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Economic Perceptions and Economic Voting in Post Communist Countries of East Central Europe

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One of the grounding postulates of democratic theory is the principle of accountability. The theoretical operation of the accountability mechanism is quite simple: elected officials bear responsibility for their performance and receive reward or punishment from their constituency accordingly in the form of re-election or denial of a future political mandate. In reference to economic accountability, the mechanism presumes government responsibility for the state of the national economy, also known as economic voting (Lewis-Beck 1988; Alvarez and Nagler 1998). As noted by Nannestad and Paldam (2000), the link between the state of the national economy, or “objective” economy, and the act of voting proceeds through several phases. First, objective economic information has to be perceived by potential voters. Ideally, voters’ economic opinion ought to reflect experts’ evaluations of the national economy or the “objective” economy. In this case, public economic opinion is considered to be accurate. Then, public perceptions of the national economy must be connected to evaluations of government economic competence and, finally, lead to a decision to support or not support the government.

For a long time, the connection between economic reality and public perceptions of this reality had been simply assumed to be there, but later it was empirically established in mature democracies (Page and Shapiro 1992; Nannestad, Paldam, and Rosholm 2003). Thus, public economic perceptions in mature democracies bear a certain degree of accuracy, although not as considerable as was previously expected. It should be noted, however, that some scholars argue that the very notion of the “objective” economy to be perceived and evaluated by citizens is problematic (Keech 1995; Lohmann 1999). Keech believes that while there may be economic facts, their interpretation is frequently contested. Thus, when a consensus on what economic facts mean does not exist, accountability is difficult if not impossible to judge. Yet most voting scholars acknowledge the existence of the “objective” economy measured by macroeconomic indicators and maintain that congruence between the “objective” and “subjective” (perceptions) economies produces government accountability.

Despite this theoretical consensus, survey researchers still prefer to use perceptive measures of the economy (both at individual and aggregate levels) rather than macroeconomic indicators. One obvious reason for this has to do with the invariability of objective economic measures across individuals within one country. More importantly, however, perceptions of the economy give a better fit, and consequently, better predictive power to voting models. This suggests that people’s economic perceptions deviate from experts’ evaluations, and therefore commonly inferred as inaccurate.

Yet I would caution against jumping hastily into this conclusion without further investigation of the link between perceptions and the “objective” economy. With questions that most of us use to measure economic perceptions (e.g. “Has the state of the national economy has gotten worse or better?”), scholars are not able to determine unambiguously whether “inaccurate” perceptions are due to a lack of economic

knowledge or individual differences in interpreting the economic reality. In other words, people may have a good sense of the national economic conditions, but develop different evaluative judgments pertaining to those conditions. For the most part, these different interpretations of the economic reality are likely to be based on individual economic experiences. Additionally, they may also differ due to people's political and ideological predispositions.

For the post-communist nations of East Central Europe, the relationship between the state of the national economy and public economic perceptions remains more uncertain – and thus the accountability of government is also uncertain. With the collapse of the command economy, the general economic conditions in these countries hit rock bottom, and most people found themselves in deep poverty in the early transition years. Thus, economic health must have become a top priority for citizens and politicians alike (Ahl 1999). While citizens fought for everyday economic survival, the elite fought to retain office by making promises of a prosperous economic future. Yet a closer look at public economic perceptions alongside indicators of the macro economy during the early transition reveals some noticeable discrepancies between a poor national economic state and unusually high sociotropic evaluations (comparable to public economic assessments in developed democracies for the corresponding period of time), especially regarding the near-term economic future.

This leads to a first research question of whether the link between objective indicators of the national economy and sociotropic perceptions of the economy break down during a transition that includes economic and political restructuring. It may be that the transition in regime form shapes economic perceptions and expectations independent of reality. For instance, adherents of the new regime are buoyed by a sense of optimism of the changes ahead, while adherents of the old regime are overly pessimistic. The economic turbulence of the transition may also blur perceptions of the objective economic conditions. The question, then, is: Did the “objective” state of the national economy drive sociotropic economic perceptions in the emerging democracies of East Central Europe at the beginning of the post-communist transition?

The next step of the accountability principle is to connect economic perceptions to voting behavior. Since economic perceptions became a part of voting models, a debate over which type of people's evaluations of the economy makes an impact on their vote choice has never left the scene. One side of this debate deals with whether people are backward- or forward-looking when it comes to their voting decisions. The second disagreement concerns whether citizens vote based on assessments of their personal economic situation or the national economy. These controversies have grown into debates about *retrospective* versus *prospective* and *sociotropic* versus *pocketbook* (or *egocentric*) voting, respectively.

This leads to the second research question of whether voters rely on their past evaluations of the economy or economic forecasts when making voting decisions during a transition. Related to this is the question of whether these vote choices are predominantly driven by sociotropic or pocketbook evaluations. It is plausible to hypothesize that due to a high uncertainty surrounding the economic future and high volatility of the recent economic past, citizens may find it easier to rely on their personal economic conditions. Alternatively, national economic judgments have performed better in previous models of voting, and, although potentially disconnected from the reality

during a transition, may still be more powerful predictors of the vote. In short, transitions may at least temporarily suspect the accountability principle, which has implications for the popular reactions to the transition.

The focus of my study is twofold. First, I intend to investigate the relationship between the “objective” economy and public economic perceptions, namely sociotropic economic evaluations in newly established democracies of East Central Europe. Second, I explore the link between economic perceptions and the vote. In particular, I will compare, to the extent possible, the effects of various types of economic evaluations on vote for the incumbent government, and thereby exert government accountability principle during the post-communist transition.

Economic Voting in Central and Eastern Europe

According to the democratic accountability mechanism, voters ought to form economic evaluations based on the actual performance of the macro-economy and punish or reward elected officials respectively. We know that the state of the national economy in developed democracies more often than not affects electoral outcomes. After the collapse of the Soviet socialist bloc, quite naturally, many students of voting behavior turned to the study of economic effects on the vote in East Central Europe. The 27 emerging electoral democracies are an attractive new zone for the application of the existent voting theories.

During over a decade of the existence of economic voting studies in the post-communist nations, the scope of the research in this area of the world has reached that of Western democracies (see Tucker 2002 for a comprehensive review). Overall, voting scholars have predominantly focused on individual-level single-country studies (Bell 1997; Gibson and Cielecka 1995; Colton 1996; Roper 2003; Duch and Palmer 2002). Aggregate-level analyses, as well as multinational comparative studies are more rare and hard to find (Pacek 1994; Fidrmuc 2000a, 2000b; Tucker 2001, 2006).

Building on the Western models, students of economic voting explored the link between the objective indicators of the economy and voting in aggregate studies. Commonly, the purpose of those studies was to determine whether electoral outcomes in post-communist transitions were a result of retrospective or forward-looking voting. One of the founding studies on economic voting in East Central Europe was Pacek’s (1994) aggregate-level cross-national analysis based on the objective measure of the unemployment rate. In the best tradition of the reward-punishment mechanism, Pacek found support for retrospective economic voting in the newly established democracies. Somewhat later, Fidrmuc (2000a, 2000b) confirmed Pacek’s results in two studies of regional data on the Czech Republic, Slovakia, Hungary, and Poland. He used unemployment along with a measure of real wages to examine economic voting, but concluded that it was predominantly prospective.

Intriguingly, Cohen (2004) put forward a new hypothesis about the difference in the voting pattern in old versus new democracies. Specifically, he maintained that in developed democracies with established economies, people should employ prospective perceptions, whereas citizens would employ retrospective reasoning in emerging democratic systems. He argued that the degree of uncertainty present in both types of

democratic systems influenced outcomes. In newly established democracies uncertainty about the future is too high for people to make reliable prospective judgments, so it is unreasonable for them to vote prospectively.

An advocate of micro-level analyses in the study of vote choice, Colton (1996) explored voting behavior of Russians at the individual-level and found evidence for the reward-punishment mechanism. Continuing on the investigation of the Russian voting function, Gerber (2000) looked at the 1996 presidential election and concluded that normative economic views (pro- or anti-market) rather than evaluations of how the economy worked influenced voters' decisions.

In contrast, Powers and Cox (1997) in their study of electoral outcomes in Poland argued for the relative importance of political factors over economic ones. Economic effects, although present in the Polish voting function, turned to be less strong than expected. Likewise, Harper (2000) found very modest sociotropic and pocketbook economic effects in an individual-level investigation of Russian voters, yet substantial effects of satisfaction with how democracy worked and normative economic attitudes. In full agreement with these findings, Evans and Whitefield (1995) and Whitefield and Evans (1999) also emphasized the political element of voting in the post-communist democracies, as well as defined a mechanism of the effect of economic factors on the vote through attitudes toward the market (see also Mateju and Vláchová 1998). In particular, Whitefield and Evans (1999) posited that pocketbook effects, which were found to be much less significant for a voting decision than sociotropic factors in the CEE nations (e.g. Hesli and Bashkirova 2001), acted indirectly through normative economic attitudes, such as feelings toward a market economy.

Preliminary Evidence

The above discussion of economic voting in East Central Europe suggests a significant role of national economic evaluations for election outcomes. However, all the previous studies using subjective measures of economic perceptions overlooked the issue of potential bias and inaccuracy of sociotropic evaluations. This is especially surprising after political scientists saw the discrepancy between their earlier assumption of high congruence between the objective and the subjective economy in established democracies and the empirical evidence of a much weaker link. Moreover, all the tribulations through which the post-communist nations were going paired with high democratic support, particularly at the beginning of the transition, should have alerted scholars that newly democratic citizens may have had overly optimistic economic evaluations in comparison to the actual state of the national economy. On top of high economic and political uncertainty, post-communist citizens in the wake of the transition had very limited knowledge of how a market economy operates. Therefore, we should expect that, due to mere ignorance individuals would have a hard time making accurate assessments of the economy.

There is always an opposite side of the story, however. One may argue that the severity of economic conditions, particularly at the beginning of the transition, should have made it easier for East European populaces to be accurate in their accounts of past economic performance. Whichever economic standard one was to employ, being it

inflation, unemployment, change in real wages, or GDP growth, the conclusion should have been unequivocal – since the collapse of the communist regime, the economy had turned to the worse. Consequently, no special economic knowledge was required to be able to capture that trend.

Let me begin by painting a broader picture of the economic reality and economic perceptions in the post-communist region in the early 1990s. Table 1 shows objective economic data for 11 new democracies in the region for 1991-1992 collected by the European Bank for Reconstruction and Development and aggregate retrospective and prospective perceptions of the national economy for 1992 taken from the respective Central and Eastern Eurobarometer study. In addition, Table 1 depicts the proportions of the population in those countries who thought that the national economic situation had gotten better or much better over the previous year.

A first look at the inflation, unemployment, and GDP growth rates in the 11 nations for 1991-1992 would probably make us think that there should be no one in those countries who would think that the national economic situation had improved. How can a triple-digit inflation rate be considered an improvement? However, as can be clearly seen from Table 1, a significant portion of the population in post-communist countries in 1992 thought that the national economy had gotten better in spite of the dreadful numbers for the inflation, unemployment and economic growth rates for that year. In 5 out of 11 countries, over 20% of the citizens evaluated the national economy as improving. In Albania and Slovenia, the proportion of population approving of past economic performance exceeded one third.

Looking ahead, post-communist citizens tended to be even more optimistic. In all 11 countries in the 1992 survey, future economic forecasts for the following year were much more favorable than evaluations of past performance. Thus, almost three quarters of Albanians felt positively about the economic future of their country. In Slovenia and Bulgaria, economic optimists constituted a majority; yet over 80 percent of Hungarians did not envision any improvement in their national economies for the year ahead. In the rest of the countries, the figure for those who believed in the economy getting better ranges from about 20 to 40 percent.

Although a more thorough analysis is necessary to estimate the relationship between objective and subjective economies, the first look suggests that there is some degree of incongruence between the reality and public perceptions. This lack of congruence would be consistent with Anderson and O'Connor's (2000) study of national economic evaluations in East Germany. They explained the disassociation of public opinion and the economic reality by a lack of familiarity about the new economic system and also by an overall euphoria about the transition (see also Tóka 1995). Anderson and O'Connor posited that people in new democracies had to "learn" before they would begin to form more accurate perceptions of the economy, i.e. congruent with objective economic indicators. Moreover, once the early stage of transition - the "honeymoon" - passed, people became more critical of the conditions in the country and started to hold the current government, not the past regime as during the "honeymoon" period, accountable for the state of the economy.

Table 1. Favorable Sociotropic Perceptions and National Economic Indicators by Country

Country	% of Respondents with Favorable Retrospective Perceptions	% of Respondents with Favorable Prospective Perceptions	Inflation		Unemployment		Growth	
			1991	1992	1991	1992	1991	1992
Albania	46.53	74.72	104.0	236.6	9.5	27.0	-27.7	-7.2
Bulgaria	30.55	50.61	339.0	79.4	10.5	13.2	-11.7	-7.3
Czech	23.81	37.66	52.0	12.7	4.1	2.6	-14.2	-3.3
Slovakia	13.50	24.06	58.0	9.1	11.8	11.4	-14.6	-6.5
Hungary	9.21	18.43	32.0	21.6	7.8	13.2	-11.9	-3.1
Latvia	7.25	25.03	262.0	959.0		2.3	-8.3	-34.9
Lithuania	4.06	28.92	345.0	1161.1	0.3	1.3	-13.4	-37.7
Macedonia	7.72	39.82	230.0	1925.2	19.2	19.8	-12.1	-21.1
Poland	20.68	28.52	60.0	44.3	12.2	14.3	-7.0	2.6
Romania	26.39	39.56	223.0	199.2		8.2	-12.9	-8.7
Slovenia	35.75	55.66	247.0	92.9	8.2	11.6	-8.1	-5.5

It should also come as no surprise that economic expectations were even more detached from the real state of the economy than past economic evaluations. While the economic past is already determined, the economic future is uncertain and may be a projection of people's high hopes for a quick recovery of the national economy. As argued by Stokes and others (e.g. Stokes 1996, 2001; Przeworski 1996), in new democracies, people may believe that things have to become worse before they get better; therefore, the drastic economic situation in East Central Europe may have been perceived by the citizens as a good sign. In summary, past studies of public opinion and electoral behavior in post-communist Europe point us in two directions. First, the independence between public economic perceptions and the actual economic conditions may be due to a lack of knowledge in the early years of the transition. Second, we can expect post-communist citizens to have adopted a more favorable interpretation of the reality due to their high hopes for the transition.

As discussed previously, economic evaluations are closely related to individual vote choices, government support, and ultimately, election outcomes. However, peculiarities of democratic transitions in Latin America and East Central Europe led scholars to believe that regime support and economic voting may require different explanatory mechanisms from those in established democratic systems. Stokes (1996, 2001), for instance, considered a mechanism of *intertemporal* voting in transition societies along with the more traditional reward-punishment hypothesis. The idea for intertemporal voting is that the state of the economy has to get worse before it gets better, so transition citizens vote for the government even when the economy goes into a slump.

Considering the abundance of possible patterns of economic assessments and voting, I will now move on to a more elaborate two-step data analysis of the formation of economic perceptions and individual voting behavior.

The Formation of Economic Perceptions: Data and Measures

Individual level data for my analysis come from the Central and Eastern Eurobarometer Study No. 3 conducted in October-November of 1992. The 1992 surveys were the last ones in the Central and Eastern Eurobarometer series that asked questions about sociotropic economic perceptions. The following studies only included questions about people's personal financial situation. However, 1992 is ideal as a starting point in modeling sociotropic economic perceptions in newly established democracies. We may expect that in 1992 memories of the old regime were still fresh, but also that after a few years of democratic reforms people had formed firm attitudes towards the new system. Thus, questions about sociotropic economic perceptions would most likely prompt people to make a comparison between the old and the new regimes. There are eleven nations included in the surveys, for which I have complete data for both stages of the analysis: Albania, Bulgaria, the Czech Republic, Slovakia, Hungary, Latvia, Lithuania, Macedonia, Poland, Romania, and Slovenia.

Previous studies of economic voting have posed the question of whether voters are forward-looking or retrospective (MacKuen et al. 1992, Erikson et al. 2000, Suzuki and Cappell Jr. 1996, Suzuki 1991, Fiorina 1978). Although the rationality assumption

prescribes voters to use prospective evaluations of the national economy, empirical analyses so far have shown more evidence supporting the reward-punishment hypothesis or retrospective voting across a wide range of countries (e.g. Fiorina 1981; Lewis-Beck 1988; see also Hesli and Bashkirova 2001).

From the point of view of democratic accountability, the reward-punishment mechanism is fairly straightforward. Citizens evaluate their government based on the past state of the national economy and reward or punish the government accordingly by voting for or against it in the next election, thus holding elected officials accountable for their past economic performance. Prospective economic evaluations may also be treated as an accountability check if they contain an extrapolative component from the past; that is, if prospective perceptions are a function of retrospective economic perceptions adjusted for the future.

As we have noted, past studies of economic voting in post-communist countries have produced somewhat contradictory results with the respect to the retrospective-prospective voting hypotheses (Pacek 1994; Przeworski 1996; Harper 2000; see also Stokes 1996). Thus, some new democratic governments in those countries achieved reelection under economic conditions that would have been fatal for any government in Western democracies.

Given the mixed evidence of the importance between past and future economic assessments, I examine both retrospective and prospective sociotropic perceptions as my dependent variables, and later in the paper I use them along with egocentric evaluations to predict voting behavior. The retrospective perceptions variable is based on the survey question where respondents are asked whether over the past twelve months the national economy in their countries has gotten much better, better, stayed the same, has gotten worse, or much worse. Similarly, the survey question about national economic forecasts asks for an evaluation of the economic situation a year ahead from the date of the interview. The summary statistics on all the variables used in the study are available from the author upon request.

For measures of the objective state of the national economy in countries of East Central Europe, I relied on the statistics collected by the European Bank for Reconstruction and Development. I chose three economic indicators that have been most-widely used in the past studies of economic voting – the annual inflation, unemployment, and GDP growth rate as described in Table 1. Since the survey data were collected at the end of 1992, I considered it most appropriate to employ the measures of the inflation and unemployment rates for 1992. Moreover, those measures seemed to be more relevant than the earlier years, because the retrospective survey question asked the respondents to consider the change in the economy within the period of one year. Finally, utilizing earlier economic measures would lead to a loss of two cases (Latvia and Romania) due to the unavailability of unemployment data for 1991.

In previous analyses, some scholars used changes in the rates of unemployment and inflation from one year to another (e.g. Anderson 1995). The underlying logic for using change measures is that people may react differently to the same level of unemployment and inflation in any given year depending on what the levels of unemployment and inflation had been in the previous year or even further back in history. For example, if the unemployment rate is running high in a certain year, but it is still a decrease compared to the recent history, people may perceive it as an improvement in the

economic state. Theoretically, accounting for the recent economic history may be a better way to tap into public perceptions of the economy. However, there are at least two reasons why I would still prefer to use levels instead of change measures of the economy in this particular study. First, there are less economic data available for 1991 than for 1992; thus, I would need to exclude 2 countries from my already small sample of 11 countries. Second, in 1992 citizens in the nations of Central and Eastern Europe may still associate current conditions with the communist era when both the inflation and unemployment rates were virtually zero. For decades people in the communist nations of East Central Europe had experienced neither inflation nor unemployment in their countries before the situation radically changed with the abolishment of the command economy. Since then, the state of the economy had been changing so rapidly that recalling the unemployment rate 12 months back in time even for those following the economy may have presented a serious challenge.

Due to the potential complications associated with using change measures of the economy in the present study, I used level measures of the annual inflation, unemployment, and GDP growth rates for 1992. I used natural logarithms of the inflation indicator to level down the distribution of the extreme values. For detailed definitions and variable codes for all the variables in the model refer to Appendix A.

Effects of Objective Economic Indicators on Sociotropic Perceptions

The multivariate models of economic perceptions consist of the individual-level explanatory variables capturing people's personal economic situation, political preferences and evaluations, attitudes towards the reforms, political sophistication, and demographic characteristics, as well as the three measures of the objective economic state, the rates of inflation, unemployment, and economic growth for 1992:

Retrospective Perceptions = f (Objective Economy, Personal Economic Variables,
Political Attitudes, Controls)

Prospective Perceptions = f (Objective Economy, Retrospective Sociotropic,
Prospective Personal Expectation, Personal Economic
Variables, Political Attitudes, Controls)

Given the ordered nature of my dependent variables, I would have to use an estimation procedure designed to take it into consideration, such as ordered logit. However, methodologically, I had yet another potential problem to overcome. This problem is inherently imbedded in the very nature of the data that I am using. Specifically, my dependent variables and the independent variables measuring the objective economic situation are, in fact, different units of analysis. The unit of analysis of the sociotropic economic perceptions (the dependent variables) is an individual, whereas the unit of analysis of the objective economic indicators is a country. In case of multilevel or hierarchical data, traditional estimation methods, such as OLS, logit or ordered logit, do not produce the most efficient standard errors. In fact, they underestimate standard errors, which may lead to a higher risk of falsely rejecting the null hypothesis. Moreover, with the introduction of macro-level explanatory variables, it is no longer possible to use national dummy variables. Country dummies, which take care of a

potential estimation bias due to omitted relevant effects measured at the level of a nation, produce perfect collinearity when used in the same model with substantive macro-level variables.

Estimation procedures for hierarchical models¹ have become increasingly available to researchers either as specially designed statistical packages (e.g MLwiN) or as a part of widely used statistical programs such as Stata. To increase the likelihood of obtaining unbiased and efficient estimates, I used the GLLMM (Generalized Linear Latent and Mixed Models) estimation procedure with the ordered logit link function compatible with the Stata framework. In addition, I estimated the models with regular ordered logit for comparison purposes and as a reliability check to make sure the results were not just an artifact of the estimation method.

The first two columns in Table 2 present the results for the retrospective model analyzed by ordered logit and the hierarchical estimator. Somewhat surprisingly, all the macro-economic estimates in both models achieved the conventional levels of statistical significance, with the unemployment coefficient in the hierarchical model achieving only marginal significance. A closer look at the results, however, reveals that the sign of the inflation variable is positive, which implies that higher levels of inflation are associated with more positive assessments of the economy. This may be unexpected given the horrendous rates of price increases that year across all newly established democracies in the region; however, this pattern is consistent with Stokes' intertemporal hypothesis.

The coefficients for unemployment and GDP growth have the signs consistent with the reward-punishment hypothesis. Substantively, the positive effect of GDP growth seems to be stronger than the negative effect of unemployment though. The total shift in the probability of forming favorable retrospective perceptions attributed to the growth variables is approximately 40% holding all the other variables at their means. In other words, moving up from the minimum to the maximum on the growth variable shifts the probability of having positive economic perceptions from 3% to 43%.

The total effect of the unemployment variable across its range (minimum of 1.3% to maximum of 27%) constitutes a -10% change in the probability of evaluating the past national economy positively. Put differently, the probability of having favorable retrospective perceptions decreases from 24% to 14% when moving from the lowest to the highest rate of unemployment

¹ A two-level hierarchical model can be given by the following notation:

$$y_{ij} = \beta_0 + \sum_{q=1}^Q \beta_{0q} z_{qj} + \sum_{p=1}^P \beta_{p0} x_{prij} + u_{0j} + e_{ij} ,$$

where β_0 is the intercept or constant,

$\sum_{q=1}^Q \beta_{0q} z_{qj}$ is a set of Q level-2 predictors z_{qj} ($q = 1, \dots, Q$),

$\sum_{p=1}^P \beta_{p0} x_{prij}$ is a set of P level-1 predictors x_{prij} ($p = 1, \dots, P$),

u_{0j} is the residual level-2 variation in the level-1 intercept, and e_{ij} is the disturbance capturing omitted level-1 predictors.

Table 2. Determinants of Sociotropic RETROSPECTIVE and PROSPECTIVE Economic Perceptions
(Standard errors in parentheses)

Independent Variable	RETROSPECTIVE		PROSPECTIVE	
	Ordered Logit	Multilevel	Ordered Logit	Multilevel
Inflation Rate (logged)	.198*** (.037)	.214* (.095)	.110** (.038)	.113 (.066)
Unemployment Rate	-.025*** (.006)	-.026 (0.015)	.014* (.006)	.018 (.010)
Growth Rate	.077*** (.006)	.080*** (.015)	.013* (.006)	.010 (.011)
Sociotropic <i>retrospective</i> evaluations			.501*** (.032)	.489*** (.032)
Egocentric <i>retrospective</i> economic evaluations	.720*** (.030)	.721*** (.031)	.086** (.033)	.080* (.033)
Egocentric <i>prospective</i> economic evaluations			.951*** (.035)	.952*** (.039)
Income	-.030*** (.007)	-.024** (.009)	-.036*** (.008)	-.018* (.009)
Unemployment Status	-.101 (.108)	-.120 (.109)	.002 (.112)	.010 (.112)
Satisfaction with democracy	.544*** (.040)	.526*** (.041)	.390*** (.041)	.374*** (.042)
Like new political system	.339** (.098)	.357*** (.100)	.117 (.097)	.099 (.099)
Like old political system	-.146 (.102)	-.172 (.103)	-.068 (.100)	-.077 (.100)
Attitudes toward market	.361*** (.021)	.308*** (.069)	.099*** (.021)	.129 (.069)
Attitudes toward the speed of the reforms	.510*** (.071)	.543*** (.071)	.070 (.073)	.067 (.074)
Education	.035 (.030)	.004 (.030)	-.003 (.030)	-.017 (.031)
Political Discussion	-.072 (.045)	-.034* (.014)	-.039 (.046)	-.019 (.014)
Gender	.044 (.057)	0.039 (.057)	.213*** (.058)	.215*** (.058)
Age	-.005** (.002)	-.006** (.002)	.003 (.002)	.004* (.002)
Country-Level Variance		.095 (.033)		.070 (.029)
N	4504	4504	4504	4504
Pseudo R2			.21	

* p < 0.05 ** p < 0.01 *** p < 0.001 (two-tailed)

The findings call for an explanation that takes an account of the specificity of the economic situation in East Central Europe at that time. Previous studies of economic sentiments and economic voting have lent some evidence to the proposition that unemployment is perceived as a larger threat than inflation. While inflation may lead to smaller savings and reduced consumption, the consequences of unemployment, particularly long-term one, may prove much more aggravating. Albeit not everybody suffered job loss after the collapse of command economies in Central and Eastern Europe, the risk of becoming unemployed dramatically increased for almost all occupational groups on the labor market. The estimated effect of unemployment, however, is not substantively very large despite that it may appear so given a wide range (over 25 percentage points) of unemployment rates across my country sample. A narrower range of the unemployment variable of 10 percentage points, common across more stable Western economies, brings about a decrease in the probability of having a positive outlook on the past economy by only 4%. Partially, this may be explained by the fact that individuals who had been laid off from their jobs did not necessarily find themselves in a worse situation than those who remained employed. For one, many of the newly unemployed became self-employed and earned some income, but did not register officially as private entrepreneurs. Secondly, most of the public employees, who constituted the majority of the labor force in post-communist countries, experienced severe wage payment delays and were not better off financially than the unemployed. At the same time, high inflation may have been interpreted as an inevitable consequence of price liberalization, and thus perceived as a sign that the transition was going in the right direction.

The positive effect of economic growth on public economic evaluations falls into the traditional reward-punishment framework. In fact, the question on which the dependent variable is based is phrased in such a way that it does not point to any specific segment of economic performance, but rather the state of the economy in general. GDP growth, in turn, is considered to be the most general economic indicator. Thus, its superior statistical performance compared to the other two objective indicators in the equation (inflation and unemployment) is as expected. It is also an important economic indicator for the population, because GDP growth directly influences quite tangible benefits received by people, such as wages and social payments.

The results for the prospective model are presented in the last two columns of Table 2. None of the three aggregate economic indicators achieved statistical significance in the multilevel model, although they were significant and positively associated with national perceptions of the economy in the ordered logit model. Because ordered logit tends to overestimate standard errors of the estimates in hierarchical data models, I believe it is safer to infer that there was no relationship between current economic conditions and public views of economic future. Thus, the findings from the prospective model seem to indicate even a greater disjuncture between economic perceptions and the reality than in the case of retrospective judgments.

Effects of the Economy on Voting Behavior: Multivariate Analysis

The second portion of my analysis deals directly with the voting function. The dependent variable is dichotomized and is coded 1) if a person voted for the incumbent party, and 0) if otherwise. Non-voters were excluded from the analysis. The notion of incumbency, quite straightforward in a two-party system, becomes much more complicated in highly volatile, fragmented multiparty systems. After the collapse of the Soviet rule and the introduction of multiparty systems, the number of political parties in East Central Europe increased exponentially. In fact, in some countries during the early transition this number exceeded a hundred resulting in high party fragmentation. Moreover, the life span of political parties was exceptionally short with new parties emerging and old parties disappearing all the time. On top of this, parties had a tendency to form pre-election or post-election blocs, transfer from one bloc to another, and change names. All these features attest to high volatility of the post-communist party systems well documented by a number of political scientists (Lewis 2000; Birch 2003; Tavits 2005; Mainwaring and Zoco 2007). Some even claim that, strictly speaking, party systems were non-existent in the early post-communist period.

The rule I used to distinguish between incumbent and non-incumbent parties implies that parties that formed a government after the previous election receive a code of 1 (incumbent), whereas all other parties regardless of their size in parliament are coded as 0. In actuality, there is only one case in my sample when the biggest party in parliament failed to form a government. The Democratic Party of Macedonia, which received the plurality of the national votes in the 1990 election, was not able to form a government, and the former communists (Social Democratic Union of Macedonia) united with a large (Party for Democratic Prosperity) and a number of smaller ethnic parties to form a coalition government.

Poland, between the 1991 national election and the time of survey interviews in October-November 1992, had two governments. The last one was formed in June 1992, and it is the only one in my analysis that is coded as the incumbent (Tucker 2006). Although a seven-party coalition government, only 4 parties were included as incumbents, because the data on the other three were not available from the survey I used. The full list of incumbent parties by country is available from the author upon request.

The individual voting model builds upon the model of economic perceptions and thus includes all the independent variables from the first stage along with the measures of sociotropic perceptions to predict the vote. Overall, my voting function is comprised of all the key elements of any comprehensive individual voting model with the exception of partisanship. With the emergence of dozens of new political parties in the wake of the post-communist transition, however, the notion of party attachment was mostly irrelevant in the context of East European countries. Even according to most optimistic estimates, no more than one fifth of the populations in post-communist nations expressed some sort of party attachment in the early transition years (Miller et al. 2000; White and McAllister 2007). In addition to being extremely volatile, parties in the post-communist context have also remained highly personalized and driven by popular leadership (Dalton and Weldon 2007; McAllister and White 2007). Therefore, citizens were more likely to invest their loyalty in political leaders rather than political parties (Klingemann and Wattenberg

1992; Wyman et al. 1995). Thus, partisanship is replaced by a series of measures of political attitudes, support for democracy and market economy, as well as sentiments toward the old and the new political systems. These measures are employed to capture ideology and evaluations of government political performance and serve to test competing hypotheses to that of economic voting. In addition to testing direct effects of economic perceptions, economic and political attitudes, and individual sociological characteristics, I decompose the total effect of personal retrospective economic perceptions and assess its relative importance vis-à-vis national economic perceptions.

The multilevel estimates of the voting model presented in Table 3 suggest that in the wake of the post-communist transition citizens relied on their evaluations of the economy and political system when casting a vote. Consistent with previous findings across the region, economic voting can be characterized as primarily sociotropic based on both retrospective perceptions and future economic predictions the effects of which are very similar in magnitude. In fact, the overall shift in the probability of voting for the incumbent government attributed to sociotropic retrospective and prospective perceptions is 18% and 20% respectively. Interestingly, people's satisfaction with the speed of the reforms also plays a major role in their decision to either give incumbent governments another chance or to vote them out of the office. Specifically, those who approved of the speed of the reforms were 8% more likely to be willing to keep the incumbent government in office than those who were dissatisfied with the reform pace.

Neither of the personal economic variables (both objective and evaluative) achieved conventional levels of statistical significance. However, I would exercise caution in arguing that pocketbook voting was not present during the post-communist transition in East Central Europe. It is reasonable to assume that personal economic perceptions affected voting decisions indirectly through other variables, especially sociotropic evaluations (Whitefield and Evans 1999). In fact, the total effect of egocentric retrospective evaluations on the change in the probability of forming favorable assessments of the past national economy is around .5. Put differently, citizens who thought that their personal economic situation had significantly improved were 50% more likely to give positive evaluations of the national economic state than those who believed that they had become much worse off financially. This evidence allows me to speculate that post-communist citizens voted their pocketbooks, but this effect was disguised as insignificant in past voting models since perhaps it is mostly indirect. A formal test of this hypothesis is presented in Appendix B, which reveals that over 90% of the total causal effect of retrospective egocentric perceptions is indirect and operates through sociotropic economic perceptions and political beliefs and evaluations.

Furthermore, it does not come as a surprise that objective economic indicators remain insignificant given our prior assumption that they operate indirectly through people's economic perceptions, and even more so given their weak connection with subjective evaluations of the national economy established earlier. Among political factors, individuals' satisfaction with how democracy is working in their countries operates as a strong predictor of the vote for the incumbent, and so do people's positive feelings toward the new political system in general. More specifically, on average, people who expressed deep dissatisfaction with democracy were 18% less likely to vote for the incumbent than those who were highly satisfied.

Table 3. Determinants of Incumbent/Non-Incumbent Voting
(Standard errors in parentheses)

Independent Variable	Reduced Model (Egocentric Retrospective Perceptions Only)		Full Model (All Economic Perceptions Variables)	
	Ordered Logit	Multilevel	Ordered Logit	Multilevel
Inflation Rate (logged)	-.119** (.040)	-.123 (.189)	-.146** (.043)	-.164 (.190)
Unemployment Rate	-.003 (.006)	.0001 (.027)	.002 (.006)	.014 (.030)
Growth Rate	.015* (.007)	.008 (.029)	.006 (.007)	-.007 (.029)
Egocentric <i>retrospective</i> economic evaluations	.352*** (.032)	.320*** (.030)	.029 (.036)	.013 (.037)
Sociotropic <i>retrospective</i> evaluations			.158*** (.035)	.191*** (.035)
Egocentric <i>prospective</i> economic evaluations			.054 (.039)	.058 (.040)
Sociotropic <i>prospective</i> evaluations			.202*** (.037)	.213*** (.038)
Income	-.028** (.008)	.013 (.010)	-.016 (.009)	.017 (.011)
Unemployment Status	.063 (.120)	.122 (.122)	.086 (.126)	.114 (.128)
Satisfaction with democracy			.239*** (.047)	.254*** (.048)
Like new political system			.335** (.115)	.322** (.118)
Like old political system			-.238* (.121)	-.199 (.122)
Attitudes toward market			.007 (.078)	.101 (.082)
Attitudes toward the speed of the reforms			.395*** (.081)	.342*** (.083)
Education	-.053 (.033)	-.049 (.033)	-.084* (.034)	-.074* (.035)
Political Discussion	.142** (.049)	.106* (.050)	.147* (.052)	.124* (.053)
Gender	.176** (.064)	.217** (.065)	.182** (.066)	.228** (.068)
Age	.005* (.002)	.005* (.002)	.006** (.002)	.007** (.002)
Country-Level Variance		.254 (.109)		.236 (.110)
N	4504	4504	4504	4504
Pseudo R2	.05		.11	

* p < 0.05 ** p < 0.01 *** p < 0.001 (two-tailed)

It is also worth noting, the positive sign of the new political system variable is probably due to the fact that most of the first post-communist governments, especially in East Central European countries vis-à-vis the former Soviet Union States, were comprised of pro-market reformers. If the distribution of pro-reform and successor communist parties in post-communist governments was more even, then I would expect to see no significant effect of this variable.

Interestingly, socio-demographic factors, despite the presence of a wide range of attitudinal variables in the model, still came out as significant predictors of the vote. Thus, active engagement in political discussions made a person 6% more likely to vote for the incumbent, and women were 5.5% more likely than men to give incumbents another chance.

Discussion and Conclusions

This study had two major objectives. First, I proposed to explore the congruence between the state of the national economy, as measured by rates of inflation, unemployment, and GDP growth and sociotropic economic perceptions at the beginning of the post-communist transition in East Central Europe. Further, I used various types of economic perceptions in a model of individual voting behavior. As systematic studies of economic evaluations in post-communist countries are virtually non-existent, I relied on similar studies done in Western democracies and adjusted my expectations to account for the specifics of the transition. In line with democratic theory, I expected to find a statistically significant relationship between objective economic indicators and public economic opinion, but given the transition turmoil and people's lack of experience with the new economic system, I did not expect this relationship to be particularly strong. Specifically, I hypothesized small substantive effects of the objective conditions on people's evaluations of the past economy, as well as economic expectations. This argument was based on two assumptions. First, at the early phase of the transformation process, post-communist citizens may have lacked knowledge about the mechanisms of the new economic systems put in place of the old command economies. This lack of knowledge may have resulted in a general misconception of the national economic situation and an inability to form accurate evaluative judgments about it. In contrast, people may have had a fairly accurate idea of the objective economic conditions, but chose to interpret them more optimistically buoyed by high hopes for the transition (Bernhard, Reenock, and Nordstrom 2003).

These arguments can certainly be generalized beyond the post-communist transition in East Central Europe. Any country that undergoes an economic and/or political transition, or experience some sort of turmoil, may reveal a greater disjuncture between public economic perceptions and economic reality. This growing independence of economic assessments from the reality could be either a sign of people's inability to make accurate evaluations or, alternatively, a shift in their judgments of the reality. Put differently, public interpretations of economic conditions may depend on other contextual factors or people's personal attitudes to the transition.

The overall findings support the proposition that people's retrospective and prospective views of the national economy at the beginning of the post-communist transition diverged from indicators of the actual economic situation. Among the three objective economic indicators, only growth rate had a significant substantive effect on the formation of retrospective perceptions of the national economy, and inflation was consistently estimated with the "wrong" (positive) sign. Stokes and her collaborators who also found evidence for the traditional reward-punishment mechanism in transitioning nations came to the conclusion that various types of support may have coexisted in the environment of transition. Consistent with this proposition, I found evidence for the intertemporal pattern of support in relation to unemployment in the prospective case (although insignificant) and inflation in both retrospective and prospective cases, as well as the reward-punishment pattern with regard to economic growth in the retrospective model.

In the second part of the analysis, I estimated an individual voting model and found that vote choice was driven by both national economic performance and political evaluations. These findings are in line with those of Pacek (1994) and Fidrmuc (2000a, 2000b) who showed evidence for retrospective and prospective voting respectively. Moreover, consistent with the results of Powers and Cox (1997), Harper (2000) and two studies by Evans and Whitefield (1995, 1999), I found that political factors played a significant role in determining incumbent vote. Similar to Whitefield and Evans (1999), I also established that pocketbook voting, previously argued unimportant in the context of the post-communist nations of East Central Europe, in fact, operated indirectly through sociotropic evaluations and political attitudes.

The results of this study provide a new outlook on the early stage of the transition to democracy in the countries of East Central Europe. One of the most important characteristics of a democratic regime is the government's accountability to its citizens; in other words, governments are to be held responsible for their performance. Economic performance of democratic governments has been a focus of numerous studies due to its essential role for predicting voting behavior and regime support. Many previous studies of economic voting in post-communist societies revealed a solid connection between people's economic perceptions of the national economy and vote choice. In this study, I took one step back and explored whether public economic perceptions were, in fact, driven by government's economic performance, thereby suggesting an orderly operation of the accountability mechanism, and also looked at the link between economic perceptions and the vote. As my analysis reveals, there was an inconsistent link between the actual economy and national economic perceptions among citizens in new democracies of East Central Europe in 1992. Specifically, some strong indicators of the poor economic situation, such as high inflation and unemployment rates were associated with more positive evaluations of the national economy, which is contrary to the reward-punishment mechanism. On the other hand, GDP growth had a strong direct effect on the past assessments of the macroeconomic state in line with the reward-punishment hypothesis. Thus, economic voting at the beginning of the democratic transition in post-communist nations was likely not a reflection of the country's economic performance, but was driven by people's individual characteristics, personal financial situation and political attitudes. Although such a distortion of the democratic accountability mechanism may be expected in the early stage of a democratic transition, it may pose a

threat to further consolidation of democracy, if incongruence between the subjective and the objective economies perseveres.

However, it is possible that, even if past economic perceptions had been accurate, people would not have held governments accountable for the state of the national economy. Instead of voting retrospectively, post-communist citizens relied more on their largely optimistic expectations of economic future. This pattern of voting, called intertemporal voting by Stokes et al., may give newly elected post-communist governments an extended mandate to rule. Despite a terrible state of the national economy, citizens in East Central Europe were ready to put up with governments of the reformists for a while believing that things should go bad before they turn for the better.

Appendix A. Variables Measures and Coding.

1. *Inflation Rate.* Inflation as defined by the CPI reflects the annual percentage change in the cost of the average consumer of acquiring a fixed basket of goods and services that may be fixed or changed at specified intervals, such as yearly. The Laspeyres formula is used.
2. *Unemployment Rate.* The share of the labor force that is without work but available for and seeking employment, measured in percent of total labor force.
3. *Growth Rate.* Annual change of the GDP from the previous year.
4. *Sociotropic Retrospective Perceptions.* A five-category variable ranging from 1 (the general economic situation in the (RESPONDENT'S) country has become much worse, compared to 12 months ago) to 5 (the general economic situation has become much better).
5. *Sociotropic Prospective Perceptions.* A five-category variable ranging from 1 (the general economic situation in the (RESPONDENT'S) country in the next 12 months will become much worse) to 5 (the general economic situation will become much better).
6. *Egocentric Retrospective Evaluations.* A five-category variable, which ranges from 1 (personal financial situation has got much worse over the past year) to 5 (personal financial situation has got much better over the past year).
7. *Egocentric Prospective Evaluations.* A five-category variable, which ranges from 1 (personal financial situation is expected to become much worse in the next 12 months) to 5 (personal financial situation is expected to become much better in the next 12 months).
8. *Income.* For the convenience of comparing individual incomes from 16 different countries of Central and Eastern Europe, the income variable has been standardized into 20 categories, where 1 is the lowest income bracket and 20 is the highest income bracket.
9. *Unemployment Status.* Coded 1 for those who reported themselves as being unemployed.
10. *System Support.* A series of two dummy variables. The first one indicates positive feelings toward the new political system and is scored 1 if the respondent likes the new political system better than the old one. The second dummy variable indicates positive feelings toward the old system and is coded 1 if the respondent decides that the old political system is better than the new one.

11. *Democracy Satisfaction.* Varies from 1, meaning complete dissatisfaction with how democracy is working in the respondent's country, to 4, which corresponds to the respondent's complete satisfaction with democracy.
12. *Opinion about the market economy.* Coded as a dummy variable, where 1 indicates positive feelings for a market economy, and 0 means that the respondent thinks that market is a bad thing in general.
13. *Feelings towards the speed of economic reforms.* A dichotomous variable coded such that 0 corresponds to respondents' answers that there are no reforms in their countries or that the speed of the reforms is either too slow or too fast, and 1 indicates that respondents think that reforms proceed at the right speed. People who have received a score of 1 on this question are expected to be the ones who develop the most favorable attitudes toward the national economic situation.
14. *Gender* is coded 1 for female and 0 for male.
15. *Education.* The education variable has four categories, where 1=up to elementary, 2=secondary, but not completed, 3=completed secondary, and 4=higher education.
16. *Political Discussion.* A 3-category variable coded 1 for individuals who never discuss politics with their friends, 2 if they discuss politics occasionally, and 3 if political matters are discussed on a regular basis.
17. *Age* indicates the actual age of the respondent.

Appendix B. Effect Analysis for Retrospective Egocentric Perceptions

In order to determine relative effects of various measures of economic perceptions along with their direct and indirect effects, I used effects analysis or effect decomposition (Davis 1985), which requires OLS estimation of a series of reduced equations and a full model. Rather than trying to estimate direct and indirect effects for all the variables in the model, I limit my task in this study by only looking at the effects of retrospective egocentric economic perceptions. Unfortunately, it is impossible at this time to determine relative effects of sociotropic retrospective and prospective perceptions (besides their direct effects), because of their potentially reciprocal relationship. In other words, we cannot assume a unidirectional causal flow going from past sociotropic perceptions to national economic forecasts and vice versa. While people are likely to use their evaluations of past economic performance to form perceptions about economic future, they may also project their optimistic economic forecasts on their assessments of the recent economic past. The effect analysis presumes a fully recursive model or requires the use of an instrument in an event of reciprocity.

Total (Bivariate) Effects:

$$\text{Vote}_i = \alpha + \beta_1 \text{Egocentric Retrospective Perceptions}_i + \varepsilon_i$$

Causal Effects:

$$\text{Vote}_i = \alpha + \beta_1 \text{Egocentric Retrospective Perceptions}_i + \sum \beta_p X_{pi} + \varepsilon_i,$$

where β_p are coefficient estimates of p X-variables that are priors to Egocentric Retrospective Perceptions

Direct Effects (Estimated by a Full Model):

$$\text{Vote}_i = \alpha + \beta_1 \text{Egocentric Retrospective Perceptions}_i + \sum \beta_k X_{ki} + \varepsilon_i,$$

where β_p are coefficient estimates of k X-variables that are both priors and intervenors to Egocentric Retrospective Perceptions

Spurious Effects (Due to Priors): Total Effect – Causal Effect

Indirect Effects (Due to Intervenor): Causal Effect – Direct Effect

To determine total, causal, and direct effects of egocentric retrospective perceptions, all we need to do is to look at β_1 estimated by OLS in the first three equations. After simple calculations, the decomposition of the total and causal effects of personal economic perceptions looks as follows:

Total	.083	100%
Causal	.081	97.6%
Direct	.007	8.4%
Spurious	.002	2.4%
Indirect	.074	89.2%

As evident from the decomposition analysis, most of the total effect of egocentric economic perceptions is causal, but indirect. This is likely to be the reason why we do not find evidence for pocketbook voting in East Central Europe when we only estimate a

full voting model with both sociotropic and egocentric evaluations used as independent variables. A more elaborate causal model allowed me to decipher direct, indirect, and spurious effects of personal economic assessments on individuals' voting decisions, which led me to believe that people relied on both their pocketbook evaluations and national economic perceptions when casting a vote.

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