder, Colo.: Lynne Rienner.
- Diamond, Larry, and Juan J. Linz. 1989. "Introduction: Politics, Society, and Democracy in Latin America." In Diamond, Larry, Juan J. Linz, and Seymour Martin Lipset, eds., Democracy in Developing Countries: Latin America, pp. 1-58. Boulder, Colo.: Lynne Rienner.
- Erickson, Robert S. 1989. "Economic Conditions and the Presidential Vote." American Political Science Review 83: 567-73.
- González, Luis Eduardo. 1986. "Los partidos políticos y la redemocratización en Uruguay." Cuadernos del CLAEH 37:1.
- Hartlyn, Jonathan. 1988. The Politics of Coalition Rule in Colombia. New York:

- Cambridge University Press.
- Hibbs, Douglas A., Jr. 1977. "Political Parties and Macroeconomic Policy." American Political Science Review 71: 1467-87.
- Huntington, Samuel. 1968. Political Order in Changing Societies. New Haven: Yale University Press.
- Johnston, R.J., A.B. O'Neill, and P.J. Taylor. 1987. "The Geography of Party Support: Comparative Studies in Electoral Stability." In M.J. Holler, ed., The Logic of Multiparty Systems. Dordrecht, the Netherlands: Martinus Nijhoff Publishers.
- Kramer, Gerald. 1975. "Short-Term Fluctuations in U.S. Voting Behavior, 1896-1964." American Political Science Review 65: 131-43.
- Laakso, Murkuu, and Rein Taagepera. 1979. "Effective Number of Parties. A Measure with Application to Western Europe." Comparative Political Studies 12 (1979): 3-27.
- Lipset, Seymour Martin. 1994. "The Social Requisites of Democracy Revisited: 1993 Presidential Address." American Sociological Review 59: 1-22.
- Lipset, Seymour Martin and Stein Rokkan. 1967. "Cleavage Structures, Party Systems, and Voter Alignments: An Introduction." In their Party Systems and Voters Alignments: Cross-National Perspectives. New York: The Free Press.
- Maguire, Maria. 1983. "Is There Still Persistence? Electoral Change in Western Europe, 1948-1979." In Hans Daalder and Peter Mair, eds., West European Party Systems: Continuity and Change. London: Sage Publications.
- Mainwaring, Scott. Forthcoming 1995. "Brazil: Weak Parties, Feckless Democracy." In Mainwaring, Scott and Timothy Scully, eds. Building Democratic Institutions: Parties and Party Systems in Latin America. Stanford: Stanford University Press.
- Mainwaring, Scott and Timothy Scully, eds. Forthcoming 1995. Building Democratic Institutions: Parties and Party Systems in Latin America. Stanford: Stanford University Press.
- Molinar, Juan. 1991. "Counting the Number of Parties: An Alternative Index." American Political Science Review 85:4 (December 1991): 1383-91.
- Nohlen, Dieter, ed. 1993. Handbuch der Wahldaten Lateinamerikas und der Karibik. Opladen: Leske + Budrich.
- O'Donnell, Guillermo. 1994. "Delegative Democracy." Journal of Democracy 5:1 (January): 55-69.
- Pedersen, Mogens N. 1979. "The Dynamics of European Party Systems: Changing Patterns of Electoral Volatility." European Journal of Political Research 7(1): 1-26.
- Powell, G. Bingham, Jr. 1982. Contemporary Democracies: Participation, Stability, and Violence. Cambridge: Harvard University Press.
- Przeworski, Adam. 1975. "Institutionalization of Voting Patterns, Or Is Mobilization the Source of Decay?" American Political Science Review 69 (March 1975): 49-67.
- Rae, Douglas. 1970. The Political Consequences of Electoral Laws, Second edition. New Haven: Yale University Press.
- Remmer, Karen L. 1991. "The Political Impact of Economic Crisis in Latin America in the 1980s," American Political Science Review 85:3 (September): 777-800.
- Rose, Richard, and Derek W. Urwin. 1970. "Persistence and Change in Western Party Systems Since 1945." Political Studies 18(3): 287-319.

- Schedler, Andreas. 1993. "Under- and Over-Institutionalization: Some Tentative Reflections on New and Old Party Systems." Paper prepared for presentation at the Joint ECPR and OGPW Workshop, "The Development of the New Europe," Vienna.
- Scott, Robert E. 1966. "Political Parties and Policy-Making in Latin America." In Joseph LaPalombara and Myron Weiner, eds., Political Parties and Political Development, pp. 331-67. Princeton: Princeton University Press.
- Tufte, Edward. 1978. Political Control of the Economy. Princeton: Princeton University Press.
- Valenzuela, Arturo. 1994. "Party Politics and the Crisis of Presidentialism in Chile: A Proposal for a Parliamentary Form of Government." In Juan J. Linz and Arturo Valenzuela, eds., The Failure of Presidential Democracy: The Case of Latin America, pp. 91-150. Baltimore: The Johns Hopkins University Press.
- Wolinetz, Steven B. 1979. "The Transformation of Western European Party Systems Revisited." West European Politics 2(1): 4-28.

Table 1: A Model of Party-System Volatility

Dependent variable is the volatility index (V)

<u>Independent Variable</u>	Unstandardized		<u>T-statistic</u>
	<u>coefficient</u>	<u>error</u>	
Intercept	-3.45	3.43	1.01
Argentina dummy	28.05**	3.69	7.60
<i>Demand-side variables</i>			
Attrition rate (years since last election) in:			
Brazil	9.92**	1.32	7.51
Bolivia	8.73**	1.09	7.98
Mexico	8.69**	1.91	4.56
Ecuador	8.62**	0.98	8.78
Chile	8.07**	0.94	8.61
Costa Rica	7.10**	1.06	6.71
Venezuela	6.21**	1.00	6.19
Uruguay	5.49**	0.99	5.55
Argentina	5.37**	0.96	5.60
Peru	5.33**	0.72	7.43
Colombia	4.08**	1.01	4.05
Regime age in Ecuador	1.73**	0.38	4.52
Regime age in Peru	3.93**	0.72	5.47
Years of repression	-4.23**	0.72	5.85
Turnout (% of population)	-0.24*	0.07	3.31
Volatility _{t-1}	0.09	0.05	1.81
<i>Supply-side variables</i>			
Boycotts and bans (% of vote)	0.69**	0.05	13.77
Splinter parties (% of vote)	0.42*	0.14	3.12

N = 117, R² = .891, F=41.87, p = .0001

* = significant at p < .005

** = significant at p < .0001

Table 2: Evidence Against Economic Voting

Dependent variable is the volatility index (V); N = 117.

Independent Variable	Coefficient Estimates (standard errors in parentheses for economic variables)							
Intercept	-2.56	-2.45	-5.58	-4.37	-3.54	-5.88	-3.05	-6.47
Argentina dummy	37.82**	37.83**	38.31**	38.87**	37.64**	36.93**	37.38**	36.36**
Attrition rate in:								
Brazil	11.32**	11.33**	12.09**	11.99**	11.45**	11.62**	11.65**	11.69**
Bolivia	10.01**	10.01**	10.38**	10.53**	10.13**	10.09**	9.95**	10.03**
Mexico	10.38**	10.41**	10.89**	11.04**	10.53**	10.60**	10.91**	10.53**
Ecuador	9.73**	9.73**	10.15**	9.93**	9.79**	9.83**	9.75**	9.69**
Chile	9.43**	9.44**	9.37**	9.64**	9.47**	9.20**	9.27**	9.06**
Costa Rica	8.33**	8.36**	8.74**	8.42**	8.34**	8.56**	8.48**	8.17**
Venezuela	7.43**	7.44**	7.64**	7.48**	7.40**	7.36**	7.57**	7.28**
Uruguay	7.35**	7.34**	7.41**	7.54**	7.37**	7.24**	7.50**	7.04**
Argentina	5.12**	5.10**	5.19**	5.33**	5.19**	5.21**	5.40**	5.18**
Peru	6.15**	6.16**	5.77**	6.27**	6.19**	5.64**	6.11**	5.58**
Colombia	5.37**	5.37**	6.37**	5.61**	5.44**	6.22**	5.48**	6.20**
Regime age, Ecuador	1.80**	1.78**	1.90**	1.86**	1.81**	1.92**	1.84**	1.97**
Regime age, Peru	4.09**	4.05**	4.54**	4.71**	4.19**	4.58**	4.12**	4.57**
Years of repression	-5.20**	-5.20**	-5.17**	-5.50**	-5.28**	-5.09**	-5.23**	-5.10**
Turnout	-0.39*	-0.39**	-0.32 ⁺	-0.34*	-0.36 ⁺	-0.29 ⁺	-0.32 ⁺	-0.27
Volatility _{t-1}	0.04	0.04	0.02	0.03	0.04	0.03	0.04	0.03
Boycotts and bans	0.72**	0.72**	0.72**	0.71**	0.72**	0.73**	0.72**	0.72**
Splinter parties	0.41*	0.41*	0.35 ⁺	0.48*	0.42*	0.40 ⁺	0.47*	0.40 ⁺
\hat{I} GDP in last year	-0.06 (0.22)							
\hat{I} GDP in last two years		-0.04 (0.13)						
\hat{I} GDP since last election			-0.01 (0.07)					
Devaluation in last year				-0.007 (0.005)				
Devaluation in last 2 years					-0.0008 (0.0037)			
Devaluation since last election						-0.0007 (0.0036)		
Per capita GDP							-2.67 (5.55)	
\hat{I} per capita GDP since last election							0.03 (0.08)	
R ²	.926	.926	.934	.928	.925	.930	.930	.932
F (df=89)	42.93**	42.95**	44.36**	43.74**	42.11**	41.26**	41.72**	40.44**

⁺ = significant at p < .05

* = significant at p < .005

** = significant at p < .0001

Table 3: Elections Used in This Study

Argentina:	1912, 1914, 1916, 1918, 1920, 1922, 1924, 1926, 1928(1), 1930, 1946, 1948(2), 1957, 1958, 1960, 1962, 1965, 1973, 1983, 1985, 1987, 1989, 1991.
Bolivia:	1956, 1958, 1960, 1962, 1966, 1979, 1985, 1989.
Brazil:	1945, 1950, 1954, 1958, 1962, 1966, 1970, 1974, 1978, 1982, 1986, 1990.
Chile:	1925, 1932, 1937, 1941, 1945, 1949, 1953, 1957, 1961, 1965, 1969, 1973, 1989.
Colombia:	1931, 1933, 1939, 1941, 1943, 1945, 1947, 1949, 1958, 1960, 1962, 1964, 1966, 1968, 1970, 1974, 1978, 1982, 1986, 1990.
Costa Rica:	1948, 1949, 1953, 1958, 1962, 1966, 1970, 1974, 1978, 1982, 1986, 1990.
Ecuador:	1950, 1954, 1958, 1962, 1966, 1979, 1984, 1986, 1988, 1990.
Mexico:	1961, 1964, 1967, 1970, 1973, 1976, 1979, 1982, 1985, 1988, 1991.
Peru:(3)	1931, 1945, 1962, 1963, 1980, 1985, 1990.
Uruguay:	1925, 1928, 1931, 1934, 1938, 1942, 1946, 1950, 1954, 1958, 1962, 1966, 1971, 1984, 1989.
Venezuela:	1947, 1958, 1963, 1968, 1973, 1978, 1983, 1988.

All elections were for the Chamber of Deputies or a unicameral legislature, with these exceptions:

- (1) vote for presidential electors, by party and concurrent with legislative vote
- (2) vote for Constituent Assembly
- (3) presidential vote, by party.

Notes

1. There is some evidence that a democratic regime is unlikely to survive for the long term unless there is some minimum of continuity of the agents in the electoral market, and some predictability of election results most of the time. In Latin America, no democratic regime with a volatile party system has lasted more than 18 years; among the region's nine major countries, those with stable party systems averaged 18.4 years of a stable regime per successful military coup, while those with unstable party systems averaged only 2.3 years per coup. (For these calculations, the cutoff between volatile and stable party systems was set at an index value of 25. The average years of stability are for Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador, Mexico, Peru, and Venezuela between 1948 and 1990, with Mexico counted as a "stable regime" rather than a democracy.) Presumably, the absence of some minimal continuity creates an atmosphere of extreme uncertainty in which it is not rational for political entrepreneurs to invest their time and energy in building party organizations, and not rational for voters to identify with them. In a crisis, it is not clear who can be bargained with, or whether they can be trusted. The associational life that has long been considered necessary for a vibrant democracy does not develop; there is instead a tendency toward "delegative democracy" (O'Donnell 1994).

2. The strict use of parties rather than blocs makes Chilean volatility rates higher than the conventional focus on left/center/right blocs would lead one to expect, but consistency requires the use of the higher, party-based, rates.

3. Figures reported were obtained by averaging each country's volatility for all elections in a given decade and then taking a regional average in which each country is weighted equally. Four country averages were used for the thirties, six for the forties, and at least nine for each decade thereafter.

4. The counting criteria make little difference in this case partly because splinter parties usually win small percentages of the vote and partly because no splinter parties were counted in 71 percent of the Latin American elections.

5. Counting criteria in Figure 1 are exactly those used by Bartolini and Mair except for Bolivia and Peru, where postauthoritarian elections are included to compensate for the low number of cases (3 in Bolivia, 0 in Peru).

6. To be exact, assuming no change in the selection of parties contesting elections volatility (V) could be expressed as:

$$V = N \left(\frac{1}{2} \sum_{i=1}^p *p_{Ni} - p_{Fi} \right),$$

where N = the proportion of the vote cast by new voters, p_{Ni} = the percentage vote for party p_i by new voters in one election, and p_{Fi} = the percentage vote for party p_i by former voters in the previous election. Only a panel study could provide estimates of the values of these variables,

but it would be rare for turnover and the loyalty gap between new and former voters to be large enough to raise volatility above 10 percent under the assumptions of the pure identifier model.

7. Some would argue that uncertainty should diminish volatility by encouraging voters to believe that their preferred party has a chance of doing better; that is, uncertainty lessens the rationality of strategic voting. This argument cuts both ways, however: uncertainty feeds both optimism and pessimism about one's party's chances. Results presented below suggest that the most important effect is to weaken attachment to parties in general.

8. No indicator of inflation per se was used because statistics are unavailable for many earlier years. Devaluation, however, looks to be a surprisingly good proxy for inflation, especially over periods of two or more years. Exchange rates are certainly sticky, but when inflation hits the high double digits a devaluation is never long in coming.

9. The only effect of adding economic indicators to the model one at a time was to render lagged volatility completely insignificant. Because the lagged volatility rate almost always precedes the corresponding economic performance, this effect would seem to suggest that if there is any relationship, it is that volatility causes bad economic performance, not the reverse.

10. The attrition variable itself does not distinguish between defections due to weak party ID and defections due to some average poor economic performance. The estimated coefficients should not be biased by this ambiguity, however, because I did control for economic performance in some estimates, and found that none of these variables were even significant. Attrition should therefore be interpreted as a reflection of (turnover and aggregate) defection due to factors other than economic performance.

11. Abstention is not included separately in the model, despite the obvious advantage in including it, only because abstention rates are not available for many of the early elections in the sample.

12. Whether the defection rate is greater than or less than the attrition estimate depends on whether new voters are more loyal or less loyal than those who voted in both elections. In general, $\text{Attrition} = d_p + F(d_F - d_p)$. In other words, the annual rate of aggregate defection, abstention, and turnover is equal to the rate of defection among panel voters (those who vote in both elections), d_p , plus the difference between rates of defection between panel voters and first-time voters ($d_F - d_p$), weighted by the proportion of the electorate that is voting for the first time (F).

13. This system awarded two thirds of the seats in each district to the first party and one third of the seats to the second party.

14. When the independent variables presented here are regressed on an index of adjusted volatility that does not include the component associated with bans, boycotts, and splits, the

percentage of the variance explained naturally does decline, but by less than 30 points.

15. The years counted as repressive were: Argentina 1930-46, 1948-57, 1966-73, and 1976-83; Bolivia 1964-82; Brazil 1964-79; Chile 1973-89; Colombia 1953-58; Ecuador 1970-79; Mexico 1961-91; Peru 1931-39, 1948-56, 1960-62, and 1968-79; Uruguay 1973-84; and Venezuela 1948-58.

16. Some have claimed that the Chilean party system changed very little during Pinochet's rule. This may be true if measured by bloc (Left/Center/Right) volatility, but when measured by party volatility, as it is here, the Chilean party system in 1989 reached its second-highest level of volatility ever--53.2. Despite the conventional wisdom, when it comes to loyalty to one specific party my evidence indicates that Chileans defect as often as most of their neighbors.

17. Bartolini and Mair measured turnout as total vote (including blank and spoiled ballots) as a percentage of the adult population. Lacking access to comparable data, I used the valid vote as a percentage of total population.

18. These relationships also held up after controlling for the number of parties in the system (Bartolini and Mair 1990, 163-166).

19. These were the three changes in Argentina and the two in Bolivia (see previous note). Mexico since 1963 has gradually increased the proportion of seats allocated to diputados de partido, who are elected by PR, from .25 to .40. Most, however, are still elected in single-member districts.

20. For a discussion of other measures, see Bartolini and Mair 1990, pp. 34-37; Maguire 1983; and Johnston et al. 1987.

21. Collection of these results would have been impossible without the assistance of many other people. Alejandra Grosse, my research assistant during 1991-92, tracked down much of the data in libraries. Dick Katz of Johns Hopkins generously shared many results he had collected for a forthcoming book. Other friends and colleagues who provided or helped locate results for some of the more obscure elections were John Booth, Ernesto Cabrera, John Carey, Carol Graham, Joseph Klesner, Scott Mainwaring, Jim Malloy, Luigi Manzetti, Cynthia McClintock, Ronna Montgomery, John Peeler, Tim Power, and Riordan Roett. The data differ in small respects from those contained in Nohlen (1993).

22. The exceptions are: (1) I still have not obtained complete results for 1951 in Bolivia or anything before 1948 in Costa Rica, before 1961 in Mexico, or before 1925 in Uruguay. Very recent elections, including 1993 in Argentina, Bolivia, Chile, and Venezuela, and 1994 in Brazil, Colombia, Costa Rica, Ecuador, and Uruguay, are also omitted. (2) Results of legislative elections in Peru proved unobtainable, so rather than exclude this important case, I used results

of Peruvian presidential elections that were reported by party. The relatively good fit of the model described below suggests that the Peruvian presidential vote is an acceptable substitute. (3) The database includes the 1928 vote for presidential electors in Argentina since it coincided with a Chamber of Deputies vote and was contested by the same basic set of parties that competed in the preceding and succeeding elections. It also includes the 1948 elections for the Constituent Assembly since they were the only relatively fair elections to a national legislative body held during the crucial early Peronist period. (4) Some of the election returns were more complete than others, which forced me to treat all of the parties that were lumped together as "Other Parties" as a single new party. In an attempt to correct for this aggregational error, I included the vote for "other parties" as an independent variable in preliminary models. This variable was never significant, which suggests that distortion introduced in this way was either small or irrelevant.