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Abstract

The postcommunist states of Eastern Europe and the former Soviet Union have witnessed levels of electoral volatility higher than both Western Europe and Latin America, levels that have deleterious effects on party consolidation and representative democracy in the region. This article presents a model of postcommunist legislative electoral volatility, testing explanations developed in Western Europe and Latin America and refining them for the different experience of the twin transition to both democracy and capitalism. Pooled cross-sectional time series regression analysis is conducted on 67 legislative elections in 19 countries, covering the 1991–2006 period. Results demonstrate that, contrary to previous studies in other regions and of the first decade of the postcommunist era, economic determinants of volatility are of minimal salience. Rather, the institutional arrangement of the electoral system is found to be critically important, as is the more thorough “Leninist” or “Soviet” legacy in the states of the former Soviet Union.

Keywords

electoral volatility, postcommunism, elections, electoral institutions

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The new democracies of Eastern Europe and the former Soviet Union (FSU) have now experienced more than a decade of free and fair elections, with wide fluctuation between winners and losers across each election. Unlike Western Europe or North America, but like Latin America, the postcommunist polities have seen deleteriously high levels of electoral volatility, conceived of as the difference in the sum of the shares of votes or seats held by each individual party over two consecutive elections (Mair, 1997). Concomitantly, the party systems of the region are far from stabilized; although the representative institutions of democracy have shown themselves to be far more robust and durable than many expected (Hanson, 1995; Jowitt, 1992), the parties that are a critical factor in the long-term viability of these institutions have demonstrated much less stability (Hale, 2005; Rose, Munro, & White, 2001). Although some have studied the results of this volatility, it has been restricted to the first decade of the postcommunist experience, resulting in conclusions suggesting that party systems are stabilizing as time goes by and that the significantly high levels of volatility seen in postcommunist elections were traits of the first few elections (Birch, 2003; Tavits, 2005).

This article draws on the substantially larger number of observations offered by the many elections held in the past half decade and draws different conclusions than previous studies. Using pooled cross-sectional time series regression analysis on 67 elections in 19 countries, it tests economic, institutional, and legacy-based explanations of electoral volatility, concluding that, contrary to previous research, problematic economic performance has little consistent effect on volatility in the postcommunist states and that the passage of time is not consistently associated with decreasing levels of volatility, once one controls for other important variables. Instead, it shows that the structure of electoral institutions is the most consistent and important determinant of electoral volatility and that the stronger "Leninist legacy" felt in those states that were part of the Soviet Union is a consistently critical, and heretofore ignored, factor.

Figure 1 illustrates the levels of electoral volatility across three regions and one country of the world. It demonstrates the extreme levels of volatility among the postcommunist states of Eastern Europe and the FSU (27.1), levels that even surpass the heightened levels observed in Latin America (21.4). The United States (4.5) and the states of Western Europe (7.7) have been bastions of stability when compared to the other two regions; even in the years between the First and Second World Wars, popularly conceived of as a volatile era, the levels of aggregate legislative electoral volatility in Western Europe reached only 10.1 on the Pedersen index (Bartolini & Mair, 1990).¹ Also noteworthy is the fact that when comparing the postcommunist democratization

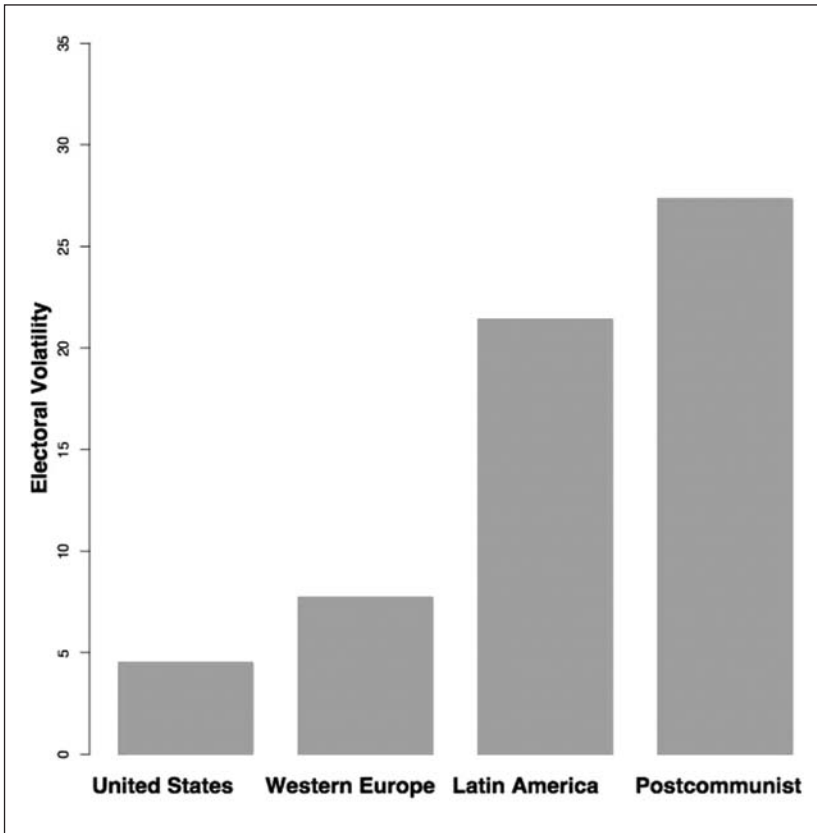


Figure 1. Comparative electoral volatility

Legislative electoral volatility in North America, Western Europe, Latin America, and the postcommunist region. U.S. data represent aggregate electoral volatility from 1948 to 1985, and Latin America data represent aggregate volatility from 1982 to 1997 (Roberts & Wibbels, 1999). Western Europe data represent aggregate electoral volatility from 1950 to 1990 (Gallagher, Laver, & Mair, 1995). Postcommunist data are aggregate 1991-2006, compiled by author.

period solely to the periods of democratization in postwar Western and Southern Europe, as well as Latin America, the significantly higher levels of volatility still hold (Bielasiak, 2002). Figure 2 plots each observation by country as well as the mean volatility score for that country.

Understanding the determinants of electoral volatility in the postcommunist states—*noted in Figure 2*—is an important endeavor, both for its own sake

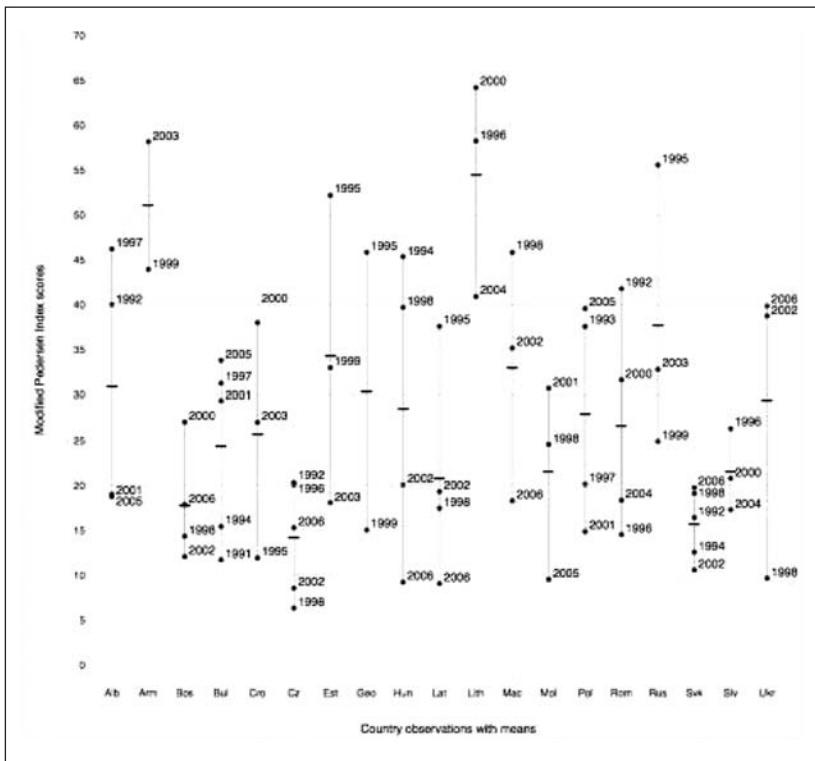


Figure 2. Postcommunist electoral volatility

Electoral volatility scores for 19 postcommunist countries. Elections are plotted with points on the vertical lines and labeled by year. Horizontal black bars signify the mean scores for each country across elections.

but perhaps more critically because of its impact on the development of stable party systems in the region. A host of scholars, writing in both the postcommunist and broader comparative politics literatures, have argued for the importance of stable and representative party systems in the consolidation and maintenance of democratic regimes (Diamond, Linz, & Lipset, 1989; Kitschelt, Mansfeldova, Markowski, & Tka, 1999; Mainwaring & Scully, 1995). Stable and predictable party systems are key because they are able to provide linkages between the state and society as well as transmit and regulate societal pressures. As important are the roles they play in holding elites accountable to those governed and in integrating diverse societal groups, be they ethnic, geographic, or economic, into the structures of democratic rule. High levels of

volatility impinge on these necessary functions of party systems. Rather than allowing for Przeworski's "institutionalization of uncertainty," whereby uncertainty is the positive, defining trait of democracy, consistently high levels of volatility illustrate the inability of parties to create any semblance of certainty in their goals and their ability to realize these goals (Mainwaring & Scully, 1995; Przeworski, 1991; Sartori, 1976). All the more problematic is the combination in the postcommunist world of high levels of volatility with high levels of party replacement (Bielasiak, 2002; Birch, 2003). The uncertainty, in these instances, is not which party will win the election next week and control the levers of power for a set amount of time but instead uncertainty about the programmatic goals of the party, its commitment to democracy, and even if it will be around for the next election.

Explanations of Electoral Volatility

Economic Explanations

With few exceptions, previous comparative studies of electoral volatility have primarily examined the phenomenon in the Western European or Latin American contexts. Three broad explanatory approaches developed, with scholars typically looking to economic, institutional, or structural features in their explanations of volatility.² The first of these explanations developed out of the literature on economic approaches to voting, whereby voters are assumed to reward or punish parties on the basis of their prior or expected future performance (Kramer, 1971; Lewis-Beck, 1988). Many studies have confirmed the existence of economic voting in Latin America, and scholars of Eastern Europe and the FSU have found assumptions of such economic voting at both the national and regional levels (Pacek, 1994; Remmer, 1991; Tucker, 2006).

There are two ways to hypothesize about the intersection of economic voting and electoral volatility. The first is simply that elections occurring during periods of poor economic performance should have higher levels of anti-incumbent voting than those in which economic performance is better; when the economy sours, party loyalties (already tenuous in the postcommunist countries where parties are extremely young) have less resonance, and voters "throw the bums out." This is the manner in which previous scholars studying the phenomenon in the postcommunist region have hypothesized the effect of economic voting on electoral volatility and leads to the following:

Hypothesis 1: There is an inverse relationship between economic performance and electoral volatility.

The relationship between economic voting and electoral volatility may not be as straightforward as previous scholars studying the phenomenon in the region have asserted, however (Birch, 2003; Tavits, 2005). These authors have assumed that the relationship between economic performance and volatility is linear, whereas it might be curvilinear (Roberts & Wibbels, 1999). Assuming the relationship between economic performance and volatility is linear results in a world where no potential voters reward those whose tenure in office has been concomitant with a robust economy and produces models where stellar economic performance results in no volatility, as the relationship is simply linear. But this is not the only potential relationship between economic voting and volatility. It may instead be that governments presiding over successful economies (as compared to those of the previous government) will also lead to increases in volatility, as voters reward them by shifting their votes. Such a relationship would be curvilinear, with high levels of volatility potentially associated with either significant economic improvements or failures. From this follows,

Hypothesis 2: Electoral volatility increases with large changes, positive or negative, in economic performance.

Institutional Explanations

Work in comparative politics has thoroughly demonstrated and debated the impact of different institutional arrangements on political outcomes, and three independent explanations exist regarding the role of institutions on electoral volatility. The first of these conceives of (primarily electoral) institutions as the “rules of the game” (North, 1990) and sees changing the rules of the game as affecting the outcome of game. Institutional change was shown by Roberts and Wibbels (1999) to be a significant determinant of volatility in Latin America. For them, institutional change is operationalized as changes resulting in large increases in the electorate, the adoption of new constitutions, or executive coups. As Bielasiak (2002) has noted, however, nearly all institutional rule changes occurred between the breakaway and founding elections, which are not analyzed here, since volatility in the first set of elections is impossible. Furthermore, it has been shown that what little changes have occurred later show no consistent effects on electoral volatility (Tavits, 2005). This is not surprising, as the first decade of postcommunism witnessed massive institutional changes, the sweeping changes to the economic and political systems swamping the miniscule fraction of these that were related to the electoral system.

The second institutional explanation views the phenomenon as endogenous to the structure of electoral and party systems. Rather than volatility being an output caused by changes in some exogenous input such as inflation, institutional change, or shifts in social cleavages, it is instead a direct cause of the structure of the mediating electoral and party systems themselves. A typical manner in which party systems are examined, and for empirical studies of volatility operationalized, is by looking at the number of parties contesting elections and winning seats in the legislature. A larger number of parties should be associated with a higher level of electoral volatility because as the number of parliamentary parties grow, their ability to distinguish themselves ideologically and programmatically shrinks, and voters have fewer barriers to switching between parties over consecutive elections (Pedersen, 1983). Previous studies are inconclusive, some arguing the number of parties is a significant factor in electoral volatility (Bartolini & Mair, 1990; Remmer, 1991) and others suggesting no discernible effect (Roberts & Wibbels, 1999). As a result, the following hypothesis is proposed:

Hypothesis 3: As the number of parties increases, electoral volatility should increase.

A second endogenous feature of party systems is the form of electoral system used. Although there are two distinct forms of electoral institutions in the postcommunist world, prior studies have ignored the comparative impact of proportional representation (PR) and mixed electoral systems on volatility. The effect of mixed systems on electoral results is undertheorized, although some empirical work has shown that they can lead to higher levels of fragmentation than PR systems (Birch, 2000), changes in the numbers of parties (Nishikawa & Herron, 2004), and different electoral incentives for parties and voters (Cox & Schoppa, 2002). There is a reason to suspect mixed systems would be associated with higher levels of volatility than PR systems. The ability for individuals to contest and enter parliaments without the need of party affiliation lowers entry costs and as such should lead to more, and more diverse candidates, and even those who claim party affiliation have interests structured in a manner very different than under a PR system (Cox & Schoppa, 2002; Kitschelt & Smyth, 2002). This, combined with the ability for voters to “split” their votes between a party on the list portion of the ballot and a specific individual at the district level, should result in higher levels of fluctuation than strictly PR systems, where there is no ability to divide votes among competing options, and leads to;

Hypothesis 4: Mixed electoral systems should evidence higher levels of electoral volatility than PR systems.

Multiple scholars have studied the effects of presidential, semipresidential, and parliamentary systems on postcommunist political outcomes and have concluded that regime type matters in phenomena such as party development, legislative practices, and the stability of democracy itself (Clark & Wittrock, 2005; Fish, 2005). As more power is concentrated in the hands of an executive distinct from the parliamentary cabinet, the development of stable and strong parties slows, and the attractiveness of the legislature decreases as the key battle becomes the contest for the presidency. As a result, we should expect to see higher levels of fluctuation within the legislature in presidential systems, as weaker parties focus their attention on capturing the executive, and propose Hypothesis 5:

Hypothesis 5: Presidential systems should be associated with higher levels of volatility.

Historical Explanations

Although a large number of scholars have assessed the impact of historical legacies and trajectories on the postcommunist experience broadly (for a lengthy discussion, see the edited volume by Ekiert & Hanson, 2003), none studying electoral volatility in Eastern Europe and the FSU have attempted to include such in their analysis. Although Bielasiak (2002) observed that volatility was significantly higher in the states that were once substate entities in the Soviet Union, no work has attempted to model volatility as a function of (in part) the historical legacy of being a satellite state of or within the Soviet polity itself.

Electoral volatility should be higher in the FSU as compared to Eastern Europe for two critical reasons. The first is that, regardless of their highly attenuated nature, there were in fact multiple parties active in much of communist Eastern Europe. Even though they were controlled by communists, the existence of (nominally) noncommunist parties in Eastern Europe provided for at least the purported representation of specific portions of society by specific, non-Leninist, parties (e.g., the United Peasants Party in Poland and the General Union of Romanian Trade Unions in Romania). The second reason for expecting more volatility in the states that once composed the Soviet Union is that the Soviet Union came much closer to achieving the goal of the eradication of social distinctions than its client states ever did. Not only

was the length of time involved a factor, as the experience of the Baltic states demonstrates, but also no Eastern European client state suffered the level of control by Moscow or the thoroughness of the destruction of local institutions as did Estonia, Latvia, and Lithuania. Even though the Soviet Union controlled many Eastern European policy decisions, they were not subject to union-level industries and the concomitant influx of “non-natives.” Perhaps the most compelling example of the distinction between the two is the case of the mass deportations of “politicals” from the Baltic states to the labor camps after the Second World War. For these reasons, let us present the following:

Hypothesis 6: The states of the FSU should have higher levels of electoral volatility than those of Eastern Europe.

Data and Measurement

The conventional measure of electoral volatility used in studies of the phenomenon is the Pedersen index, which measures the aggregate shift in votes or seats among parties over the course of two consecutive elections (Pedersen, 1979). By summing the net gains and losses of each party, a score on a range of 0-200 is obtained and is then halved to allow for a 0-100 scale.³ Designed in the context of, and with explicit analytical interest in, already solidly democratic states, the traditional Pedersen index is an imperfect tool for analyzing electoral volatility in democratizing states possessing a large turnover in parties. An alternative means of devising volatility scores for countries with substantial amounts of party entry and exit was proposed by Sarah Birch (2003) and is shown in the equation below:

$$V = \frac{\sum |c_{i,t+1} - c_{i,t}|}{\sum c_{i,t+1} + \sum c_{i,t}}$$

This method of calculating volatility scores takes the absolute value of a party's representation in the legislature for the election of interest ($c_{i,t}$), subtracting from its share of seats in the previous legislature ($c_{i,t+1}$). The sum of this absolute value is taken for each party and divided by the total number of seats each party held after the two consecutive elections. This modified Pedersen index is able to better capture the volatility of elections in which there are many parties entering and exiting, as it isolates the question of volatility from that of party replacement.⁴ This is crucial for our purposes

because these events are ubiquitous in the postcommunist world. By allowing the denominator to also be determined by the wins and losses of parties continuous between t and $t + 1$, we are able to analyze volatility that would otherwise go unobserved. Although these two measures of volatility are correlated ($r = .75$), the differences between the two measurements of volatility in postcommunist elections are not uniform. The mean difference is a little more than 7 points, and we observe four cases where the scores are the same (Moldova in 2001, the Czech Republic in 2002, Poland in 2005, and Latvia in 2006) and also four cases where the difference between the measures is more than 30 points (Georgia in 1995, Lithuania in 1996, and Armenia in 1999 and 2003).

Independent Variables

Three variables are used to assess the accuracy of Hypothesis 1, that volatility and economic performance are inversely related. The first of these is *growth*, which is the percentage change in GDP over the 12 months prior to the election. *Inflation* is the second of these measures and is the percentage change in the consumer price index, lagged and weighted for the month of the election. Finally, *unemployment* captures the level of unemployment during the year of the election. To test Hypothesis 2, regarding the potentially curvilinear relationship between economic performance and electoral volatility, the change in each of these three variables compared to the prior government is employed. The absolute difference in the growth, inflation, and unemployment rates between the last 12 months of the previous government and the 12 months prior to the election is used. This allows us to differentiate between moderate and extreme economic performance, of either a positive or negative character.

The first of the institutionally based hypotheses, regarding the impact of the number of parties on volatility, is tested by using the effective number of parliamentary parties (*ENP*) measurement developed by Taagepera and Shugart (1989). Hypothesis 4, suggesting that mixed electoral systems should have higher levels of volatility than standard PR systems, is tested by employing a dichotomous variable for *mixed system*. States with mixed systems are coded 1, whereas those employing PR are coded 0. To test Hypothesis 5, a dichotomous variable for *presidential systems* is also employed, with presidential and semi-presidential systems coded 1 and parliamentary systems coded 0.

Hypothesis 6, the impact of being a union-level republic of the *former Soviet Union*, is captured by a dichotomous variable: the states of the FSU are coded 1, whereas the states of postcommunist Eastern Europe are coded 0.

Two variables are included to control for potentially confounding issues arising from the nature of the analysis. The first of these is *democracy*, measured by the aggregate Freedom House score for political and civil rights during the appropriate year, with a score of 2 being a perfect democracy and a score of 14 being the most nondemocratic state possible. This is employed to control for the fact that those countries that are more democratic may have higher or lesser levels of volatility. One potential effect that increased levels of democracy might have is that as the system increases in its tolerance of political opposition, more fluctuation will result. On the other hand, one could theorize that in less democratic systems the true level of support for those in power is more difficult to measure between (and even through) elections, and therefore volatility might result. Unfortunately, little explicit theorizing and few empirical tests have been conducted as to the precise relationship or relationships between democracy and electoral volatility.⁵

The second control variable, *time*, is employed for both methodological and theoretical reasons and is the number of elections since the end of communist power. That is, an observation that is the second election (the first for which a volatility score is meaningful) since the collapse of communism is coded as 2, and the sixth election since the event is coded a 6. In panel data, controlling for time allows us to mitigate problems of serial correlation. In addition, including a variable tracking the time since the beginning of the postcommunist era allows us to speak to the claims made by many that time is itself a salient variable, with party systems stabilizing and volatility decreasing as it passed. The decision was made to employ the number of postcommunist elections instead of a yearly count variable because of the nature of the arguments regarding political learning and the institutionalization of elections, which should be more dependent on the number of elections held, rather than simply on the number of years.⁶ In other words, those countries that have held half a dozen elections should have more stabilized systems than those that have held three, even if the same number of years passed.

The regression model testing the first, linear, model is expressed in the equation below:

$$Y_{\text{Volatility}} = \beta_0 + \beta_{\text{Growth}} + \beta_{\text{Inflation}} + \beta_{\text{Unemployment}} + \beta_{\text{ENP}} + \beta_{\text{Mixed System}} + \beta_{\text{Presidential}} + \beta_{\text{FSU}} + \beta_{\text{Democracy}} + \beta_{\text{Time}} + \varepsilon_i.$$

The model testing the hypothesis that the impact of economic voting on volatility is curvilinear simply replaces the three economic variables on the right side of the equation. Instead of a linear relationship, the absolute difference in the change between the previous administration and the current is employed.

Table 1. Two Models of Electoral Volatility

	Model 1	Model 2
Constant	34.56*** (8.18)	40.35*** (8.90)
Growth	-0.48 (0.30)	0.07 (0.24)
Inflation	0.01 (0.01)	-0.01** (0.00)
Unemployment	0.38* (0.19)	0.07 (0.40)
ENP	-1.33 (0.98)	-0.91 (0.99)
Mixed system	10.17*** (3.67)	8.59** (3.63)
Presidential	5.91* (3.52)	5.85 (3.53)
Former Soviet republic	8.45*** (3.80)	7.84** (3.67)
Democracy	-1.26 (0.80)	-0.44 (0.73)
Time	-2.44 (1.55)	-4.19*** (1.61)
R ²	.30	.27
N	67	67

ENP = effective number of parliamentary parties. Values are estimates for two models of electoral volatility with standard errors in parentheses. Model 1 tests a linear relationship between the economic variables and volatility. Model 2 tests a curvilinear relationship, using the absolute value of the change in each, comparing the value during the past 12 months of the previous government to the value 12 months prior to the election.

* $p < .10$, two-tailed. ** $p < .05$, two-tailed. *** $p < .001$, two-tailed.

Results and Data Analysis

Two cross-sectional time series regression models are presented to test the relationship between the proposed independent variables and electoral volatility. As results of partially-pooled mixed effects models (the presence of time-invariant covariates make fixed effects models problematic) allowing the intercept to vary by country are nearly identical to the OLS estimates, the simpler pooled models are presented. Both models employ the modified Pedersen index presented above as the dependent variable, with the first model testing the linear variant of economic voting and the second testing the curvilinear version. The results of these two regression models are reported in Table 1. Both models provide strong support for Hypotheses 4 and 6, suggesting that the only consistently significant predictors of volatility are the type of electoral system and former Soviet status.

Looking at Table 1, we see that, with the exception of the ENP, the sign of each variable in Model 1 is in the predicted direction, though not each of these variables is statistically significant. There is some, albeit scanty, support for the economic voting model; neither growth nor inflation is statistically significant. Taking into account the amount of variance resulting from large standard errors, a 100-point increase in inflation is expected to be associated with (in 95%

of the cases) only somewhere between a 1-point drop and a 4-point increase in volatility. Unemployment is the only economic variable that is shown to be statistically significant at the $p < 0.10$ level, though its effect on volatility is limited, with a 1-point increase in the unemployment rate associated with less than a half point increase in the dependent variable. A change in unemployment from its mean observed value in all 67 observations to the third quartile, for example, would be associated with barely more than a 2-point increase in electoral volatility.

The institutional variables fare better than the economic in Model 1, with the mixed system variable reaching the $p < 0.10$ level of statistical significance and the presidential system variable reaching the $p < 0.10$ level. In addition, both have a substantial effect on volatility levels. Mixed electoral systems are associated with a 10-point higher volatility score and presidential systems with slightly less than a 6-point higher level of electoral volatility. The effect of the ENP is indeterminate, with the estimate's standard errors passing over the intercept, suggesting that it has no consistent effect on electoral volatility in the postcommunist world.

The results for the historical variable in the first model suggest that there is a post-Soviet legacy, with status as a member of the FSU being associated with an 8.5-point higher score on the Pedersen index. The effect is both significant in a statistical sense at the $p < 0.05$ level, and substantively important. Combined with the results of the mixed system variable, we see post-Soviet states with mixed electoral systems evidencing shockingly high levels of volatility and countries of Eastern Europe with PR systems the lowest, holding all other variables constant.

The results of Model 2, which attempts to capture a curvilinear relationship between economic performance and volatility, are quite similar to those of Model 1. Interestingly, the control variable time, which is not found to be significant in Model 1, is found to be significant in the curvilinear model, perhaps a result of the higher correlation ($r = .35$) between higher levels of growth and time than absolute change in economic performance and time. In neither model is the control for democracy significant, suggesting no discernible relationship between degree of democratization and volatility.

In Model 2, unemployment is no longer significant, and growth remains in possession of a statistically ambiguous effect on the dependent variable. Inflation reaches the $p < 0.05$ level of statistical significance, but, as in Model 1, it is associated with imperceptible changes in volatility. The coefficient for mixed system remains statistically significant, and its substantive effect is only slightly attenuated. Similarly, the effect of being a successor state of the Soviet Union is unchanged in Model 2, the sole difference being a slight decrease in the estimated coefficient.

Simulated Quantities of Interest

In this section a number of simulated quantities of interest are presented to better demonstrate visually differences in the estimated effects of the covariates on volatility when their values are varied while maintaining the uncertainty of the model. That is, rather than merely providing hypothetical values for each independent variable and suggesting that these combined with the coefficient point estimates give us predicted outcomes, these simulations include the variance around the point estimates, giving us instead a distribution of predicted outcomes for a hypothetical observation.

Figure 3 shows two density plots, each of 10,000 simulated observations, drawn from multivariate normal distributions, taking into account the variance present in the model. Rather than simply providing point estimates, it conveys visually not only the expected mean for a given quantity of interest, in this case the variation in volatility as a function of divergent economic situations, but also how variance in the data affects the certainty of the expected means. For the economic comparison, all noneconomic independent variables were held constant at their medians (the dichotomous variables suppose that the simulated observations are non-FSU states with PR and an elected presidency), simulating 10,000 new observations each for good and bad economic performance. In this case, good economic performance meant mean unemployment and inflation simulated as the first quartile of the 67 observations used in Model 1 and growth at the third quartile. For bad economic performance, the opposite configuration was employed.

What is clear from the density plots in Figure 3 is that of the 20,000 observations, half simulated good and half given poor economic performance, it is impossible to tell for almost any of them which category they were drawn from, as the overwhelming majority of each distribution overlaps the other. This illustrates much better than simple regression coefficients just how poorly economic variables perform in explaining varying levels of electoral volatility.

The difference between the results when institutional and legacy variables are allowed to vary and the economic variables are held constant is striking. The two density plots of Figure 4 are similar, this time with one distribution containing simulated former Soviet states possessing mixed electoral systems and presidencies and one distribution of simulated Eastern European states with PR and no presidency. What we see in this case is that the majority of each distribution is distinct from the other. In other words, we can discern quite clearly the effects of different institutional arrangements and legacies, even when holding constant the ENP, economic performance, democracy, and the number of previous postcommunist elections. Although those simulated

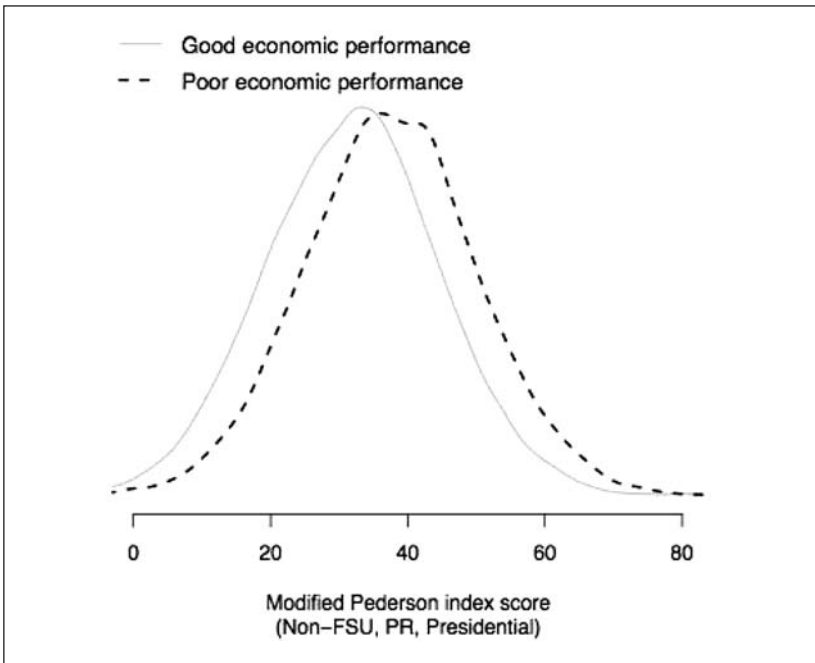


Figure 3. Variation in economic performance

The density plot above demonstrates the results of 10,000 simulations drawn from a multivariate normal distribution with means and standard deviations determined by the estimates and variance in Model 1, reported in Table 1. The solid grey line shows the distribution of cases where good economic performance was simulated (growth at the third quartile, inflation and unemployment at the first), whereas the dotted black line shows the distribution of cases where poor economic performance (growth at the first quartile, inflation and unemployment at the third) was simulated.

observations in the higher end of the non-FSU, PR, nonpresidential distribution do overlap with the lower bounds of the FSU, mixed, presidential distribution, they compose a minority of observations and are an expected result of these being two normal distributions. Clearly, the institutional and historical variables serve as good predictors of variance, whereas the economic variables demonstrate little explanatory power.

Implications and Conclusions

Five key points relevant to our understanding of electoral volatility and party system stabilization are to be drawn from the results of the models presented

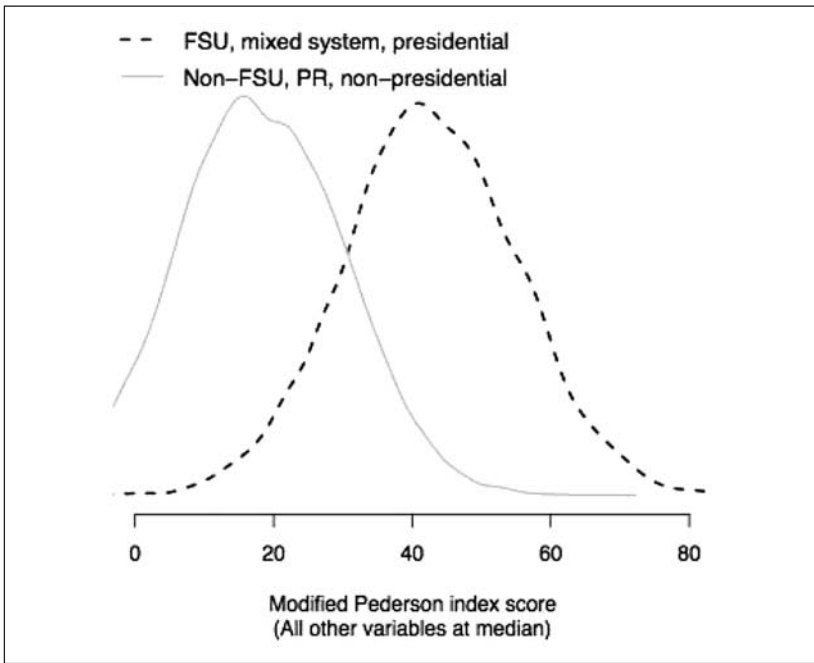


Figure 4. Variation in institutional arrangement

The density plots above demonstrate the results of 10,000 simulations drawn from multivariate normal distributions with means and standard deviations determined by the estimates and variance in Model 1, reported in Table 1. The dotted black line shows the results of simulated observations of former Soviet Union (FSU) states with mixed electoral systems and an elected presidency, whereas the solid grey line shows the results of simulated observations of non-FSU states with PR and no elected presidency.

above. The first is that, contrary to previous studies, the effects of economic performance on electoral volatility are at best negligible and at worst indeterminate in the postcommunist world (Birch, 2003; Tavits, 2005). In neither the linear nor the curvilinear model presented above was GDP growth a successful predictor of levels of electoral volatility, and inflation, though statistically significant in the curvilinear model, was substantively irrelevant in both models. In the first model, unemployment was significant and had some effect on volatility, but the impact of the variable was overwhelmed by other independent variables and even at the third quartile of the variable was associated with only a 5.8-point higher volatility score.

That both models fail to show even negligible support for the economic voting hypothesis is mutually reinforcing, implying that at the aggregate level voters are not shifting their votes in direct response to shifting economic conditions, contrary to specific case studies suggesting the opposite. This is most likely the result of both anti-incumbent voting during periods better economic performance and vote shifts among opposition parties during periods of robust economic performance, even when the party controlling the legislature retains control; survey work showing corruption as being the most salient issue facing postcommunist citizens supports such an interpretation (Miller, Grodeland, & Koshechkina, 2001). Results in previous studies have been more sensitive to trends in the 1990s, as it was a larger proportion of the observations than in the current study. The anti-incumbent trends in the 1990s, during which economic performance was poor, have not entirely been reversed by the substantially improved economic conditions of the current decade, and volatility is still high in many countries of the region, confounding estimates of the consistent effect of economic performance on electoral volatility. This is not an unfounded suggestion, theoretically. In developed party systems with higher degrees of voter party identification, it is not surprising that volatility, aggregate shifts in voters' choices among parties, is correlated with economic performance, as poor performers are punished. However, in the less developed party systems of Eastern Europe and the FSU, volatility during periods of economic growth and lower inflation and unemployment might very well be the shift of votes among opposition parties (as noted by Tucker, 2006).

The second important implication of the results presented in Table 1 and Figure 4 is that we must explicitly theorize and examine the effects of different political and electoral institutions on volatility and the development of stable party systems. The dichotomous variable for mixed proportional and single-member district electoral systems is highly significant and substantively important in both models. The comparative density plots in Figure 4 illustrate this, with large areas under the curve for respective systems falling outside of the area of the alternative electoral system. Mixed electoral systems are associated with much higher levels of volatility (10.2 in Model 1 and 8.6 in Model 2), even when controlling for many other potentially confounding factors. An illustration of the comparative impact of the two statistically significant economic and this single institutional variable is in order. If two countries were similar on all variables save their electoral system, for the country with PR to reach the predicted level of volatility possessed by the mixed system country, either a 28-point increase in unemployment would be necessary (Model 1) or an absolute change in inflation of 1,250% would be

required (Model 2). The only circumstances under which the economic variables are able to match the effects of the electoral system is under cases of extreme economic performance. Even then, neither variable maintains statistical significance under both models.

These results persuasively show that more theoretical and empirical study is required to better determine the effects of mixed versus proportional representative electoral systems. Scholars have made first steps toward this (Herron & Nishikawa, 2001; Nishikawa & Herron, 2004), but systematic examination of the comparative effect of different institutional structures on political outcomes in the postcommunist environment is called for. Though there has been much support for mixed electoral systems for reasons such as their ability to represent voters in parliament through both national party lists and individual candidates in local districts, the results here suggest that, at least in cases where the party system is underdeveloped, mixed electoral systems are a poor choice. In Germany, Japan, and New Zealand, where established parties have decades—and in some cases more than a century—of history, perhaps the effects of mixed systems are not so deleterious. However, in polities where political parties that capture significant percentages of legislative seats still appear and disappear somewhat regularly, the large increase in volatility associated with mixed systems is problematic.

The third implication of the results is that there is, in fact, a Soviet legacy affecting the stabilization of party systems and leading to increased levels of electoral volatility. In both models, the effect of formerly being a union-level republic of the Soviet Union is strong and consistent. A conclusion to be drawn from this is that, in some sense, scholars speaking of a greater expected “Leninist” or “Soviet” legacy for those states that experienced the more thorough Soviet destruction of prior institutions and cleavages were correct, at least in the case of electoral volatility. Levels of volatility are consistently higher in the FSU than in Eastern Europe, and even controlling for economic and institutional factors, the effect is still robust. A corollary to this is that scholars focusing on geography were right to do so, in that there is a clear demarcation between Eastern Europe and the FSU. In an important article, Kopstein and Reilly (2000) argue that geography matters and that it does so by the increased linkages with Western Europe that are to be found in the postcommunist states of Eastern Europe, relative to those of the FSU, and by the assumption that good institutions and behavior would be rewarded by admission into Western clubs such as the European Union and NATO.

The model here suggests that, for the case of electoral volatility, the former causal mechanism should hold, but that the latter might give cause for doubt. This is because of the anomalous case of the Baltic states. Coded here as part

of the FSU, they evidence the higher levels of volatility common to the FSU. Were this not the case, their divergent experience would have confounded the significance of the dichotomous FSU variable, as they compose 43% of the FSU observations. However, if it were the prospects of joining, and later membership in, the EU that was causally important, the experience of the Baltic states would follow that of Eastern Europe, not the rest of the FSU, as they were clearly headed for EU candidate and membership status early in the post-Soviet era. The data presented, however, are unable to adjudicate as to whether it is a more cultural Leninist legacy of the kind theorized by Jowitt or the institutional legacy of choices made during, at the end of, and after the communist period as forwarded by Kitschelt and others. Research explicitly designed to test the legacy effects of the Soviet era is called for, and deep temporal causes should not be entirely abandoned in favor of more proximate variables.

The fourth implication to be drawn from this study is with regard to the institutional variable that does not matter. Contrary to expectations, the ENP in a system lacks any systematic effects on the level of electoral volatility. This suggests that those worried about the proliferation of parties need be more concerned with the structure of the electoral system and the executive rather than the simple number of players. Similarly, in both models the effect of democracy on volatility was inconclusive.

The final implication of the model to be discussed is regarding the inconsistent effect of the time variable on electoral volatility between the two models presented. Earlier studies of postcommunist electoral volatility have argued that the development of the party systems over time and the attendant decrease in volatility illustrate a stabilization of party systems (Birch, 2003; Tavits, 2005). The results here suggest a less positive conclusion should be made. Though the mean postcommunist electoral volatility is lower (by 6 points) in the 29 elections that have occurred since 2000, in Model 1 this variable is not significant when controlling for the other potentially mitigating factors listed in Table 1. It should be noted that this linear version of the economic voting hypothesis is the one tested by previous scholars working on postcommunist electoral volatility; it would appear that the electoral results of the elections since 2001 (the bulk of which were not included in these earlier works) have confounded the prior, consistent effect of time on the dependent variable. That time appears statistically significant in the curvilinear version (Model 2) leads one to think that the effect of time is highly sensitive to the choice of independent variables, unlike the institutional and legacy variables discussed above.

This study explores the important phenomenon of electoral volatility, in the important laboratory of the postcommunist states of Eastern Europe and

the FSU, and does so with a more comprehensive set of independent variables and with more observations than previously available. It suggests that, contrary to many previous studies of volatility in the postcommunist world and elsewhere, economic conditions have little consistent effect on electoral volatility. Rather, the critical determinants of volatility are to be found in the institutional arrangements of the electoral system and executive as well as in the lasting differences between Eastern Europe and the FSU. Unfortunately, the key factors that it suggests are associated with higher levels of electoral volatility are also not those that are easily changed. That electoral institutions are sticky, however, does not mean they are immutable—as Russia's recent decision to move from a mixed system to PR illustrates.⁷ This study leads to the conclusion that electoral volatility is not as clear cut as previous studies have suggested and that larger institutional factors are critically important, deserving of further theoretical and empirical study.

Appendix

Data Sources

Electoral volatility: Data for the dependent variables were gathered from Birch (2003), reports from the electoral commissions of the country in question, or the reports of nongovernmental organizations and scholars, such as the Project on Political Transformation and the Electoral Process in Post-Communist Europe (<http://www.essex.ac.uk/elections>). Party name changes were handled in the same process as described by Birch (2003), and seats won by independents were excluded for purposes of measurement.

Growth, inflation, and unemployment: Data for the economic variables were compiled from the World Bank 2006 World Development Indicator dataset and the 2006 transition report of the European Bank for Reconstruction and Development. In the models growth and inflation are weighted for the month of the election, giving the effective growth and inflation levels for the previous 12 months.

Effective number of parties: Determination of the effective number of parliamentary parties was made by looking at election results and employing the formula advocated by Taagepera and Shugart (1989).

Electoral system: The dichotomous variable for type of electoral system was coded by looking at electoral results for each election and verified by reading the reports of the Inter-Parliamentary Union (<http://www.ipu.org>).

Presidential system: The dichotomous variable for presidential states was coded by reading relevant electoral commission publications as well as journalistic and scholarly accounts.

Former Soviet Union: The dichotomous variable for former Soviet Union status was coded based on membership in the former Soviet Union.

Democracy: The variable for democracy was compiled from yearly Freedom House reports.

Time: The variable for time was coded based on the number of elections from the first free and fair elections in the country in question. As the first volatility scores are for the second round of elections, these were coded 2.

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Notes

1. The Pedersen index (Pedersen, 1983) is the conventional measure of electoral volatility. It aggregates the change in the share of votes or seats obtained by each party between each election, dividing by 2 to produce a number on a 0-100 scale. All measures of the postcommunist states are modified Pedersen scores. For further details, see the appendix.
2. Although early studies of electoral volatility in Western Europe focused on structural explanations, where long-standing and slowly developed social cleavages such as class and religion (and later, ethnicity) were viewed as causal factors in the relative stability of European party systems (Lipset & Rokkan, 1967), these explanations are much less relevant for explaining postcommunist electoral volatility, and are not included here. There is little consensus as to the role of social

cleavages in the development of postcommunist parties specifically, or in postcommunist social interaction generally, with some scholars arguing that the communist era eradicated social differences, whereas others contend that continuities with the precommunist era are more prevalent than expected (for a review of this issue, see Whitefield, 2002). Evans (2006) and Wittenberg (2006) have both shown that certain social cleavages (especially the role of the Catholic church for the latter author) have remained highly salient, yet also that these cleavages do not operate consistently across the postcommunist space, making their inclusion in cross-national work highly problematic.

3. The original 0-200 score is a result of the summation of gains *and* losses among parties, such that an election in which a party that had 90 of 100 seats lost all to a sole opposition party with 10, we would see a raw score of 180-190 each for the gain and the loss. Dividing this score by 2 is done simply for conceptual ease.
4. It should be noted that in a system with fully continuous parties at t and $t - 1$, the denominator is in fact simply 2 and as such is identical to the score derived from a traditional Pedersen index. However, when new parties are entering and exiting, this equation provides for a measure of volatility that is uncontaminated by the analytically distinct phenomenon of party replacement.
5. Employing Freedom House scores also allows for an easy and unbiased method of case selection; only states that were scored "free" or "partially free" were included, since elections in states that are "not free" should be qualitatively different and volatility should be an entirely different phenomenon.
6. It should be noted, however, that employing a variable for the number of years since the collapse of state socialism has a minimal effect on the coefficients or standard errors of the two models. The sole difference is that the p value for the presidential system dummy variable is below .10 (but not .05) in each model.
7. Unfortunately, at the same time Russia fell from a Freedom House rating of "partially free" to "not free," which would remove it as a potential future observation in this study design.

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