

Transitional Economic Voting: Russia, Poland, Hungary, Slovakia, and the Czech Republic, 1990-1999

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This is a working paper I prepared while writing my book [*Regional Economic Voting: Russia, Poland, Hungary, Slovakia, and the Czech Republic*](#) that highlighted one of the principal arguments and findings of the book. It is a useful way to get a quick sense of the arguments in the book, but it does **not** contain the final versions of the results that are presented in the book, nor does it go into nearly the level of detail on either the theory or the methodology as the book does. For this reason, the paper is no longer available for citation -- anyone wishing to cite findings in the paper should refer to the book instead for the final versions of these analyses and cite the book (Tucker 2006). I am leaving the paper on my website, however, for those who would like a quick overview of one of the main argument and findings of the book.

A previous version of this paper was presented at the 2004 Annual Meeting of the American Association for the Advancement of Slavic Studies, Boston, MA., the 2004 Annual Meeting of the Mid-West Political Science Association, Chicago, IL, and the 2004 Conference of Europeanists, Chicago, IL. I am very appreciative of comments and suggestions made during presentations of an earlier version of the paper at the National Election Study Workshop at the University of Michigan, the New York University Department of Politics, and Princeton University's Center for the Study of Democratic Politics. All statistical analysis was conducted using *Stata* and *Clarify* software packages.

ABSTRACT

This is a working paper I prepared while writing my book [*Regional Economic Voting: Russia, Poland, Hungary, Slovakia, and the Czech Republic*](#) that highlighted one of the principal arguments and findings of the book. It is a useful way to get a quick sense of the arguments in the book, but it does **not** contain the final versions of the results that are presented in the book, nor does it go into nearly the level of detail on either the theory or the methodology as the book does. For this reason, the paper is no longer available for citation -- anyone wishing to cite findings in the paper should refer to the book instead for the final versions of these analyses and cite the book (Tucker 2006). I am leaving the paper on my website, however, for those who would like a quick overview one of the main argument and findings of the book.

In the paper, I present two models for predicting the effect of cross-regional variation of economic conditions on cross-regional variation in election results in post-communist countries. The Referendum Model predicts that *Incumbent* parties will perform better in areas of the country with better economic conditions, while the Transition Model predicts that *New Regime* parties will perform better in areas of the country where the economy is stronger and *Old Regime* parties will perform better where the economy is weaker. Using an original data set of regional level economic, demographic, and electoral variables, I demonstrate that across 20 national presidential and parliamentary elections from Russia, Poland, Hungary, Slovakia and the Czech Republic, there is substantially stronger empirical support for the Transition Model. Moreover, the effect of the economy on Incumbent parties is largely conditional on their status as New Regime parties, Old Regime parties, or neither type of party.

INTRODUCTION

Since the collapse of communism in the former Soviet Union and Eastern Europe, the field of post-communist studies has found itself at an important juncture. On the one hand, the field has a long tradition of analysis based on the intricacies of the communist experience, one that placed it outside the bounds of most avenues of research in mainstream political science. On the other hand, many of the fundamental political realities of societies undergoing nascent democratic transitions – some succeeding and some failing – are anything but unique. Indeed, mainstream political science has much to say about democratic transitions and, ultimately, political behavior in a democratic society. Thus one of the overriding questions the field must answer is how to draw on the vast reservoir of outstanding scholarship from mainstream political science without losing sight of the peculiarities of what is now the *post*-communist experience.

One field that is clearly ripe for making a contribution to a wider audience is the study of economic voting in post-communist countries. To date, though, most analyses have examined only a single election (Gibson and Cielecka 1995; Colton 1996; Mason and Sidorenko-Stephenson 1997; Powers and Cox 1997) or a single country (Wade, Groth and Lavelle 1994; Bell 1997).¹ As a result, they generally focus on the question, “How has the economy affected the vote for the parties that contested this particular election?” This is not to say that the authors do not have *a priori* expectations, but they are by and large couched in the particular circumstances of that country and tend to remain more implicit than explicit (although see Powers and Cox 1997). Although one can certainly find similarities in these expectations across articles, the authors are less concerned with the generalizable implications of their findings than

¹ Although see Pacek 1994; Fidrmuc 2000a, 2000b; Harper 2000; Tucker 2000, 2001; Duch 2002 for more comparative analyses. Even from this list, though, only Fidrmuc (2000a, b) and Tucker (2000, 2001) analyze more than four elections.

with what has been learned about the effect of the economy on that particular election. The same holds for the role of the economy in other general studies of voting in post-communist countries.

In this paper, I move beyond country-specific approaches to understanding the effect of economic conditions on election results by searching for broader, more general models that can be applied in any post-communist country. Moreover, I take the additional step of directly linking the models I propose to the existing literature on the effects of economic conditions on election results in established democracies, while at the same time modifying them to take account of the realities of the post-communist context. In doing so, the goal is to make a theoretical contribution to both our understanding of the interaction between economic factors and electoral outcomes in post-communist countries and the general economic voting literature.

More specifically, two theoretical frameworks for hypothesizing about the effect of economic conditions on election results in post-communist countries that are directly tied to both the existing mainstream literature as well as the realities of the post-communist experience are proposed. The *Referendum Model* is similar to the main strand of the economic voting literature in proposing that incumbent parties should perform better in parts of the country where economic conditions are stronger. The *Transition Model*, however, takes its cue from a secondary strand of the existing literature and suggests instead that economic conditions affect a party's electoral fortunes based on the party's relationship to the transition: *Old Regime* parties are expected to enjoy more electoral success in parts of the country where economic conditions are worse while *New Regime* parties should do better in parts of the country where economic conditions are stronger.

In an effort to provide a systematic test of these claims, I employ a broadly comparative framework in this paper that takes two forms. First, the paper examines elections results from

twenty separate presidential and parliamentary elections that took place that took place between 1990 and 1999 in Russia, Poland, Hungary, Slovakia, and the Czech Republic. Thus none of the patterns identified can be said to be a product of a particular set of circumstances peculiar to a given country at a given time, or even in a given country over time. Second, the study looks for concentrations of economic winners and losers and their effects on election results not at the national level – which would have yielded but one observation of economic conditions and election results per election – but rather at the regional level. In this manner, I am able to examine on a party by party basis whether or not individual parties that contested all twenty of the elections performed better in areas of the country where economic conditions were better or where economic condition were worse. At the same time, I employ a method of analysis that allows for comparison of these party by party results with one another, allowing me to search for patterns of support across the entire set of cases contained in the study. Empirical tests are conducted on an original database containing regional level macro-economic data and election results from twenty national parliamentary and presidential elections, making this the one of the most thorough study of economic voting in post-communist countries to date, as well as the only comparative study to include both Russian and Eastern European cases. Moreover, in expanding the study of economic voting to the regional level, this paper joins a small but growing number of papers in illustrating another level of analysis at which we can observe the effect of economic conditions on election results.²

The result of the empirical analysis is greater support for the predictions of the Transition Model than the Referendum Model. The Transition Model also has a significantly wider scope,

² Moving the study to the regional level of analysis also allows us to greatly increase the amount of data that we can bring to bear on the topic; at the same time, though, it is important to note that because this study takes place at a different level analysis, the results should be seen as supplementing as opposed to testing findings from others levels of analysis. For much more on the method of analysis, including its benefits and drawbacks, see Tucker 2004, ch. 3.

allowing us to make predictions about a wider range of cases. Moreover, the effect of the economy on Incumbent parties is largely conditional on their status as New Regime parties, Old Regime parties, or neither type of party.

The rest of this paper proceeds as follows. In the next section, I introduce the Transition Model and the Referendum Model and outline the underlying theoretical arguments for both. After a short section touching on methodological considerations, the results of empirical tests conducted across all twenty elections are presented. This is followed by a more focused examination of the results from two particularly informative elections, the 1997 Polish and 1998 Hungarian parliamentary elections. The paper concludes with a discussion of the implications of these findings.

POST-COMMUNIST MODELS OF ECONOMIC CONDITIONS AND ELECTION RESULTS

In this section, I introduce two models that allow us to make predictions about the effect of economic conditions on election results in post-communist countries. The models are designed with intent of grounding the study of voting in post-communist countries in the existing literature on economic voting. The reader will note that all of the hypotheses developed below refer to aggregate-level relationships between economic conditions and election results, as opposed to micro-level models of individual vote decisions.³ As such, it is important to note that I am not directly testing micro-level propositions about individual behavior, but rather relationships between aggregate-level indicators. The hypotheses were designed, however, to be consistent with micro-level propositions about the individual behavior of voters, as will be explained in detail below.

³ I chose to rely upon aggregate data because it facilitates more seamless comparisons across multiple countries and time periods; reliance on survey data would either introduce problems with comparing results across different surveys in different languages or would greatly reduce the number of elections analyzed.

A Referendum Model

Setting aside the peculiarities of the post-communist world for a moment, consider an electoral environment in which voters possessed no information about how parties were likely to behave *vis a vis* the economy once elected to office. Although such a claim may seem far fetched, there are numerous reasons why voters could have no information in this regard: the election could be contested by parties that had never held office before, either because the election is taking place in a new democracy or following a major shake up of the party system in a more established democracy; voters could lack the will or the ability to make judgments about the relationship between a victory for certain parties and the likely effect on economic conditions; or there could be so much uncertainty about current economic situation that even the most informed citizens would be hard pressed to predict future economic developments.⁴

Even in such a low information environment, though, we would expect voters to be aware of the parties that make up the government. And in the absence of information about differences between the political parties contesting the election, the only way we could expect the economy to have an effect on election results would be through the vote for or against incumbent parties. To generate this prediction, we need to make two additional assumptions, neither of which ought to be particularly controversial. First, we assume that people concerned with the state of the economy are more likely to want to vote the government out of office than people who think the economy is performing well. Note that this assumption is different from a retrospective evaluation of government performance or competence based on evaluating the impact of the current government on economic conditions during its tenure in office (a point that I return to in

⁴ See Aidt 2000 for a theoretical argument concerning the question of whether we ought to expect citizens in established democracies to expend effort to acquire enough information about the state of the economy to judge the competence of the government.

more detail later in this section). Instead, it simply proposes that the more dissatisfied an individual is with the state of the economy, the more likely he or she will be to choose to cast a vote for a party that is not currently in power. Similarly, the more satisfied an individual is with the state of the economy, the more likely he or she will be to cast a vote in favor of an incumbent party as opposed to an unknown “other” option.⁵

The second assumption is that the worse economic conditions are in a particular area of the country, the more likely we should be to find more people dissatisfied with the state of the economy in that area. This affect can work both directly and indirectly. Consider unemployment as an example. If I have lost my job and can not find work, then I am likely to think that the economy is performing poorly. The higher the unemployment rate, the more people there are who are likely to be unemployed and share these beliefs. Thus the higher the unemployment rate, the more people there are who are likely to be dissatisfied with the state of the economy because they are out of work. However, the effect also works indirectly. Even if I am not unemployed, higher unemployment rates may mean that more people I know are unemployed. I may also see more unemployed people loitering on the streets, and I may be more afraid that I will become unemployed.⁶ All of these factors could lead me to the same conclusion as someone who is unemployed: the economy is not performing well. Now it is doubtful that everyone who is employed will feel this way, and perhaps it is just a small minority that will

⁵ Note that these are probabilistic and not deterministic statements. So the claim is not that all people dissatisfied with the economy will choose to vote against incumbent parties, but only that people dissatisfied with the economy will be more likely to do so than people who are satisfied with the state of the economy.

⁶ Indeed, Paldam and Nannestad 2000 argue that for every person who is unemployed, an estimated 100-300 people will know that person and “will notice and be concerned”. And their estimate does not even include the people who don’t know the unemployed directly but notice their presence. They also find a strong degree of knowledge about the issue of unemployment throughout the population. See Paldam and Nannestad 2000, 371-3.

come to this conclusion. Nevertheless, the higher the unemployment rate, the more people we are likely to find sharing this belief.⁷

With these assumptions in hand, the following aggregate level prediction falls out nicely. In areas of the country where economic conditions are stronger, incumbent parties should enjoy more electoral success than in areas of the country where economic conditions are weaker. This holds because we expect worse economic conditions to lead to a greater concentration of voters dissatisfied with the state of the economy and consequently fewer voters inclined to support incumbent parties than in areas of the country where economic conditions are better. Where the economy is better, we expect to find more voters who are likely to be satisfied with the state of the economy and thus more voters likely to support the incumbent parties.⁸

The same aggregate level hypothesis can also be arrived at if it is believed that voters use a two-step process in making their vote choice whereby they first decide whether or not to support an incumbent party and only then make the decision of which opposition party to support (if the decision is not to support an incumbent party). If this is the case, then regardless of the level of information voters possess about political parties, voters who are more satisfied with the

⁷ It is important to note that this argument sets aside the debate about whether citizens actually perceive economic conditions correctly. A number of scholars have noted variation in the perception of similar economic circumstances across different voters – see for example Goidel and Langley 1994; Holbrook and Garand 1996; Duch 2000 – although in the Danish (Paldam and Nannestad 2000) and British cases (Sanders 2000), authors have found that perceptions of the economy at the micro level actually match well to conditions at the macro-level. In some ways, though, the cross-regional approach insulates the analysis from these kinds of concerns. Even if there are systematic misperceptions by voters of the state of the economy, as long as these misperceptions are randomly distributed across geographic regions the analysis should not be affected even if, as Hetherington 1996 found in the United States, perceptions are more important in affecting vote choice than actual macro-economic conditions. We should still expect more voters to have a negative perception of the state of the economy in areas of the country where actual economic conditions are worse than in areas of the country where economic conditions are better even if the assessment of the economy does not map perfectly from actual conditions to perceptions.

⁸ It is important to note that this is *not* a relative deprivation argument. Voters are not posited to be voting against the government because they perceive that their region is being treated poorly in comparison to other regions. Instead, the logic is that in the absence of information about different parties, voters who are more concerned about the state of the economy will be more likely to want to see a change in the government than voters who are less concerned about the state of the economy, and, on the aggregate-level, there should be more voters concerned about the state of the economy in areas of the country where economic conditions are worse.

state of the economy should still be more likely to support incumbent parties than voters who are dissatisfied with the state of the economy, and, consequently, based on the same assumptions described above, that incumbent parties should perform better in areas of the country where economic conditions are stronger than in areas where economic conditions are weaker. This interpretation also presumes that voters will focus first and foremost on whether to punish or reward the incumbent party for the current state of the economy irrespective of their level of information or beliefs about alternative vote choices. And even if their preference for some alternatives are greater than others, there should still be a pattern of more support for incumbent parties in areas of the country where economic conditions are better and less support where they are worse.

While this particular formulation of the voting choice process stands in marked contrast to traditional spatial models of voting,⁹ the logic is not that far off from the theories underlining most cross-national models of the effect of economic national election results, which inevitably focus on the vote for incumbent parties independent of the options presented by other parties.¹⁰ Moreover, the idea of voters first making up their minds about whether or not to vote for incumbent parties is attractive in the transitional context because it emphasizes the only concrete information voters have: the knowledge of which parties are currently incumbents. If voters have beliefs about what other parties are likely to do when they are in office but are at all uncertain about these beliefs, one could imagine that voters who are pleased with the state of the economy might not want to take the risk of being wrong about economic effects of electing a different party to office. Conversely, voters who are unhappy about the state of the economy might be much more willing to risk replacing the current governing parties with other parties,

⁹ See in particular Downs 1957.

¹⁰ Although see Anderson 2000 for an example of a cross-national study that considers the availability of alternative options.

even if they run the risk of being wrong about their assessment of these other parties. While such a calculus is not necessarily peculiar to transition countries, the levels of uncertainty that force voters to fall back on a yes/no assessment of the incumbent parties are probably more likely to be found in transitional countries than in established democracies.

Before turning to an alternate set of hypotheses, I want to emphasize that although the hypothesis looks very similar to standard economic voting hypotheses insofar as it predicts that better economic conditions will lead to more votes for incumbent parties, the argument is theoretically distinct from the standard retrospective economic voting models. The argument presented above is *not* one in which voters use changes in the economy since the previous government took office as a way to measure the competence of the existing government, but rather one in which uncertainty about parties and policy-making leads economically satisfied citizens to be more likely than economically dissatisfied citizens to want the current government to remain in office. Thus the prediction is that incumbent parties ought to enjoy greater electoral success in areas of the country where the economy is stronger, as opposed to hypotheses that focus on either changes in vote totals or in economic conditions since the previous election. .

At the same time, it is also useful to note the similarities between the Incumbency Hypothesis proposed above and arguments common to the economic voting literature. Although the focus here is not on using economic conditions to assess the competence of the current government, both approaches do rely on the basic argument that dissatisfaction with economic conditions can lead voters to be more likely to want to “throw the bums out”. At the end of the day, both approaches suggest that the worse economic conditions are, the less likely Incumbent parties are be favored by voters. Furthermore, in some ways such an approach is a direct descendent of what Fiorina calls the “pure” retrospective approach of V.O. Key, based on

“retrospective voters – unaffected by party ties, ideologies, and future issue expectations – who regard elections as referenda on the state of the country”.¹¹ If ever there was an opportunity to locate such pure retrospective voters, it would seem to be in the uncertain environment of post-communist elections.

As the Incumbency Hypothesis suggests the economic conditions affect election results solely by increasing or decreasing the likelihood that voters will support Incumbent parties, the model has the feel of a referendum on the current government. For this reason, I have labeled this approach the Referendum Model. The obvious shortcoming of the Referendum Model is that it offers analysts no leverage over the question of where voters who are dissatisfied with Incumbent parties are likely to turn in casting their vote. This is not a large concern in the context of a two party system, where a vote against the incumbent by definition means a vote for the opposition party. As the number of parties contesting an election increases, however, models that make predictions solely based on incumbency status are likely to suffer from an increasingly narrow scope and an inability to comment on the relationship between economic conditions and the vote for large number of parties. So the next question to consider is how to motivate a model of the effect of economic conditions on election results that can move beyond this limitation.

A Transition Model

Although most studies of economic voting tend to concentrate on how economic conditions affect the vote for incumbent parties, there is another strand of the literature. This second strand makes predictions about the effect of economic conditions on the vote for parties based on their partisan alignment (Lewis-Beck and Bellucci 1982; Kiewiet 1983; Bellucci 1984; Host and Paldam 1990; Powell and Whitten 1993). The basic thrust of the argument is that

¹¹ See Fiorina 1981, 36.

certain economic conditions – generally higher unemployment – are likely to increase the vote for left wing parties, while other economic conditions – generally higher inflation – are likely to increase the vote right wing parties. The logic underlying the argument is that voters are concerned with specific economic problems and have a belief about which parties would be better suited to solving those particular problems. In the context of the advanced industrialized democracies, it is generally assumed that right wing parties are more likely to favor control of inflation at the expense of rising unemployment while left wing parties are the opposite. Thus, an electorate concerned about inflation would be more attracted to right wing parties, while an electorate scarred by unemployment would be more likely to vote for a left-wing government.

Transporting a simple partisan based approach to the post-communist world is problematic because of the pervasive levels of uncertainty in any new democracy (Bunce and Csanadi 1993). It is difficult to apply a simple left-right classification scheme to parties in transition countries, both because it is hard to know where parties stand and because they can often change their positions (Kitschelt 1992; Colton 1998). Moreover, even if analysts could come up with a compelling schema, it would be a stretch to assume that that voters would be able to associate parties of a certain partisan persuasion with specific policies as closely as voters can in established democracies. This is a function of the proliferation of new parties, the presence of new economic realities, and voters' lack of experience in seeing different parties in power. Moreover, due to the enormity of the economic transition from a centrally planned economy to a market economy, it is unlikely that voters would be motivated by concerns over specific economic conditions as opposed to the state of the overall economy.

With these concerns in mind, I make the following two assumptions to craft a model that is based on the partisan approach to economic voting but is appropriate for the post-communist

context. First, I assume that voters are aware of a party's relationship *vis à vis* the transition. More specifically, I assume that voters can identify the parties most closely associated with the prior regime, the *Old Regime* parties, and that voters can identify the parties most closely linked to the newly emerging democratic and capitalist world, the *New Regime* parties.

Old Regime parties are defined as the political party or parties that are directly linked to the party that ruled during the previous non-democratic regime. Two sets of parties fall under this general rubric. The first is the legal successor party to the previous ruling party. The second group includes all splinter parties that have split from the legal successor party in order to remain closer to the ideology of the old ruling party. In the case of post-communist countries, this is an easy distinction to make, as the splinter party would declare that it wants to remain truer to communist principals than the legal successor. The important point is that Old Regime parties are visibly linked to the previous regime, either through the people that make up the party, the ideology it continues to publicly embrace, or its legal obligations.¹²

The primary goal of coding New Regime parties is to arrive at a set of parties that are most likely to appeal to voters primarily through their connection to, association with, and in general support for the transition itself. To identify these parties, I use what amounts to a two step process. The first step is to trace out the descendents of the initial opponents of the existing Communist regime in each of the countries. The second step is to then eliminate any parties that attempt to appeal to voters on grounds that are separate and distinct from the transition. In practice, this primarily means excluding parties that attempt to appeal to voters on the basis of their identity or profession, which excludes religious, ethnic, nationalist, agrarian or trade union

¹² One should also note that "Old Regime" is not synonymous for "leftist". There are examples of dominant leftist parties that are not Old Regime parties, such as the Czech Social Democratic Party, as well as Old Regime parties that have moved closer to the center, such as the Democratic Left Alliance in Poland.

parties from the category of New Regime parties.¹³ The purpose of this is to make the category as “pure” as possible by limiting it to parties whose primary association in the mind of voters is likely to be to the transition away from the Communist political and economic systems, which forms the basis for the logic underlying the New Regime hypothesis. While the coding rules are certainly subjective to a certain extent, the list of New Regime parties that can be found below in Table 1 is one that I believe most scholars would agree seems to be the correct list.¹⁴

Knowledge of whether a party is an Old Regime party, New Regime party, or neither is all that is required of voters in this model.¹⁵ They are not required to have knowledge of the specifics of parties’ economic platforms, the likelihood of the parties keeping promises regarding these platforms, or the ability of parties to implement such policies if elected. They are only required to be able to identify the parties most closely connected to the transition.

The second assumption of the model is that, instead of assuming that voters are guided by concerns with specific economic problems, we assume that they have general concerns about the economy; they react to it either being “bad” or “good”. As both assumptions are motivated by the presence of simultaneous economic and political transitions, we refer to this model as the *Transition Model*. The Transition Model therefore produces two hypotheses. The *New Regime Hypothesis* predicts that New Regime parties will do better where economic conditions are better, and worse where economic conditions are worse. Conversely, the *Old Regime Hypothesis* predicts that Old Regime parties will benefit where economic conditions are worse, and will do worse where economic conditions are better.

¹³ One could argue that agrarian parties appeal to voters on the basis of interest as opposed to identity in the more classic sense of the word. Nevertheless, agrarian parties clearly target a specific sub-section of the population based on what they do and where they live, and as such possess the same special appeal to particular citizens as, for example, an ethnic party has for members of that particular ethnic group.

¹⁴ By definition, Old Regime parties can not become New Regime parties; the two categories are mutually exclusive.

¹⁵ Readers are invited to see Tucker 2004, which goes in to many of these coding decisions in great detail.

Both predictions stem from a conception of the transition as representing a sharp break from the past, complete with new opportunities and dangers. The New Regime Hypothesis is based on a fairly straightforward logic. Voters who are enjoying more benefits from economic reforms and have avoided more of the pain from economic reforms are likely to want the reforms to continue. Irrespective of who is currently in power, there is a good chance that voters will think that New Regime parties are likely to continue pursuing policies that ensure the transition to a full fledged market economy. As we should find more voters who are enjoying the benefits of the transition where the economy is performing better, we expect New Regime parties to likewise perform better where the economy is stronger.

The logic underlying the Old Regime Hypothesis is a bit subtler. If a voter has not benefited from reform – has not enjoyed the new prosperity and is suffering greater pain – then she is likely to want to stay away from parties that are associated with reform for the same reason described in the preceding paragraphs. Having eliminated New Regime parties as an option, however, the voter still has many other parties to choose between in casting her vote. While she may not have much information about most of those parties, she does know something about the Old Regime parties. When they were in power, there were none of the new problems associated with the reforms, such as unemployment, inflation, and non-payment of wages. Thus if the voter is particularly concerned about these problems, then she knows at least one type of party that in the past – at least on the surface – dealt with these problems successfully. Even if a return to the past is not desired, the voter still is likely to have more confidence in the Old Regime parties to address these issues than any of the other non-New Regime parties. And the worse the economic conditions are, the more likely she is to act on these concerns when she casts her ballot. By no means should we expect everyone to select Old Regime parties if they are unhappy with the

current path of reforms, but in the aggregate, it is likely that more people should decide to vote for Old Regime parties when economic conditions are worse. Likewise, if a voter were enjoying more of the benefits from the new economy, then she would be less motivated to turn to an Old Regime party. Thus we arrive at the Old Regime Hypothesis, which predicts greater success for Old Regime parties when economic conditions are poor and less when they are strong.¹⁶

DATA AND METHODS: ANALYZING 20 POST-COMMUNIST ELECTIONS

In this article, twenty national elections from the Czech Republic, Hungary, Poland, Russia, and Slovakia are analyzed. These five countries were chosen for a number of reasons. First, all five of the countries have enjoyed relatively free and fair elections.¹⁷ Second, all embarked on some type of economic reform program. Although the reforms have differed in term of pace, scope, and results, it is clear that all five countries now have substantially different economies as compared to communist era. Third, the sample also includes elections from both the former Soviet Union and East Central Europe, as well as both presidential and parliamentary elections, in order to make as strong a case as possible for generalizability of the findings. In particular, including parliamentary and presidential elections allows us to include both the vote for individuals (in presidential elections) and parties (in parliamentary elections) in the analysis. A final consideration is that all five countries report disaggregated election results and economic conditions using the same sub-national units, thus facilitating the construction of the data base.

¹⁶ The Referendum and Transition Models should not be confused with the debate between retrospective and prospective voting (Fiorina 1981; Kiewiet 1983; Kiewiet and Rivers 1985; MacKuen, Erikson and Stimson 1992). Both models could be consistent with either retrospective or prospective approaches. Although the Referendum Model is clearly based on past performance, a voter may be acting out of concern for the future in trying to keep the incumbent parties out of power. Likewise, although the Transition Model is predicated on choosing preferred parties for the future, the expectation of what these parties may or may not do is taken from the past.

¹⁷ Russia is the one exception, with questions persisting about the 1993 parliamentary elections. Nevertheless, despite the likely presence of some fraud, it is doubtful that the overall outcomes were affected greatly. See McFaul 1996; Myagkov, Ordeshook and Sobyenin 1997; White, Rose and McAllister 1997. Moreover, eliminating this election from the analysis has no effect on the overall conclusions.

Included in the study are all elections for national office – parliamentary and presidential – that took place in each of these countries between 1990 and 1999. This excludes initial parliamentary elections that were contested largely between two forces, the communists and a broad anti-communist umbrella coalition; these elections also often included restrictions on participation and competition for certain seats. Thus the study begins with the first true multi-party parliamentary elections that occur in each of the countries, in addition to all directly contested presidential elections. For two-round presidential elections, results from the first round are analyzed; for mixed legislative electoral systems (Hungary and Russia) results from the party list proportional representation vote are analyzed. Table 1 lists the elections included in the study and the coding of the candidates/parties (which, for the sake of simplicity, we will refer to simply as parties for the remainder of the article) for each election.¹⁸

– INSERT TABLE 1 ABOUT HERE –

To test the three hypotheses, we need to estimate the effect of economic conditions on the electoral fortunes of each of the eighty-eight parties included in the study. To generate these estimates, an original data base of regional-level electoral, economic, and demographic data is utilized.¹⁹ More specifically, for each party listed in Table 1, the effect of economic conditions on that party's election results is estimated using the share of the vote received by the party as the dependent variable, measures of macro-economic conditions as independent variables, and

¹⁸ In article of this length, it is clearly not possible to detail every coding decision. For this reason, a separate web based appendix justifying all of the coding decisions will be made available to readers upon request and will be posted on the web. Please note, though, that no parties with fewer than 2% of the national vote were included in the analysis except in the one instance of an incumbent party (the AZR in the 1998 Slovak presidential election) that failed to secure 2% of the vote in the election following its time in office. The reader should also note that the existence of two incumbents in the 1991 Russian presidential election was due to the unique circumstance whereby two candidates ran representing the more reformist (Bakatin) and hard line (Ryzhkov) wing of the ruling Communist Party of the Soviet Union (White et. at. 1997).

¹⁹ The number of regions per country is Hungary (20), Slovakia (38), Poland (49), Czech Republic (76), and Russia (79). While it would be desirable to have as many observations as possible, the extent of disaggregation of the voting data is limited by the availability of commensurate economic data.

demographic indicators as control variables, thus resulting in 88 separate analyses (one for each of the parties). It is important to note that although regional-level data is used in the analysis – e.g., the amount of the vote received by Party A in Region 1 – these are all results from *national* elections disaggregated to the regional level.

In order to control for any socio-demographic patterns of party support, a constant set of control variables are included in each regression: the percentage of workers that work in industry; the percentage of workers that work in agriculture; the percentage of the population living in urban areas; the percentage of older citizens in a region, and the log of the population of the region.²⁰ While these variables may not capture every socio-demographic basis for party support, they do touch on most of the larger themes in the literature, including rural-urban splits, agricultural and industrial labor patterns, and center-periphery distinctions. They also capture features that have been highlighted as being important for nascent post-communist cleavages, including the propensity of older voters to support communist successor parties and urban voters to prefer more liberal parties. The key point to note is that by including these control variables, all economic effects identified by the statistical analysis should be interpreted as being independent of any of these underlying socio-demographic explanations for party support.

Traditional analyses of the effects of economic conditions on election results in established democracies have usually relied on measures of changes in income or economic growth. In the post-communist context, however, unemployment and inflation have been arguably the most drastic economic developments and the ones to which we might think voters

²⁰ Following convention, population is logged to account for the extreme outliers of major cities. Please note as well that the proportion of non-ethnic Slovaks is also included as a controlling variable in the Slovak election due to the presence of a Hungarian minority party that captured close to 10% of the vote in these elections. Earlier robustness tests had suggested that not including this control variable made the results less stable, although more recent tests have not seen this pattern repeated. Nevertheless, including the control variable seemed prudent just in case. Including similar control variables in other countries had no effect on any of the results.

would be most likely to respond. In an ideal world, therefore, we would include all four of these variables in any economic voting analysis.

Inflation, however, does not lend itself to a cross-regional study, as the most substantial variation in inflation is usually over time as opposed to cross-regional within a single country in a single time period. Moreover, it is very difficult to find inflation figures disaggregated to the regional level; indeed, I could only locate such data for 4 of the 20 elections included in the study. For these reasons, I use change in wages, growth, and unemployment as the three base economic variables in every regression analysis.²¹

In addition to these three variables, I also relied on three other economic variables that were intended to capture additional indicators of transitional economic success (or failure): foreign direct investment; foreign trade; and the non-payment of wages (or wage arrears).²² As with inflation, I was only able to find data on these variables for some of my cases, therefore they are included whenever they are available. As my rule for whether or not to include these supplemental variables – whether or not the country reported the data at the regional level – should not in any way be correlated with likelihood of economic conditions effecting the vote for incumbents, New Regime, or Old Regime parties, including these extra variables when available should not bias my findings. But in order to alleviate any doubts, I also reran all of the analyses using only the three base variables that were available for every elections and, as will be discussed later in this paper, found practically the exact same overall results. It is also instructive to recall that the hypotheses that are being tested with this data do not make specific predictions about the effect of individual variables, but rather about areas of the country that are enjoying

²¹ The one exception is the 1991 Russian presidential election, for which I was unable to locate any unemployment data. It is also impossible to find GDP growth disaggregated at the regional level early in the decade. For this reason, GDP growth is used when available; when it is not available, industrial growth is used instead. In no case is industrial growth used when GDP growth is available.

²² Wage arrears were a seriously problem in Russia, although not in any of the East Central European cases.

more or less economic success. Therefore any variables that can help touch upon how “good” the economy is doing in a region should be useful for such an analysis.

The actual regression analyses are conducted using a model appropriate for multi-party data (Tomz, Tucker and Wittenberg 2002). Details of the model can be found in Appendix II, but the basic idea is that it is designed to take account of the fact that aggregate electoral data is compositional: all vote proportions are bounded between 0 and 1, and the sum of all vote proportions must equal 1. It is primarily distinguished from OLS in that the dependent variable is modeled as the log of the ratio of the vote for the party in question relative to a base category (the vote for one or more of the other parties) and that all of the equations for any given election are estimated simultaneously using a *seemingly unrelated regression* (SUR) model.

EMPIRICAL RESULTS

Although space prohibits reporting the regression results for all twenty elections, consider as an example the 1996 Czech Parliamentary elections.²³ Two parties that competed in the election are coded as both Incumbent and New Regime parties, the Civic Democratic Party (ODS), and the Civic Democratic Alliance (ODA). There is one additional incumbent party, the Christian Democratic Union (KDU), and one Old Regime party, the Communist Party of Bohemia and Moravia (KSCM). Table 2 presents the results of regressing the vote for each of these parties on our base economic variables (unemployment, change in income, and growth) and our five demographic control variables (the percentage of the population employed in

²³ The full set of regression results are available upon request and will be included as a web-based appendix with future versions of the paper.

agriculture, the percentage employed in industry, the percentage of elderly citizens, the percentage of the population living in urban areas, and the population of the region).

-- INSERT TABLE 2 ABOUT HERE --

These regression results as presented in Table 2 can tell us something interesting about the effect of the economy on these four parties. But it is unclear how useful they are for the larger task of assessing whether or not each case provides support for the hypotheses we are testing, or how we would compare these results with those found from another election. This would be a difficult enough task if we employed a model such as OLS, whereby we would have one intuitively logical set of coefficients and standard errors for each of the 88 parties being analyzed. But as the multi-party election model described above is dependent on a one party (or group of parties) functioning as a base category, regression analysis will produce a different set of coefficients and standard errors depending on which of the parties are included as the base party in exactly the same way as a multi-nomial logit analysis. Thus the correct way to interpret the coefficient for unemployment on the ODS in Table 2 is not as the effect of unemployment on the vote for the ODS, but rather as the effect of unemployment on the vote for the ODS relative to the composite “other” category (the vote for all parties besides the ODS, ODA, KDU, and KSCM; see Appendix II for details).

Therefore, if we choose to rely on the coefficients and standard errors of economic variables for assessing the empirical support for our hypotheses, we would actually need to rotate through every party except one as the base party in turn in order to get a complete set of coefficients and standard errors.²⁴ And with an average of four economic variables per analysis

²⁴ We would not need to rotate every party through because we can calculate the final party from the other regressions, as a pairs of parties (one in the regression, one in the base) will also produce the exact opposite coefficients with the same standard errors by mathematical definition.

and four and a half parties per election over twenty elections, we would end up comparing close to 2000 coefficients and standard errors in an effort to make our overall assessments of the empirical support of the different hypotheses. Moreover, with a log-transformed dependent variable, none of these coefficients would have any real intuitive meaning. Thus in order to analyze the our hypotheses comparatively, we need a much more compact estimate of the effect of economic conditions on the election results for each party that can be compared across cases.

An appropriate measure to use in this case is a first difference that calculates the change in the predicted share of the vote for each party when demographic variables are held constant and economic conditions are varied to simulate a standardized shift from a “bad” economic situation to a “good” economic situation. To do this in practice, I calculate two estimates for the expected vote of the party in question: one with economic variables at their 10th percentile level and another with economic variables at their 90th percentile level. In both cases demographic variables are set at their means. Negative indicators, such as unemployment, are shifted from the higher value to the lower value, and vice versa for positive indicators, such as change in income.²⁵ When the expected vote in the “bad” economic situation (e.g. high unemployment, low wage growth) is subtracted from the expected vote in the “good” situation (e.g. low unemployment, high wage growth), the result is a single measure of the overall impact of better economic conditions on the vote for that particular party, which is exactly what is needed to analyze the Incumbency, New Regime, and Old Regime hypotheses. Moreover, not only do first differences have the advantage of producing a single, intuitive measure of the effect of economic conditions on the electoral fortunes of the party in question, they are also robust by mathematic definition to which party is included as the base party for the purpose of the regression analysis.

²⁵ For example, if there were 100 regions, we would use the unemployment level from the region with the 10th highest rate in one case and from the 10th lowest rate in the second case.

There is, however, one important shortcoming in comparing first differences for different parties. In moving from a set of betas with standard errors to a single point estimate of a first difference, however, we run the risk of losing information regarding our *uncertainty* in the quantity of interest being reported. Fortunately, this can be avoided by using stochastic simulation to simulate an entire distribution of first differences.²⁶ Such an approach has the added benefit of allowing us to quantify not only our best estimate of the first difference (the mean value of the simulations) but also our level of uncertainty surrounding that estimate (the standard deviation of the simulations). Moreover, we can easily generate confidence intervals surrounding substantively meaningful quantities of interest. For example, in the empirical analysis to follow, the crucial concern is whether we can be confident that the party in question either benefits from better economic conditions (Incumbent and New Regime parties) or is hurt by better economic conditions (Old Regime parties). To assess this claim, we will want to know how confident we are that the first difference is greater than zero (in other words, that better economic conditions increase the expected vote for the party), or, in the case of the Old Regime parties, less than zero. If 90% of the simulated first differences are greater than zero, then we can claim with 90% confidence that the party in question is helped by stronger economic conditions; the same holds in the reverse direction if 90% of the simulated first differences are less than zero. In this manner, calculating estimated probability distributions of first differences allows us to measure *exactly* what we need to test our hypotheses: how confident we should be

²⁶ More technically, we draw 1,000 betas from the sampling distribution of the parameter estimates. From each set of betas, a separate first difference was calculated. The simulations were performed using *Clarify 2.1* (Tomz, Wittenberg and King 2003). For a full treatment of the approach, see King, Tomz and Wittenberg 2000). Moreover, stochastic simulation of first differences also produces unbiased estimates of the first differences regardless of base parties in the same manner as the calculation of first differences without stochastic simulation. While the estimated distribution may vary across repeated runs, all variance will be due to the unbiased variance in the simulation procedure and not to the choice of base party. Put another way, repeatedly running simulations with the same base party will generate no less variation across sets of simulations than running repeatedly running simulations rotating the base party.

that better economic conditions translated into better (or worse) election results for the party in question.

For ease of interpretation, these simulations can be plotted graphically, resulting in an estimated probability distribution of the first difference. Figure 1 plots these estimated distributions for the previous example, the 1996 Czech parliamentary elections.

-- INSERT FIGURE 1 ABOUT HERE --

From Figure 2, we find that this particular election provides clear empirical support for the New Regime and Old Regime hypotheses, and mixed empirical support for the Incumbent Hypothesis. We are very confident that both New Regime parties, the Civic Democratic Party (ODS) and the Civic Democratic Alliance (ODA), do better where economic conditions are better and worse where economic conditions are worse, and that the one Old Regime party, the Communist Party of Bohemia and Moravia (KSCM), does better when economic conditions are worse and worse when economic conditions are better (as approximately 99% of the simulations predicted a *decrease* in the vote for the party as economic conditions improve). The evidence in support of the Incumbent Hypothesis is not quite as strong. As noted above, we are confident that the Incumbent ODA and ODS are helped by better economic condition. The evidence provided by our analysis of the vote for the Christian Democratic Union (KDU), the third incumbent party is very weak. While our best guess at the effect of a positive shift of economic conditions (the mean of the simulations) is positive, almost 40% of the simulations show that the party's fortunes would decline as economic conditions improved. Thus we have very little confidence that this example provides support for the Incumbency Hypothesis.

Comparative Analysis

Rather than display the 84 additional estimated distributions from the other 19 elections and continue to discuss each individually, Table 3 concisely summarizes our level of confidence in all of the empirical evidence for all of the hypotheses.

-- INSERT TABLE 3 ABOUT HERE --

Table 3 displays a count of the number of parties for which we are 90% certain that moving from a bad economy to a good economy produces the type of effect – positive or negative – that the hypotheses predict should be present. As explained above, the percentage of positive first differences is used to measure the level of certainty that the effect is as predicted by the model. Thus for Incumbent and New Regime parties, we are 90% confident that the effect is as predicted if at least 90% of the predicted first differences are positive; for Old Regime parties, the same threshold is achieved if no more than 10% of the predicted first differences are positive. The table also lists the number of cases for which 90% of the simulations are in the opposite direction from what is predicted; these are the cases for which the models appear to be clearly wrong. We identify these cases in the same manner as the cases where there is 90% confidence of the effect, only with the signs reversed.

Table 3 suggests strongly that there is more empirical support for the Transition Model than the Referendum Model. Observe first the Old Regime Hypothesis, where we have strong confidence that the empirical data supports the hypothesis in 72% of the cases (21 out of 29). The empirical support for the New Regime Hypothesis is not quite as strong, but we still have strong confidence that the empirical data supports the hypothesis in almost two-thirds (25 out of 40, or 63%) of the cases. Moreover, for both the New Regime and Old Regime Hypotheses there is only one example of a case where we have strong confidence that the empirical data actually

supports the opposite from what was predicted by the hypothesis.²⁷ By comparison, we only find strong empirical support for the Incumbent Hypothesis in slightly more than 40% (20 out of 49) of the cases. This is a rather startling finding if one stops to consider it. After all, the Incumbent Hypothesis tends to dominate the way most analysts of the politics of economic reform think about elections in transition countries. And yet, we now find that in more than half of the cases for which we have empirical evidence, it is impossible to state with 90% confidence that this relationship does exist. In addition, the evidence suggests that the exact opposite from what the Incumbent Hypothesis predicts occurs with a 90% level of certainty in almost one-sixth (8 out of 49, or 16%) of the cases.

Robustness Tests

-- INSERT TABLE 4 ABOUT HERE --

Moreover, these findings are robust in a number of important ways. Table 4 (above) demonstrates that our conclusion about the superiority of the evidence supporting the two Transition Model hypotheses is in no way dependent upon the choice of our threshold for “strong” confidence in the predicted effect. The evidence from the table is remarkably clear. No matter which of these thresholds were adopted, the conclusion would have been the same: there is more empirical support for the Transition Model than for the Referendum Model. In addition, our ordering of the empirical support for the two Transition Model hypotheses would also have remained the same, as in each case we would have concluded that there was more empirical

²⁷ For the Old Regime Hypothesis, this is a small Russian far-left communist movement, the “Communist Workers of Russia – For the Soviet Union” bloc in the 1995 Russian parliamentary elections. For the New Regime Hypothesis, this is perhaps one of the most difficult coding decisions in the entire dataset, Rudolph Schuster in the 1999 Slovak presidential elections. Schuster is coded as a New Regime candidate due to his being the candidate of choice of the Slovak government that came to power in 1998 and was led by a New Regime Party, the Slovak Democratic Coalition, despite the fact that Schuster’s own party, the Party of Civic Understanding, was not coded as a New Regime party. So Schuster could easily not have been coded as a New Regime candidate, which would have left the New Regime Hypothesis without a single case where there was strong empirical support for a party performing in the opposite as predicted by the hypothesis. For more, see Tucker 2004, ch. 5.

support for Old Regime Hypothesis than the New Regime Hypothesis. The final line of the row of the table – noting the number of cases where at least a majority of the simulations were in the correct direction – is worth noting because this is essentially what we would have come up with had we just calculated first differences and then looked to see whether these first differences were positive or negative without attempting to assess our level of uncertainty. Two observations can be drawn in this regard. First, we still would have come to the same overall conclusion as to the superiority of the Transition Model to the Referendum Model. At the same time, we would have significantly overestimated the degree of empirical support for all the hypotheses, claiming support in quite a number of cases where although our “best guess” would be in the correct direction, there would be so much underlying uncertainty in that guess that claiming it as strong evidence would be unwarranted.²⁸

The overall results also hold up nicely to respecification of the original economic voting models. In an attempt to test the robustness of the findings, I re-analyzed every election in four different ways by: (1) adding an extra explanatory variable to measure poverty (2) moving at least one additional party out of the “other” category and including it as a separate dependent variables (3) changing the size of the economic shock from the 10th to 90th percentile to the 20th to 80th percentile and (4) as mentioned earlier, reducing the number of economic variables to only the three base variables (unemployment, growth, and change in income). As wage arrears were so important in Russia and a non-issue elsewhere, I also re-ran the Russian cases using the base economic variables plus arrears. While each change led to some differences in the results for individual parties, in no case did any of the overall conclusions changes. As demonstrated in Table A1 (found in Appendix III), no matter which of these specifications are used, the overall

²⁸ In a sense, this would be akin to running a regression and looking only at the sign of a coefficient without considering its standard error.

conclusions remain the same: there is much stronger empirical support for the Transition Model than the Referendum Model; we always have the most support for the Old Regime Hypothesis, then the New Regime Hypothesis, and then the Incumbency Hypothesis; and we never have more than half of the cases providing support for the Incumbency Hypothesis.

It is also interesting to note that the findings hold up across intuitively relevant subsections of the dataset.²⁹ Table A2 (also in Appendix III) demonstrates that if I had chosen to include only parliamentary elections, or only East Central European elections, or only parties that had received at least 10% vote, we would still find much stronger support for the Transition Model than the Referendum Model.³⁰

Finally, we can also subject these results to a limited out of sample test. When I originally started this project, I was working with only the 14 elections that took place between 1990-96 due to the fact that the data necessary to analyze the remaining elections were not yet available. I presented these findings in a series of conference papers (e.g., Tucker 1999a; Tucker 1999b), making the same basic overall point that there was more empirical support for the Transition Model than for the Referendum Model. In a sense, then, the final set of 6 elections could be considered an out of sample test for the findings from the original 14 elections. As Table A3 (in Appendix III) demonstrates, examining just the post-1996 elections also leaves one

²⁹ Another interesting finding in this regard is that there is practically no difference in the degree of support for reformed Old Regime parties (e.g., the Democratic Left Alliance in Poland or the Hungarian Socialist Party) than there is for unrepentant Old Regime parties (e.g., the Communist Party of the Russian Federation or the Communist Party of Bohemia and Moravia in the Czech Republic); see Tucker 2004, chapter 6 for details.

³⁰ The other two patterns – finding the most support for the Old Regime Hypothesis and support in fewer than half the cases for the Incumbency Hypothesis hold up for the parliamentary and East Central European subsections of the data. In the case of parties with at least 10% of the vote, however, the New Regime Hypothesis enjoys as much empirical support (73% of the case) as the Old Regime Hypothesis (72% of the cases). We also find empirical support for the Incumbency Hypothesis in just over 50% of the cases (11 out of 21) in this subset of the data, although to get to this level of accuracy requires a great reduction in the scope of the model, with the total number of parties for which the hypothesis makes predictions dropping from 49 to 21.

with the inescapable conclusion that there is more empirical support for the Transition Model than the Referendum Model.³¹

Interacting the Models

As none of the hypotheses are able to make correct predictions in all of the cases, we can perform a final empirical test of each model to assess the degree to which it can help explain the shortcomings of the other model. For example, we can break down Incumbents into New Regime Incumbent parties, Old Regime Incumbent parties, and Other (defined as neither New Regime nor Old Regime) Incumbent parties. If the Transition Model has strong explanatory power, then New Regime–Incumbents should predominate in the group where we are confident that the results are in the correctly predicted direction, as the New Regime Hypothesis predicts the same effect as the Incumbent Hypothesis. By the same logic, Old Regime–Incumbents should make up most of the group where we are confident that the results are in the opposite direction from what was predicted by the model, as the Old Regime Hypothesis predicts the opposite effect of the Incumbent Hypothesis. We can make similar predictions for New Regime parties (expecting that we should find more support for the New Regime Hypothesis amongst New Regime Incumbents than New Regime Opposition parties) and Old Regime parties (expecting that we should find more support for the Old Regime Hypothesis amongst Old Regime Opposition parties than Old Regime Incumbents)

-- INSERT TABLE 5 ABOUT HERE --

Panel 1 of Table 5 demonstrates that the Referendum Model adds very little to our understanding of the shortcomings of the Transition Model. While there is slightly more

³¹ Although beyond the scope of the present paper, it is interesting to note that all three hypotheses generate stronger empirical support from the post-1996 elections. In particular, we now find the strongest empirical support for the New Regime hypothesis, which has strong empirical support in 10 out of 11 cases, with the one exception being the aforementioned example of Rudolph Schuster from the 1999 Slovak presidential election.

empirical support for the New Regime Hypothesis amongst New Regime Incumbent parties than New Regime Opposition parties, which the Incumbency Hypothesis would lead us to expect, there is also slightly more empirical support for the Old Regime Hypothesis amongst Old Regime Incumbent parties than Old Regime Opposition parties, which is not what the Incumbency Hypothesis would lead us to expect. In either case, though, the differences in support are slight.

Conversely, as Panel 2 of Table 5 demonstrates, the Transition Model can account for almost all of the differences found across Incumbent parties. When Incumbents are also New Regime parties, we find strong support for the Incumbency Hypothesis in two-third of the cases (14 out of 21). But when Incumbents are also Old Regime parties, we do not find any support for the Incumbency Hypothesis; indeed, we find strong support for the opposite of what the Incumbency Hypothesis predicts in almost 80% (7 out of 9) of the cases. For Incumbents that are neither Old Regime nor New Regime parties, we find support for the Incumbency Hypothesis in roughly one-third (6 out of 19) of the cases, which is basically half way between the finding for the New Regime Incumbents and the Old Regime Incumbents.

Thus we arrive at a second major empirical finding: the effect of the economy on Incumbent parties is almost completely dependent on their relationship to the transition. For Incumbent parties that are also New Regime parties, we find strong support for the prediction of the Incumbency Hypothesis across a wide number of cases. But for Incumbent Parties that are also Old Regime parties, we find almost no evidence that these parties perform better in parts of the country where the economy is stronger. And Incumbent parties that are neither New Regime nor Old Regime parties perform are effected by economic conditions as expected some of the

time, but not nearly as often as the received wisdom would have had us expect and not nearly as often as Incumbent New Regime parties.

Case Study Analysis

The previous section examined how the models fared compared to one another across all twenty elections. However, another legitimate question to ask is how the models fair against one another within specific elections. In particular, elections that feature Old Regime parties running as the incumbent would lead to contrasting predictions from the Referendum and Transition Models. Two elections of this type are the 1997 Polish and 1998 Hungarian parliamentary elections, both of which involved a communist successor party running for re-election after having ruled in coalition with one other party for almost the entire period of time since the preceding election.

In Poland, the communist successor party was the Democratic Left Alliance (SLD), which had come to power in 1993 and ruled in coalition with the Polish Peasant Party (PSL) for almost the entire period leading up to the 1997 elections. The SLD's primary opposition was the Electoral Action Solidarity (AWS) coalition, a grouping of over 30 right wing parties and movements under the leadership of the Solidarity Trade Union.³² Competing with both the AWS and the SLD was the Union of Freedom (UW), which had been created by a merger in April 1994 of the Democratic Union and the Congress of Liberal Democrats, the two parties which had lead most of Poland's governments from 1989-93 and were most closely associated with Poland's original shock therapy economic reform program. Thus for this election, the SLD is coded as an Old Regime party, AWS and UW as New Regime parties, and SLD and PSL are the incumbent parties.

³² See Szczerbiak 1999, Appendix I, for a list of the parties comprising the movement.

In Hungary, the main communist successor party was the Hungarian Socialist Party (MSzP), which had been in power since 1994 in a coalition with the liberal Alliance of Democrats (SzDSz). The MSzP's primary competition in the election was FIDESZ-Hungarian People's Party. (Fidesz-MPP) was distinguished from the AWS in Poland in two important ways. First, Fidesz-MPP was not a new party. It had run in both the 1990 and 1994 elections as a liberal anti-communist party of young people. Indeed, "Fidesz" was the acronym from the party's original name, the League of Young Democrats (Fiatal Demokraták Szövetsége). Second, Fidesz-MPP did not attempt to consolidate the anti-communist successor vote by forming an electoral coalition, but rather by establishing itself as the premier opposition party. Seemingly stuck between the two was the SzDSz, a liberal party which had entered into coalition with the MSzP and now found itself in the unenviable position of needing to both defend the status quo and present itself as an alternative to the main party responsible for the status quo, its coalition partner the MSzP. The Hungarian Democratic Forum (MDF), another New Regime party that had been the lead coalition member in Hungary's first post-communist government, also competed in the election. Thus for this election, MSzP and SzDSz are coded as incumbents, SzDSz, Fidesz-MPP, and the MDF are coded as New Regime parties, and MSzP is coded as an Old Regime parties; the Workers Party (MP), a hard line communist spin off from MSzP, is also coded as an Old Regime Party. In both cases, the Incumbency and Old Regime Hypotheses present a contradictory prediction for one party: the SLD in Poland and the MSzP in Hungary.

-- INSERT TABLE 6 ABOUT HERE --

Table 6 presents the results of our test of all three hypotheses using the data from these two elections and reflects the general pattern of greater empirical strength for the Transition Model than for the Referendum Model. Most importantly, note that the two Old Regime parties

that are also incumbent parties (the SLD in Poland and the MSzP in Hungary) both fail to provide any support for the Incumbency Hypothesis, but do in fact provide strong support for the Old Regime Hypothesis. Of the two remaining incumbent parties, it is only the New Regime SzDSz that provides strong support for the Incumbency Hypothesis; the analysis of the Polish PSL, which is coded as neither a New Regime nor an Old Regime party, reveals no systematic effect for the economy in either direction, despite its status as an incumbent party. The non-incumbent Old Regime (the MP in Hungary) and New Regime parties (the UW in Poland and the MDF and Fidesz-MPP in Hungary) also all provide empirical support for the Old Regime and New Regime Hypotheses, respectively. Thus even in elections featuring head to head tests between the two models, we find much stronger support for the Transition Model.

CONCLUSIONS AND IMPLICATIONS

The very idea of democracy is dependent to a certain extent on voters using elections to enforce some sort of control upon their elected representatives. Both the Referendum Model and the Transition Model are based on the idea that voters are attempting to do that, albeit based on different means of doing so. Seen in this light, the results from the post-communist countries analyzed in this article are very encouraging. Patterns that are consistent with these types of models have undoubtedly emerged, and emerged quickly, in these countries. There is clearly some effect for economic conditions on Incumbent, New Regime, and Old Regime parties consistent with what the models predicted.

However, the data have also proved to be sufficiently rich to allow us to assess the comparative value of the two models. Interestingly, the results of this comparison are fairly clear. Across numerous tests, the data definitely generate more empirical support for the Transition Model, and its predicted effects on New Regime and Old Regime parties, than for the

Referendum Model, which makes predictions about Incumbent parties. Of the three hypothesis, we consistently find the strongest empirical support for the Old Regime Hypothesis, followed by the New Regime Hypothesis, and then the Incumbency Hypothesis. Finally, the effect of the economy on Incumbent parties is almost completely conditional on their status as New Regime parties, Old Regime parties, or neither.

The Transition Model is also attractive in the context of the post-communist cases for other reasons. In political science, we generally judge models according to three criteria: accuracy, scope, and parsimony. The preceding section demonstrates that the Transition Model produces more accurate predictions than the Referendum Model. The question of whether the Transition Model or the Referendum Model is more parsimonious is an open one. In the universe of models, both are very parsimonious, yielding very simple hypotheses about the direction of economic effects (e.g., do good economic conditions help or hurt?) on certain types of parties. As ascertaining the direction of economic effects is constant across both models, the only way we can distinguish their degree of parsimony from each other is by focusing on the coding decision that both require for identifying the parties for which the models make predictions. In a stable democracy, we would most likely conclude that simply identifying incumbents would be an easier task than coding parties in most any capacity. However, identifying incumbents in new democracies, especially following the dissolution of umbrella movements, can be tricky and time consuming. By comparison, most of the Old Regime coding decisions appear fairly simple, although it is more difficult to make this conclusion about New Regime parties. Probably the safest conclusion is to note that both models are fairly parsimonious although they do involve coding decision that range from easy to difficult and that it is difficult to call one more parsimonious than the other.

Scope, on the other hand, provide a much clearer distinction. The Transition Model has a significantly wider scope than the Referendum Model, affording us the opportunity to make predictions for 69 parties as opposed to 49 parties. Moreover, the Transition Model tells us where to look for parties that are likely to benefit both from better economic conditions (New Regime parties) and from worse economic conditions (Old Regime parties), whereas the Referendum Model only offers predictions about which parties are likely to benefit from better economic conditions (Incumbents).³³ In a sense, therefore, the Transition Model has both wider theoretical and empirical scope than the Referendum Model.

These findings also have potentially interesting implications for the long standing debate in political science about the relationship between elections and political accountability.³⁴ Originally, the Downsian approach held that voters insured accountability by selecting politicians and parties based on their proximity to one's own preferences over issues (Downs 1957). Empirical analysis, however, cast doubt on the Downsian approach; as Ferejohn (1986) succinctly noted, "the actual evidence for extensive issues voting is fairly weak" (p.7). An alternative approach is retrospective voting, which suggests that voters can use a punishment mechanism to hold politicians accountable for their behavior in office (Fiorina 1981; Ferejohn 1986). But retrospective voting itself has also come under attack, both from micro-level studies

³³ We could of course greatly increase the scope of the Referendum Model to the maximum extent possible by adding an "Opposition Hypothesis" that predicted that all non-incumbents should benefit where economic conditions were worse. Aside from the theoretical concerns inherent in such a prediction (why would we expect all opposition parties to benefit equally from poor economic conditions?) doing so would significantly further decrease our assessment of the accuracy of the Referendum Model. Indeed, if we tested such an Opposition Hypothesis using the parties included in Panel 2 of Table A1, we would find almost as many cases with strong empirical support in the wrong direction (24%, or 18 out of 76 cases surpassing the 90% threshold) as in the correctly predicted direction (36%, of 27 out of 76 cases). Note as well that if we exclude Old Regime parties from this sample, the proportion of cases in the incorrect direction (31%, or 17 out of 56 case) would actually surpass the number of cases in the correctly predicted direction (23%, or 13 out of 56 cases).

³⁴ Although some would argue that it is a debate which has generally received insufficient attention. As Fearon 1999 notes, "the main justification for freely contested and regular elections is that these are supposed to bring about democracy, or rule according to the will of the people . . . [but] the tradition of democratic theory contains surprisingly little on exactly how elections are supposed to produce this result."(p.82).

of economic voting that suggest voters may be more interested in future economic conditions (MacKuen, Erikson and Stimson 1992), as well as from more theoretically oriented studies that present sanctioning-oriented voting as but one means of ensuring electoral accountability, and perhaps not even the most important one at that (Fearon 1999).

The debate has been raised to prominence once again in the edited volume *Democracy, Accountability, and Representation* (Przeworski, Stokes and Manin 1999). In the opening chapters of the volume, the authors very clearly frame the debate as one between “Sanctioning Representation” and “Mandate Representation.” In the case of the former, voters exert control over politicians by threatening to punish them in subsequent elections, while the latter, voters control politicians by voting for politicians whose policies they prefer (Manin, Przeworski and Stokes 1999a, see as well the table on p.9 of Manin, Przeworski and Stokes 1999b).

Another way to interpret the results of this article, therefore, is as a novel test for examining whether voters are behaving in accordance with the worlds of Sanctioning Representation or Mandate Representation by moving away from the context of American politics. While the analyses presented in this article do not test, nor do they claim to test, actual individual level motivation for voting decisions, the two models are based on the idea of voters behaving as if they are living in one of these two types of worlds. More specifically, the Referendum Model – with its emphasis on reacting to the presence of incumbents – is consistent with voters living in a Sanctioning Representation world, while the Transition Model – with its emphasis on voters seeking out parties because of the economic strategies that might result from their being in office – is consistent with the idea of voters living in a Mandate Representation model. Thus one way to interpret the results presented above would be to suggest that voters in post-communist countries are not only capable of behaving in accordance with the predictions of

Mandate Representation, they actually seem to do so much more often than they behave in accordance with the predictions of Sanctioning Representation. Thus in a part of the world that we might expect to be a more “difficult” case for the Mandate Representation approach (voters know less about parties and their policies; we might expect them to be more “angry” given the tremendous upheaval in their lives during the transition to capitalism), we find evidence that strengthens the argument for Mandate Representation at the expense of Sanctioning Representation. Even if one thinks this may be stretching the results of the study too far, then at the very least it certainly suggesting an interesting avenue for future research.

APPENDIX I: POLITICAL PARTY AND CANDIDATE ABBREVIATIONS

Abbreviation	Party Name	Country
AZR	Association of Slovak Workers	Slovakia
Bakatin	Vadim Bakatin	Russia
Cimoszewicz	Wlodzimierz Cimoszewicz	Poland
CSSD	Czechoslovak Social Democratic Party	Czech Republic
DS	Democratic Party	Slovakia
DU	Democratic Union of Slovakia	Slovakia
FIDESZ	League of Young Democrats	Hungary
Gronkiewicz-Waltz	Hanna Gronkiewicz-Waltz	Poland
HZDS	Movement for a Democratic Slovakia	Slovakia
ISP	Independent Smallholders Party	Hungary
KDH	Christian Democratic Movement	Slovakia
KDNP	Christian Democratic People's Party	Hungary
KDU	Christian Democratic Union	Czech Republic
KKW	Catholic Electoral Committee "Fatherland"	Poland
KLD	Congress of Liberal Democrats	Poland
KPRF	Communist Party of the Russian Federation	Russia
KSCM	Communist Party of Bohemia and Moravia	Czech Republic
KSS	Communist Party of Slovakia	Slovakia
KTR	Communist Workers of Russia	Russia
Kuron	Jacek Kuron	Poland
Kwasniewski	Aleksander Kwasniewski	Poland
LB	Left Bloc	Czech Republic
Mazowiecki	Tadeusz Mazowiecki	Poland
MDF	Hungarian Democratic Forum	Hungary
MSzMP (MP)	Hungarian Socialist Workers Party (Workers Party)	Hungary
MSzP	Hungarian Socialist Party	Hungary
NDR	Our Home is Russia	Russia
ODA	Civic Democratic Alliance	Czech Republic
ODS	Civic Democratic Party	Czech Republic
ODU	Civic Democratic Union	Slovakia
OH	Civic Movement	Czech Republic
PC	Center Citizens Alliance	Poland
PL	Agrarian Alliance	Poland
PRES	Party of Russian Unity and Accord	Russia
PSL	Polish Peasant Party	Poland
Ryzhkov	Nikolai Ivanovich Ryzhkov	Russia
SDL	Party of the Democratic Left	Slovakia
SLD	Democratic Left Alliance	Poland
SNS	Slovak National Party	Slovakia
SV	Common Choice Coalition	Slovakia
SzDSz	Alliance of Free Democrats	Hungary
UD	Democratic Union	Poland
US	Union of Freedom	Czech Republic
VR (VDR)	Russia's (Democratic) Choice	Russia
WAK	Catholic Electoral Action	Poland
Walesa	Lech Walesa	Poland
Yavlinsky	Grigorii Yavlinsky	Russia
Yeltsin	Boris Yeltsin	Russia
Zyuganov	Gennadii Zyuganov	Russia

APPENDIX II: THE STATISTICAL MODEL

- $V_i = (V_{i1}, \dots, V_{i(J-1)})$ is a vector of vote proportions of party $j = (1, \dots, J-1)$ for each district i ($i = 1, \dots, n$)
- Y_i is a vector of $J-1$ log ratios where $Y_{ij} = \ln(V_{ij}/V_{iJ})$ for party j ($j = 1, \dots, J-1$) relative to party J
- Y_i is multivariate normal with a mean μ and a variance of Σ .
- Means can be estimated as a linear function of explanatory variables, whereby :

$$\mu_{ij} = X_{ij} \beta_j$$

- Equations are estimated simultaneously for all parties $j = (1, \dots, J-1)$ using a *seemingly unrelated regression*
- For more, see Tomz, Tucker, Wittenberg (2002)

APPENDIX III: SUPPLEMENTARY TABLES

-- INSERT TABLE A1 ABOUT HERE --

-- INSERT TABLE A2 ABOUT HERE --

-- INSERT TABLE A3 ABOUT HERE --

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Table 1. Coding of Parties by Election

Country	Date	New Regime	Old Regime	Incumbent
Czech Republic	6/5/92 (L)*	ODS, ODA, OH	LB	ODS, ODA, OH
Czech Republic	5/31/96 (L)	ODS, ODA	KSCM	ODS, ODA, KDU
Czech Republic	1998	ODS, Freedom Union	KSCM	ODS, US, KDU
Hungary	4/ 8/90 (L)	MDF, SzDSz, FIDESZ	MSzP, MSzMP	MSzP, MSzMP
Hungary	5/ 8/94 (L)	MDF, SzDSz, FIDESZ	MSzP, MP	MDF, ISP, KDNP
Hungary	1998	MDF, SzDSz, FIDESZ	MSzP, MP	MSzP, SzDSz
Poland	11/25/90 (P)	Mazowiecki, Walesa	Cimoszewicz	Cimoszewicz
Poland	10/27/91 (L)	UD, KLD	SLD	UD, KLD, PSL PL, PC, WAK
Poland	9/19/93 (L)	UD, KLD	SLD	UD, KLD, KKW, PL
Poland	11/5/95 (P)	Walesa, Kuron, Gronkiewicz-Waltz	Kwasniewski	Walesa
Poland	1997	AWS, UW	SLD	SLD, PSL
Russia	6/12/91 (P)	Yeltsin	Ryzhkov Bakatin	Ryzhkov Bakatin
Russia	12/12/93 (L)	VR, PRES	KPRF	RC, PRES
Russia	12/17/95 (L)	VDR, NDR	KPRF, KTR	NDR
Russia	6/16/96 (P)	Yeltsin	Zyuganov	Yeltsin
Russia	1999	Unity, SPS	KPRF, KTR	Unity
Slovakia	6/5/92 (L)	ODU	SDL	HZDS, KDH, ODU
Slovakia	10/1/94 (L)	DU, DS,	KSS AZR, SV	DU, KDH CCC, HZDS, SNS
Slovakia	1998	SDK	KSS, AZR, SDL	HZDS, SNS, AZR
Slovakia	1999	Schuster		Meciar

*L = Legislative, P = Presidential. Full names of parties and candidates can be found in Appendix I.

Table 2: Estimated Coefficients (Standard Errors) of Effect on Party Vote for the 1996 Czech Parliamentary Elections*

	ODS	ODA	KDU	KSCM
Unemployment Rate	-.087 (.013)	-.113 (.021)	-.087 (.033)	.029 (.013)
Change in Income	.001 (.007)	.008 (.011)	.004 (.018)	.000 (.007)
Industrial Growth	-.001 (.001)	.002 (.002)	-.006 (.003)	.001 (.001)
Percent Agriculture	-.016 (.006)	-.016 (.009)	.082 (.015)	.003 (.006)
Percent Industry	-.005 (.003)	-.005 (.005)	.018 (.007)	-.009 (.003)
Percentage Elderly	.036 (.013)	.052 (.020)	.000 (.031)	.007 (.012)
Percent Urban	.000 (.002)	-.000 (.002)	-.012 (.004)	-.003 (.001)
Log Population	.050 (.047)	.099 (.073)	.806 (.115)	-.069 (.045)
Constant	-1.266 (1.038)	-4.675 (1.628)	-11.418 (2.564)	-.531 (1.008)
R-Squared	0.61	0.51	0.60	0.36
N	76	76	76	76

**Models estimated using seemingly unrelated regression (SUR) with logistic transformation of dependent variable. Source: Okresy Ceske Republiky v roce 1996 & 1995, Vekove Slozeni Obyvatelstva Ceske Republiky v roce 1996, Volby do Poslanecke Snemovny Parlamentu Ceske Republiky v roce 1996 and Aktuality CSU: 1996 Duben, Kveten - 1 .cast (Latest News of the Czech Statistical Office: April, May 1996 - Part I). Praha, Czech Republic, Cesky Statisticky Ura*

Table 3. Number of Cases with 90% Certainty of Predicted Effect by Model

	Transition Model		Referendum Model
	<u>New Regime</u>	<u>Old Regime</u>	<u>Incumbents</u>
90% Confident in Predicted Direction	25	21	20
90% Confident in Wrong Direction	1	1	8
Total Cases	40	29	49
Percentage with 90% Confidence in Predicted (Wrong) Direction	63% (3%)	72% (3%)	41% (16%)

Table 4. Transition Model Has More Empirical Support Regardless of Threshold

	Transition Model		Referendum Model
	<u>New Regime</u>	<u>Old Regime</u>	<u>Incumbents</u>
90% Confident in Predicted Direction	63%	72%	41%
95% Confident in Predicted Direction	50%	59%	33%
66% Confident in Predicted Direction	73%	83%	49%
Majority in Correct Direction (>50%)	80%	90%	63%
Total Cases	20	29	49

Table 5. Interaction of Referendum and Transition Models

Panel 1. Transition Model: Breakdown of Certainty by Incumbency

	New Regime		Old Regime	
	<u>Incumbent</u>	<u>Opposition</u>	<u>Incumbent</u>	<u>Opposition</u>
90% Confident in Predicted Direction	14	11	7	14
90% Confident in Wrong Direction	0	1	0	1
Total Cases	21	19	9	20
Percentage with 90% Confidence in Predicted (Wrong) Direction	67% (0%)	58% (5%)	78% (0%)	70% (5%)

Panel 2. Referendum Model: Breakdown of Certainty by Transition Model Categories

	Incumbents			
	<u>New Regime</u>	<u>Other</u>	<u>Old Regime</u>	<u>Total</u>
90% Confident in Predicted Direction	14	6	0	20
90% Confident in Wrong Direction	0	1	7	8
Total Cases	21	19	9	49
Percentage with 90% Confidence in Predicted (Wrong) Direction	67% (0%)	32% (5%)	0% (78%)	41% (16%)

Table 6. Support for Hypotheses in the 1997 Polish and 1998 Hungarian Elections

		Party	Confidence in Predicted Effect
<i><u>Incumbent Parties</u></i>			
Poland	1997	Democratic Left Alliance (SLD) Polish Agricultural Party (PSL)	1.2 50.7
Hungary	1998	Hungarian Socialist Party (MSzP) Alliance of Free Democrats (SzDSz)	0.4 100
<i><u>New Regime Parties</u></i>			
Poland	1997	Electoral Action Solidarity (AWS) Union of Freedom (UW)	96.2 93
Hungary	1998	FIDESZ-Hungarian Civic Party (FIDESZ- MPP) Alliance of Free Democrats (SzDSz) Hungarian Democratic Forum (MDF)	100 100 99.4
<i><u>Old Regime Parties</u></i>			
Poland	1997	Democratic Left Alliance (SLD)	98.8
Hungary	1998	Hungarian Socialist Party (MSzP) Hungarian Workers Party (MP)	99.6 100

Table A1. Number of Cases with 90% Certainty of Predicted Effect by Model by Different Specifications of Original Analyses

Panel 1. Including an Extra Independent Variables (Poverty)

	Transition Model		Referendum Model
	<u>New Regime</u>	<u>Old Regime</u>	<u>Incumbents</u>
90% Confident in Predicted Direction	22	22	18
90% Confident in Wrong Direction	2	0	10
Total Cases	40	29	49
Percentage with 90% Confidence in Predicted (Wrong) Direction	55% (5%)	76% (0%)	37% (20%)

Panel 2. Including Additional Dependent Variables

	Transition Model		Referendum Model
	<u>New Regime</u>	<u>Old Regime</u>	<u>Incumbents</u>
90% Confident in Predicted Direction	24	20	20
90% Confident in Wrong Direction	1	1	7
Total Cases	40	29	49
Percentage with 90% Confidence in Predicted (Wrong) Direction	60% (3%)	69% (3%)	41% (14%)

Panel 3. Alternative Economic Shock (20th to 80th Percentile)

	Transition Model		Referendum Model
	<u>New Regime</u>	<u>Old Regime</u>	<u>Incumbents</u>
90% Confident in Predicted Direction	24	19	20
90% Confident in Wrong Direction	1	1	7
Total Cases	40	29	49
Percentage with 90% Confidence in Predicted (Wrong) Direction	60% (3%)	66% (3%)	41% (14%)

Panel 4: Reduced Independent Variables (Growth, Wage Change, and Unemployment)

	Transition Model		Referendum Model
	<u>New Regime</u>	<u>Old Regime</u>	<u>Incumbents</u>
90% Confident in Predicted Direction	22	21	19
90% Confident in Wrong Direction	3	1	8
Total Cases	40	29	49
Percentage with 90% Confidence in Predicted (Wrong) Direction	55% (8%)	72% (3%)	39% (16%)

Panel 5: Reduced Independent Variables Plus Arrears in Russia

	Transition Model		Referendum Model
	<u>New Regime</u>	<u>Old Regime</u>	<u>Incumbents</u>
90% Confident in Predicted Direction	24	20	21
90% Confident in Wrong Direction	1	0	7
Total Cases	40	29	49
Percentage with 90% Confidence in Predicted (Wrong) Direction	60% (3%)	69% (0%)	43% (14%)

Table A2. Comparing the Transition and Referendum Models Across Subsets of Data

Panel 1. Parliamentary Elections

	Transition Model		Referendum Model
	<u>New Regime</u>	<u>Old Regime</u>	<u>Incumbents</u>
90% Confident in Predicted Direction	21	18	18
90% Confident in Wrong Direction	0	1	7
Total Cases	32	24	43
Percentage with 90% Confidence in Predicted (Wrong) Direction	66% (0%)	75% (4%)	42% (16%)

Panel 2. East Central European Elections

	Transition Model		Referendum Model
	<u>New Regime</u>	<u>Old Regime</u>	<u>Incumbents</u>
90% Confident in Predicted Direction	20	19	16
90% Confident in Wrong Direction	1	0	8
Total Cases	32	21	42
Percentage with 90% Confidence in Predicted (Wrong) Direction	63% (3%)	90% (0%)	38% (19%)

Panel 3. Parties with at Least 10% of the Overall Vote

	Transition Model		Referendum Model
	<u>New Regime</u>	<u>Old Regime</u>	<u>Incumbents</u>
90% Confident in Predicted Direction	16	13	11
90% Confident in Wrong Direction	1	0	4
Total Cases	22	18	21
Percentage with 90% Confidence in Predicted (Wrong) Direction	73% (5%)	72% (0%)	52% (19%)

Table A3. Out of Sample Test

Panel 1. Original 14 Elections (through 1996)

	Transition Model		Referendum Model
	<u>New Regime</u>	<u>Old Regime</u>	<u>Incumbents</u>
90% Confident in Predicted Direction	15	14	14
90% Confident in Wrong Direction	0	1	5
Total Cases	29	20	37
Percentage with 90% Confidence in Predicted (Wrong) Direction	52% (0%)	70% (5%)	38% (14%)

Panel 2. Post 1996 Elections

	Transition Model		Referendum Model
	<u>New Regime</u>	<u>Old Regime</u>	<u>Incumbents</u>
90% Confident in Predicted Direction	10	7	6
90% Confident in Wrong Direction	1	0	3
Total Cases	11	9	12
Percentage with 90% Confidence in Predicted (Wrong) Direction	91% (9%)	78% (0%)	50% (25%)

Figure 1: Estimated Probability Distribution of Effect of Economic Conditions on New Regime, Old Regime, and Incumbent Parties in 1996 Czech Republic Parliamentary Elections

