Economic performance and political outcomes: An analysis of the Turkish parliamentary and local election results between 1950 and 2004[†]

ALI T. AKARCA[1,*] & AYSIT TANSEL[2]

[1]*Department of Economics (mc 144), University of Illinois at Chicago, 601 S. Morgan Street, Chicago, IL 60607-7121, U.S.A.; Telephone: 1 312 996-1416; Fax: 1 312 996-3344;* [2]*Department of Economics, Middle East Technical University, 06531 Ankara, Turkey*
(**Author for correspondence: E-mail: akarca@uic.edu*)

Abstract. The results of twenty-five Turkish elections for parliament and local administrations between 1950 and 2004 are studied. Turkish voters are found to take government's economic performance into account but not look back beyond one year. Furthermore, they are found to hold the major incumbent party responsible for both growth and inflation but minor incumbent parties, only for inflation. Also, they appear to vote strategically, especially in local and parliamentary by elections, to diffuse power. Finally, all parties exhibit a steady depreciation in their political capital while in office. These conclusions are essentially in conformity with the literature on other countries.

1. Introduction

A well-informed electorate, which assesses a government's economic performance before voting, is essential to a well-functioning democracy and economic system. However, in making this assessment, whether the voters give similar weights to growth and inflation, whether they consider the entire tenure of a government or just its recent performance, whether they hold the major and minor parties in a coalition equally accountable, whether their support for a government rises or diminishes with the passage of time, and whether they vote strategically to diffuse power, are of great importance as well.

When the electorate emphasizes growth over inflation, and recent past over distant past, the governments will be provided with incentives to undertake populist policies before an election and deal with their adverse long-run

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effects after the election, giving rise to political business cycles. The administrations then will also be motivated to postpone, until after elections, the adjustments that are necessary for the long-run health of the economy, if such measures involve some short-run hardships.

When voters do not hold all parties in a coalition government equally accountable, this could lead to irresponsible behavior by some parties in power and may create friction between the coalition partners, which in turn can lead to the dissolution of the government and to political instability.

When the incumbents automatically lose votes over time for simply being in power and making the hard decisions, the lifetime of governments will be shortened and instability will be introduced into the system. The country then will be run frequently by inexperienced parties and leaders, and subjected to frequent elections.

When voters vote strategically to diffuse power, for example by voting in local elections against the parties in the central government, while creating more checks and balances for democracy, they also create a rift between central and local administrations. Then the coordination of policies at the central and local levels will be more difficult.

Consequently, a considerable amount of research is devoted to investigating the voter response to economic conditions. Surveys of these are provided by Lewis-Beck (1988), Nannestad and Paldam (1994), Norpoth (1996) and Lewis-Beck and Stegmaier (2000). There are very few studies on economic voting in Turkey. Notable among them are Bulutay and Yıldırım (1969), Bulutay (1970), Çakmak (1985), Çarkoğlu (1997), Akarca and Tansel (2002) and Genç, Şahin and Bekmez (2005). Of these, only the fourth, fifth and to some extent the third one used rigorous statistical analyses. The rest based their conclusions only on descriptive statistics. The first four of these have addressed only the question of whether economic conditions prevailing at the time of an election affect its outcome, ignoring other important questions pertaining to voter behavior. The last one considered in addition only the issue of voter myopia. Furthermore, the first three studies considered only agricultural prices and output, as determinants of electoral outcomes. While the fourth and the sixth considered economy-wide variables in explaining the voter behavior, their results are suspect due to errors in their data.[1]

The only study on Turkey to investigate all aspects of voter behavior posed above is Akarca and Tansel (2002). While the conclusions reached in that study are in conformity with the findings of studies on other countries, because they are based only on the 1995 election results, they need to be replicated in studies involving other Turkish elections, before they can gain full credibility.

Our aim in this paper is to analyze the results of parliamentary and local elections held between 1950 and 2004 in Turkey, and the political and economic conditions surrounding them, to check whether the conclusions we have reached in regard to the 1995 election in Turkey, using cross-section data, and

other researchers have reached about other countries, using both cross section and time series data, can be supported by more than half a century of time series data covering the entire democratic experience of Turkey.

2. Methodology

Our methodology involves regressing V_t, the vote share of the major incumbent party in election held at time t, on various subsets of the following variables: g_t, g_{t-1}, p_t, p_{t-1}, g_t. C_t, p_t. C_t, V_{t-k}, $\Delta(L_t + B_t)$. V_{t-k}, $\Delta (S_t)$. V_{t-k}, r_t. V_{t-k}, A_t, $D65_t$, $D91_t$, $D94_t$, $Z73_t$, $D75_t$, $D99_t$, $D02_t$, where $\Delta X_t = X_t - X_{t-k}$ and

V_{t-k}: vote share of the major incumbent party in the previous election held k years earlier

g_t: growth rate of the per capita real GDP during the one-year period preceding the election held at time t (henceforth referred to as the growth rate)

g_{t-1}: g_t lagged one year

p_t: inflation rate in GDP implicit price deflator during the one-year period preceding the election held at time t (henceforth referred to as the inflation rate)

p_{t-1}: p_t lagged one year

r_t: number of years the major incumbent party was in power since the previous election

A_t: ratio of state support funds received by the major incumbent party in the election year to the state support funds received by all other parties (the ratio is taken as unity in elections when no support is given by the state to the parties)

L_t: a dummy variable, which takes on the value of one if the election involved is for local administrations, and zero otherwise

B_t: a dummy variable, which takes on the value of one if the election involved is a National Assembly by-election only (that is, not held simultaneously with a Senate election), and zero otherwise (henceforth we will refer to elections in which B_t takes on the value of unity as by elections)

S_t: a dummy variable, which takes on the value of one if the election involved is a Senate election, and zero otherwise

C_t: a dummy variable, which takes on the value of one if the incumbent government is a coalition government, and zero otherwise.

$D65_t$: a dummy variable, which takes on the value of one in 1965, and zero in all other years

$D91_t$: a dummy variable, which takes on the value of one in 1991, and zero in all other years

$D94_t$: a dummy variable, which takes on the value of one in 1994, and zero in all other years

$Z73_t$: a dummy variable, which takes on the value of $+1$ in 1973, -1 in 1975, and zero in all other years

$D75_t$: a dummy variable, which takes on the value of one in 1975, and zero in all other years

$D99_t$: a dummy variable, which takes on the value of one in 1999, and zero in all other years

$D02_t$: a dummy variable, which takes on the value of one in 2002, and zero in all other years

The motivation for including g_t and p_t in our regressions of course is to measure the impact of contemporaneous economic conditions on election outcomes. We would expect the coefficients of these variables to be positive and negative, respectively. g_{t-1} and p_{t-1} are considered so that we can determine whether voters take earlier periods of administrations into account in making their evaluations. Longer lags were not considered because there were not sufficient number of observations for which the government was in power two or more years since the previous election, to fit dependable regressions. If our results for the 1995 elections in Turkey and the results of others on other countries are any guide, the coefficients of g_{t-1} and p_{t-1} should be close to zero and insignificant. If significant, the coefficient of g_{t-1} is expected to be less than that of g_t and the coefficient of p_{t-1}, to be less than that of p_t, in absolute value.

The interaction terms $g_t . C_t$ and $p_t . C_t$ are considered to check whether, in case of multi-party governments, some of the credit or blame for economic conditions is shared by the minor incumbent parties. This would manifest itself in a negative coefficient for $g_t . C_t$ and a positive coefficient for $p_t . C_t$. If the major incumbent party's return from economic conditions is not dependent on it being in power alone or in partnership with other parties, the estimated coefficients of these variables would not be significantly different from zero.

V_{t-k} is included in the equations to capture the political inertia in the political system. It stands for ideological affiliations and party loyalties, which die very slowly. The factors that influence a person's party preference in the previous election apart from economic conditions, such as his/her education, ethnic background, and socio-economic class, are not likely to have changed much in a few years. For that reason, we would expect the coefficient of V_{t-k} to be close to unity. However, it is likely to be less than one if the voters vote strategically against parties in power to diffuse their power. Such strategic voting is likely to be more prominent in local and National Assembly by elections. In these, voters get a chance to increase the power of the opposition parties, in local administrations and in the parliament, without altering the central government. We have considered the variable $\Delta(L_t + B_t)$. V_{t-k} to

determine whether strategic voting is stronger in local and by elections. We have entertained also the possibility that voters may use the Senate elections as well, to create additional checks and balances against the parties in power. The variable $\Delta (S_t)$. V_{t-k} is considered to capture this possibility. However, unlike local elections which influence balance of power only at the provincial level, and by-elections which result in small changes in the composition of the parliament, Senate elections which involve one-third of the seats in the Senate, are not likely to be seen by the electorate as a good vehicle for fine-tuning the balance of power.

$\Delta(L_t + B_t)$ takes a value of -1 if the previous election is a local or by election and the current election is not, a value of +1 if the current election is a local or by election and the previous one is not, and a value of zero if both elections in question are local or by elections or both are not local or by elections. Thus an extra strategic voting in local and by elections would be indicated if the coefficient of $\Delta(L_t + B_t)$. V_{t-k} variable is negative and significant. That would imply a loss in the support of the major incumbent party in the local and by elections, holding other factors constant. Similarly, a significant negative coefficient estimated for $\Delta (S_t)$. V_{t-k} would imply a loss of support for the major incumbent party in Senate elections relative to national assembly general elections.

Another reason why a party would lose a part of its vote share after it takes power is that it would alienate its supporters with the controversial decisions it makes while in office. It is also possible that voters may get tired of parties or leaders in power with the passage of time. Political scientists refer to this depreciation in the vote shares of incumbent parties over the lifetime of a government, as the "cost of ruling." To account for that, the r_t. V_{t-k} term is included in some of the regressions. r_t is defined as the time spent in power by the major incumbent party since the previous election, rather than since it first came to power, because inclusion of the lagged vote variable should account for any vote loss suffered by the party until the last election. If the literature on other countries is any guide, the parameter of the r_t. V_t term is expected to be negative.

We feel that capturing cost of ruling, and strategic voting in local and by, and Senate elections, through interaction terms, r_t .V_{t-k}, $\Delta(L_t + B_t)$. V_{t-k} and $\Delta (S_t)$. V_{t-k} is better than doing it simply through r_t, $\Delta (L_t + B_t)$, and ΔS_t because the vote loss due to being in power is not likely to be fixed across time and major incumbent parties, but proportional to their recent base support. Also, introduction of V_{t-k}, r_t. V_{t-k}, $\Delta (S_t)$. V_{t-k} , and $\Delta (L_t + B_t)$. V_{t-k} terms into our equations individually, allows us to separate strategic voting from cost of ruling and to distinguish between different types of strategic voting.

A_t is considered to measure the impact of state support received by the major incumbent party relative to its rivals.[2] One would expect the coefficient of this variable to be positive. However, because the state support is apportioned

among the parties according to their vote shares in the previous parliamentary general election, it is doubtful that A_t will make a significant contribution to a regression that already includes V_{t-k}.[3] Nevertheless, we considered A_t as well to see if it contains any additional information.

The dummy variables $D65_t$, $D91_t$, $D94_t$, $Z73_t$, $D75_t$, $D99_t$ and $D02_t$ are entertained to capture possible effects of unusual events preceding the 1965, 1973, 1975, 1991, 1994, 1999 and 2002 elections. In 1965, 1991 and 1994 major incumbent parties (Justice, Motherland, and True Path parties, respectively) entered the election under a different leader than the one presiding during the previous election.[4] The first three dummy variables listed are considered to gauge the impact, if any, these new leaders had on the vote shares of their parties. Shortly before the 1973 election, a political faction split from the Justice Party, the major incumbent party then, and formed their own party. This new Democratic Party siphoned off considerable amount of votes from the Justice Party in the 1973 election. However, these votes largely returned back to the Justice Party in the following election in 1975 and the Democratic Party virtually disappeared from the political scene after that election. $Z73_t$ is introduced to account for this loss and recapture of votes by the main incumbent party during the 1973–1975 period. The 1975 and 1999 elections were the first elections following the Turkish military intervention in Cyprus and the capture of Abdullah Öcalan, the long-sought leader of the terror organization PKK, respectively. The dummy variables $D75_t$ and $D99_t$ are included to measure the impact of these events on the vote shares of the major incumbent parties in the 1975 and 1999 elections. The coefficients of these variables should be negative if the parties in power at the times these events (Republican People's and Democratic Left parties, respectively) were rewarded by the voters at the expense of major incumbent parties at the times of elections that followed (Justice and Motherland parties, respectively). In the 2002 election, the aggregate vote share of incumbent parties (Democratic Left, Motherland and Nationalist Action parties) dropped to 14.7 percent from 53.4 percent in 1999. None of them were able to pass the 10 percent threshold to be represented in the parliament. The vote share of the major incumbent party, the Democratic Left Party, has decreased to 1.2 percent from 22.2 percent in the previous election, an unprecedented reduction of 95 percent. This was due to a chain of events, impact of which we tried to capture through the dummy variable $D02_t$. Refusal of the prime minister to resign, or even temporarily relinquish his power, despite his old age and incapacitating illness, and his self-publicized rift with the president, triggered a political crisis, shattered confidence in his government at a time when it was implementing austerity measures. The Turkish currency plummeted in foreign exchange markets. The inability or unwillingness of the government to eradicate or even take effective measures against rampant corruption further outraged the public. These chain of events led to a split in the prime minister's party and forced the government

to call an early election at an inopportune time. So incensed was the electorate, they eliminated from parliament not only all three of the incumbent parties, but also one of the major opposition parties (True Path Party), which led previous governments that were tainted by corruption accusations also. The winner was the newly formed Justice and Development Party which was able to convince the public that it would clean up the government and that it would disavow its Islamist origins. Although it is too early to tell, it appears that the 2002 election will prove to be a watershed event in Turkish politics, leading to a new political realignment.[5] The $D02_t$ is constructed to capture this.

It would be instructive if we could measure the impact of independent variables mentioned above, on the vote shares of minor incumbent parties as well. However, there are only ten coalition governments in our sample, hardly a sufficient number of observations to run reliable regressions, given the number of independent variables. Consequently, to gain some insight on whether voters hold major and minor coalition partners equally accountable for economic conditions, instead we fitted the best model for the major incumbent party, also to aggregate vote share of all incumbent parties and compared the two.

3. The Data and Background

Researchers studying the impact of economic events on election outcomes outside the U.S, face two data related problems. The data is scarce and the elections and changes in government do not always occur at the same time of the year. Overcoming both of these require making defensible, yet often, controversial assumptions.

The challenge of the first problem is to come up with a reasonable number of observations for a reliable estimation, without compromising the data. Usually this is attempted by pooling elections of different types, and even from different countries. The challenge of the second problem is to find a way to measure economic conditions preceding an election, using observations on periods comprised of time both before and after the election. This problem is exacerbated when quarterly data is not available. This is the case with Turkey. Although quarterly GDP figures are available for the latter part of our sample period, it is not for the entire period. To overcome this problem, usually the growth and inflation rates for the year of the election are used to represent the conditions at the time of the election, even when the election is held in the middle of the year. Sometimes when the election is held early in the year, the economic conditions for the previous year are utilized instead.

Our solution to the first problem was to pool parliamentary and local elections in Turkey. We have considered only the elections since 1946, when muti-party democracy was introduced. The Turkish parliament (Turkish Grand National Assembly) was uni-cameral prior to 1960 and is since 1983. Between 1961 and 1980, it consisted of two chambers: the National Assembly

and the Senate. In Turkey, elections for all local administrations (mayors, and members for city and provincial councils) are held simultaneously. The electorates for the Provincial Councils and the National Assembly are the same. So we chose the Provincial Council election results over other types of local elections, for inclusion in our sample.

Since 1946, 15 general and 9 by elections for National Assembly, 8 elections for the Senate and 12 elections for Provincial Councils have taken place. However, no detailed records exist on vote shares for 3 by elections held between 1947 and 1949, and for 3 local elections held between 1946 and 1955. This eliminates 6 of the 43 elections from consideration. Of the remaining 37, 4 elections have coincided with another election and, 3 either coincided with or have taken place within two months of two other elections, thus eliminating 10 more elections from inclusion in our sample.

In instances when different types of elections are held simultaneously or almost simultaneously, the priority for inclusion in our sample was given first to the National Assembly general elections, next to the Provincial Council elections, then to the Senate elections, and last to the by elections. The Senate and the by elections were given lower priorities because, unlike the National Assembly general elections and local elections, they did not cover the whole country. The Senate elections involved only a third of the provinces and only a third of the seats in the Senate that were subject to election. The coverage of the by elections were even less, about 15–27 percent of the provinces when they did not coincide with a Senate election. When the Senate and by elections were held simultaneously, we aggregated their results to increase the coverage of the country. In such an aggregation, for provinces where the two elections did overlap, we have taken only the results of the Senate election.

At the time of 1961 and 1983 elections there were no incumbent parties, as the military was in charge. We eliminated the latter election as a data point but kept the former, treating Republican People's Party as the incumbent party. This party was allied with the military regime at the time or at least perceived by the public as such, and the votes cast for the other parties in 1961 were largely in opposition to the military regime and Republican People's Party.[6] Although a new party, openly favored by the military regime, entered the 1983 election, since no data exists on its lagged vote share, we could not use the 1983 election results in our sample, other than to get the value of the lagged vote share variable for the 1984 election. The 1946 election results are used in the same manner. While not included as a data point, it allowed us to obtain the lagged vote share for the 1950 election.

The elections included in our sample are listed in Table A1 of the Appendix. The Turkish acronyms of incumbent parties are given in the table as well, and their names in English are presented in note b of the table. For each election, the party listed first in the table is the major incumbent party. This is defined as the party with the largest number of cabinet members. For the 1999 election,

not the minority caretaker government in power at the time, but the government in power until four months prior to that, for over eighteen months, is taken as the incumbent. Of the 27 elections listed in Table A1, 21 were held over the entire country, and 6 over parts of it. In the case of the latter, the provinces covered by the election were not concentrated in any one region but spread across the country. Thus we assumed that their results can be attributed to the country as a whole.

How we measured the time spent in power by incumbent parties, is explained in notes c and d of Table A1. How we addressed the second challenge, mentioned at the top of this section, is explained in detail in notes e and f to Table A1. Essentially, the growth and inflation rates prevailing before an election, g_t and p_t, are constructed as a weighted average of their values during the election year and the one preceding it, with the weights varying according to the point in the year at which the election has taken place. Exceptions were made for the 1965, 1975 and 1984 elections, when all the weight is given to the election year. The governments serving during these years were either not in power in the previous year or were in power for less than half a quarter.[7]

The variables g_{t-1} and p_{t-1} are computed similarly as a weighted average of growth and inflation rates, repectively, during the two years preceding the election year. In general, for each election, the same weights as the one utilized in computing g_t and p_t are used. However, for 1951, 1961, 1966 and 1979 elections, all the weight is placed on the year preceding the election year, as the party or parties in question were either not in power during the year prior to that or were in power less than half a quarter.

The data used in the regressions presented in this study and their sources are given in Table A1 of the Appendix.[8] For detailed histories of Turkish elections, political parties, and governments, the reader is referred to Tuncer (2002).

4. Empirical Results

The results of our key regressions, estimated using the method of Ordinary Least Squares, are given in Table 1. These include, besides the estimates of parameters and their t-statistics in absolute value, the R^2, the adjusted R^2, and F values, for judging the fit of the equations, and Durbin's (1970) h and White's (1980) chi-square statistics and their probability values to check for autocorrelation and heteroskedasticity in the residuals and any misspecification in the equations considered.[9] The dependent variable in each regression, is the vote share of the major incumbent party.

Of the regressions in Table 1, the sixth is the one that fits the data best and is the one upon which we will base our conclusions. We will analyze this regression and some extentions to it in the next subsection. The other regressions

Table 1. OLS coefficient estimates and summary statistics

Independent variables					Regressions[a]					
	1	2	3	4	5	6	7[b]	8[c]	9[b]	10
Constant	−2.21	−0.01	−2.06	−4.65	15.38[e]	9.30[e]	1.43	10.62	−0.29	8.52
	(0.37)	(0.00)	(0.47)	(1.33)	(2.49)	(1.79)	(0.63)	(1.28)	(0.09)	(0.96)
Z_t		−13.48[d]	−9.22[e]	−8.67[d]	−7.32[e]	−7.32[d]	−7.74[d]	−8.50[e]	−6.31	
		(2.91)	(2.12)	(2.56)	(2.08)	(2.63)	(2.67)	(1.81)	(1.37)	
D_t		−19.33[d]	−15.88[d]	−16.30[d]	−19.00[d]	−18.61[d]	−16.06[d]	−19.13[d]	−14.93[d]	
		(2.80)	(2.60)	(3.44)	(3.83)	(4.75)	(4.25)	(3.48)	(3.10)	
V_{t-k}	0.96[d]	0.93[d]	1.11[d]	1.06[d]	0.78[d]	0.82[d]	1.00	0.73[d]	1.00	0.72[d]
	(6.71)	(7.75)	(9.14)	(11.14)	(5.75)	(7.59)		(3.85)		(4.26)
g_t				1.12[d]		0.88[d]	0.93[d]	1.04[d]	0.88[e]	1.12[e]
				(3.67)		(3.43)	(3.45)	(2.98)	(2.57)	(2.33)
g_{t-1}								0.04	0.21	
								(0.14)	(0.71)	
p_t					−0.16[d]	−0.13[d]	−0.08[d]	−0.10	−0.16	−0.14[e]
					(3.44)	(3.21)	(2.73)	(0.91)	(1.48)	(1.98)
p_{t-1}								−0.03	−0.10	
								(0.24)	(0.92)	
$r_t \cdot V_{t-k}$			−0.07[d]	−0.05[e]	−0.06[d]	−0.05[d]	−0.06[d]	−0.03	−0.06[d]	
			(2.64)	(2.54)	(2.89)	(2.95)	(3.81)	(1.20)	(2.82)	

Table 1. (Continued)

Independent variables	Regressions [a]									
	1	2	3[b]	4	5	6	7[b]	8[c]	9[b]	10
$\Delta(L_t + B_t) \cdot$ V_{t-k}			−0.07[e] (1.76)	−0.08[d] (2.57)	−0.04 (1.35)	−0.06[e] (2.21)	−0.07[d] (2.70)	−0.06[e] (2.02)	−0.06[e] (1.90)	
R^2	0.66	0.82	0.87	0.93	0.92	0.96	0.95	0.96	0.95	0.79
Adj. R^2	0.65	0.79	0.84	0.90	0.90	0.94	0.93	0.93	0.92	0.76
F	45.03[d]	30.95[d]	26.61[d]	38.93[d]	36.75[d]	52.08[d]	54.89[d]	30.81[d]	31.95[d]	26.38[d]
Durbin-h	−2.25[d]	−0.90	−0.47	0.11	−0.46	0.11	−0.07	−0.72	−0.26	−2.87[d]
Probability	0.01	0.18	0.32	0.46	0.32	0.45	0.47	0.23	0.40	0.00
White Chi-sq	1.40	5.12	9.78	15.79	10.44	17.80	21.05	21.92	19.99	5.37
Probability	0.50	0.53	0.71	0.67	0.94	0.85	0.74	0.64	0.79	0.80

Notes. [a] The dependent variable in all of the regressions is V_t, the vote share of the only or major incumbent party. For the definitions of independent variables, see Section 2. The numbers in parentheses are the t-values in absolute value.

[b] The coefficient of V_{t-k} is restricted to be unity.

[c] The sample excludes 1965, 1975 and 1984 elections. Durbin's h could not be obtained and t-statistic is given instead.

[d] Significant at 1 percent level (one-tail test).

[e] Significant at 5 percent level (one-tail test).

in the table are presented because valuable lessons can be drawn from a comparison of these, which will be done in the subsection following next.

4.1. *Main findings*

The model that represents the behavior of the Turkish electorate best is the following:

$$V_t = 9.30 - 7.32Z73_t - 18.61D02_t + 0.82V_{t-k} + 0.88g_t - 0.13p_t - 0.05r_t$$
$$\cdot (1.79) \quad (2.63) \qquad (4.75) \qquad (7.59) \quad (3.43) \quad (3.21) \quad (2.95)$$
$$\cdot V_{t-k} - 0.06\Delta(L_t + B_t) \cdot V_{t-k} + e_t \tag{1}$$
$$(2.21)$$

$R^2 = 0.96$, adj. $R^2 = 0.94$, $F = 52.08$, White chi-sq. $= 17.80$ ($p = 0.85$), Durbin $h = 0.11$ ($p = 0.45$).

This model explains 96 percent of the variation in the vote share of the major incumbent party. It exhibits no autocorrelation or heteroscedasticity in its residuals and no evidence of misspecification. According to it, each percentage point increase in the growth rate of per capita real GDP during the one-year period before the election, is expected to raise the share of the major incumbent party in the total vote by 0.88 percentage points. Each percentage point increase in the inflation rate during the same period, on the other hand, lowers this share by 0.13 percentage points or by about one-seventh of that of the growth rate. Thus an incentive exists for Turkish governments to adopt populist policies before elections, especially considering the fact that economic conditions more than a year before the election does not matter, as we will discuss below. As long as it does not generate an additional inflation exceeding 6.8 percentage points, a stimulation of the economy that results in a percentage point increase in growth rate is advantageous to the main incumbent party. The coefficient of V_{t-k} is close to unity, indicating a strong political inertia. However the parameter is less than unity, consistent with strategic voting. The model predicts that the major incumbent party is expected to lose 18 percent of its vote in the previous election of the same type for simply being the incumbent. This loss is estimated to be 24 percent in local and by elections that follow regular parliamentary elections, and 12 percent in regular parliamentary elections that follow local or by elections.[10] In addition, the major incumbent party's vote share is anticipated to depreciate at the rate of 5 percent per year, presumably for making the controversial decisions while in office. Thus in between two parliamentary elections held four or five years apart, the maximum length allowed by the 1961 and 1983 constitutions respectively, the primary ruling party is expected to lose 38–43 percent of its vote share. This may explain why the elections are almost always held in

Turkey way before their constitutionally mandated time and why the tenure of governments were often short except in few instances when major incumbent party's vote share was quite high to start with. This finding negates a widely held view in the Turkish media and public that being in power creates an advantage for a party through its use of patronage and government transfers. Apparently, that advantage is more than cancelled by the alienation it causes through its decisions. Likewise, any advantage a ruling party enjoys in local elections through its ability to transfer central government resources to those local administrations under the party's control, is more than wiped out through the strategic voting by the electorate. In 2002 the major incumbent party appears to have received 18.61 percent less of the total vote than was expected, given the economic conditions, the type of election and the number of years it was in power. Similarly, it appears that the fragmentation of the incumbent party in 1973 caused it to lose 7.32 percent of the total vote, which it was able to recoup in 1975.[11]

Addition of g_{t-1}, p_{t-1}, g_t. C_t, p_t. C_t, $\Delta (S_t)$. V_{t-k}, A_t, $D65_t$, $D91_t$, $D94_t$, $D75_t$ and $D99_t$ to equation 1, either individually or in subgroups, failed to increase its explanatory power significantly. In each case the t-values of the estimated coefficients were far smaller than the critical values for 5 percent level of significance. Insignificance of these variables however have quite significant implications for the understanding of the behavior of Turkish voters. For brevity, we have included in Table 1 only the extension involving the lagged growth and the lagged inflation rates, but we will go over the implications of finding other variables insignificant as well. Finding g_{t-1} and p_{t-1} insignificant (in column 8 of Table 1) leads us to believe that Turkish voters are myopic, not looking back more than one year in evaluating government's economic performance. Insignificance of g_t. C_t and p_t. C_t shows that the influence of economic conditions on the vote share of major incumbent party is not different when the party is in power alone than when it rules in partnership with other parties. If minor parties in a coalition get some credit (or blame) for the economy, it is not at the expense of their major partner but perhaps at the expense of opposition parties. Insignificance of $\Delta (S_t)$. V_{t-k} term implies that Turkish electorate did not vote in Senate elections to check and balance the power of major incumbent party, any more than they do in National Assembly elections. Insignificance of A_t implies that either the state support to major incumbent party, relative to its rivals, is not important to the outcome of the election or that its influence is sufficiently captured by the lagged vote share variable in the equation. Insignificance of $D65_t$, $D91_t$ and $D94_t$ reveal that the new leaders of major incumbent parties did not alter their party's fortunes in the 1965, 1991 and 1994 elections. Insignificance of $D75_t$ and $D99_t$ implies that Cyprus intervention and the capture of Öcalan either did not benefit the parties in power at the times of these events or it benefited, but not at the expense of the major incumbent parties at the times of elections that followed.

Unable to fit an equation similar to (1) for just the minor incumbent parties, due to lack of data, we have instead fit the equation to data for aggregate vote share of all incumbent parties, yielding:[12]

$$V_t = 15.92 - 6.26Z73_t - 24.56D02_t + 0.73V_{t-k} + 0.45g_t - 0.14p_t - 0.06r_t$$
$$\cdot (1.89) \quad (1.44) \qquad (3.78) \qquad (4.06) \qquad (1.07) \quad (2.58) \quad (2.00)$$
$$\cdot V_{t-k} - 0.07\Delta(L_t + B_t).V_{t-k} + e_t \qquad\qquad\qquad (2)$$
$$(1.63)$$

$R^2 = 0.84$, adj. $R^2 = 0.77$, F $= 12.62$, White chi-sq. $= 24.69$ ($p = 0.48$), Durbin $h = 0.84$ ($p = 0.20$).

The fit of the model to all incumbent parties is not as good as its fit to just the major incumbent party, as can be observed from the drop in the R^2 and F values. While the coefficient of the inflation rate is about the same in both equations, the coefficient of the growth rate in Equation (2) is half as much as it is in equation 1 and is not significant at conventional levels. This implies that the economic growth do not affect the fortunes of the minor parties in the government or at least not as much as the major party. This is likely to affect the harmony of a coalition government adversely and may contribute to the shortening of its life. We had noted above that minor coalition parties do not seem to get any credit (or blame) for economic growth at the expense of the primary coalition party. Now, we can state that they do not seem to get it at the expense of opposition parties either. Interestingly, they seem to get blame for inflation and credit for lowering it but not at the expense of their primary partner but at the expense of opposition parties. There is a general belief in Turkey that coalitions lead to increased inflation because of the competition among coalition partners to reward their supporters with patronage and transfers. Our results confirm that the electorate is aware of this and holds all of the ruling parties responsible for inflation. The coefficient of $D02_t$ is larger in equation 2, confirming that not only the major incumbent party but all incumbent parties suffered unusual losses in the 2002 election. Compared to equation 1, in equation 2 the coefficient of V_{t-k} is lower and that of $\Delta(L_t + B_t) \cdot V_{t-k}$ and $r_t . V_{t-k}$ are higher in absolute value but not significantly. All of the other coefficients in the regressions are roughly of the same magnitude and significance. Thus the proportion of the vote lost due to incumbency, time spent in power, and strategic voting, appears to be either the same or slightly higher for the minor incumbent parties than for the major incumbent party.

4.2. *Other findings*

The regressions in Table 1, with the exception of seventh and ninth ones, are given essentially to gauge the contributions made by various variables

or groups of variables to the explanation of Turkish voter behavior and to understand the possible consequences of omitting them. The regressions in columns 7 through 10 of Table 1 are to check the robustness of our estimaters pertaining to the impact of economic variables. The first regression is a naive inertia model and is presented as a yardstick against which other models can be compared. The second regression is this model with the dummy variables to account for peculiarities of the 1973, 1975 and 2002 elections. The third regression includes two additional variables to control for and measure the effects of cost of ruling and strategic voting in local and by elections. In the next three regressions, the growth and inflation rates are introduced individually and jointly. In the eighth regression, lagged growth and inflation rate variables are added to the sixth regression, as discussed above. The seventh and ninth regressions are the same as the sixth and eighth regressions, except with coefficients of lagged vote share variable restricted to unity.

A comparison of the regressions in Table 1 reveals some interesting patterns. For example, inclusion of the $r_t \cdot V_{t-k}$ and $\Delta (L_t + B_t) \cdot V_{t-k}$ terms in the equation results in an increase in the explanatory power of the model and a reduction in the residual autocorrelations. Thus their presence in a vote equation improves its specification. Also, when $r_t \cdot V_{t-k}$ and $\Delta (L_t + B_t) \cdot V_{t-k}$ terms are not included in a regression, the estimated coefficient of the lagged vote variable is substantially lower and appears to reflect partially the cost of ruling and the strategic voting in local and by elections. This information is quite useful in interpreting the results of cross section studies involving a single country, in which these terms cannot be included as they are constant across observations.

Also, inclusion of the inflation rate variable in the regressions results in a substantial reduction in the coefficients of the lagged vote share and the growth rate, and in an increase in the adjusted R^2. Dropping this variable from a regression, actually changes the estimate of the lagged vote variable from below unity to above unity, reversing the incumbency disadvantage into an incumbency advantage. Thus its absence in vote equations is likely to create an "omitted variables" problem in time series regressions. This probably will be less of a problem in cross section studies involving a single country though, as the inflation rate varies much less across provinces than across years. Cost of transporting goods freely between provinces is likely to be much less than keeping inventories over time.

Addition of the growth and inflation rates into the naive inertia model raises the R^2 from 0.66 to 0.79, and their addition to the model that already includes inertia, dummy, cost of ruling and strategic voting variables raises the R^2 from 0.87 to 0.96. Thus the two economic variables add to the explanatory power of the vote equation. It is remarkable that even dropping dummy, strategic voting and cost of ruling variables from the best-fitting model (as is done in the last regression in Table 1) does not alter the estimated coefficients of economic

variables appreciably. This however does not mean that other variables can be safely ignored. Dropping them from the equation reduces the adjusted R^2 From 0.96 to 0.76 and results in autocorrelated residuals.

Some studies on U.S. Congressional elections, observed that the significance of economic variables in a vote equation depends on whether the dependent variable is taken as the vote share or the difference (swing) in the vote shares. The latter is equivalent to restricting the coefficient of lagged dependent variable in a vote share equation to unity. Doing this in the seventh regression, we found that the size and significance of the coefficients of growth and inflation rates did not change appreciably.[13] Similarly, applying the same restriction on the eighth regression did not render lagged growth and inflation rates significant. Thus our results concerning the impact of economic conditions on election outcomes appear to be quite robust. They do not depend on the choice of other explanatory variables and on whether the dependent variable is taken as the vote share or the vote swing.

5. Comparisons with Other Studies

Our main conclusion in this paper that the state of the economy influences the Turkish voters in casting their ballots, is the same as the one we (2002) have reached earlier, studying the cross-provincial data pertaining to the 1995 National Assembly general election in Turkey, and is similar to the ones reached by the majority of the studies on voters in other countries. There are very few studies in the literature which fail to find a connection between economic growth and election outcomes. These studies involve predominantly the U.S. Congressional elections, such as Erikson (1988, 1990), Alesina and Rosenthal (1989 and 1995), Alesina, Londregan and Rosenthal (1993) and Lynch (2002). However, the conclusions of these have been challenged by Jacobson (1990), Kiewiet and Udell (1998) and Grier and McGarrity (2002), who argued respectively that when proper specification is utilized, when better data is used and when the incumbency of the congressional candidates running for office is accounted for, growth in per capita real income exhibits a significant influence on the outcomes of House of Representatives elections. Contrary to what Erikson (1988, 1990) and Jacobson (1990) found for U.S. congressional elections, we found that the significance of economic conditions in a Turkish vote equation is not dependent on whether the dependent variable is taken as vote share or vote swing.

Our finding that the growth rate more than a year before an election does not affect its outcome, is in conformity with the findings of Fair (1978, 1982, 1988, 1996 and 2002) who studied this issue extensively in U.S. presidential elections. He concluded that the growth rate only during 2–3 quarters preceding the election matters for the incumbent party's vote share. In fact, studies that use the growth rate in output or in per capita output during the election year

as the main economic determinant of the incumbent government's electoral success, either finding or assuming growth in earlier years to be irrelevant, abound in the literature. Beside Fair (1978, 1982, 1988, 1996, 2002), these include time-series studies by Lewis-Beck and Rice (1984a), Burdekin (1988), Gleisner (1992), Chappell and Suzuki (1993), Alesina, Londregan and Rosenthal (1993, 1996), Alesina and Rosenthal (1995) and Lewis-Beck and Tien (1996) on U.S. presidential elections, by Kramer (1971), Lewis-Beck and Rice (1984b), Kiewiet and Udell (1998), and Grier and McGarrity (2002) on U.S. congressional elections, by Lewis-Beck (1997) on French presidential elections, cross-state time-series study by Peltzman (1987) on U.S. gubernatorial elections, cross-state study by Blackley and Shepard (1994) on a U.S. presidential election, cross-provincial study by Akarca and Tansel (2002) on a Turkish parliamentary election, pooled cross-national time-series studies by Powell and Whitten (1993) on 102 parliamentary elections in 19 industrialized countries, Pacek and Radcliff (1995) on 52 presidential elections in 8 developing countries, Wilkin, Haller and Norpoth (1997) on 38 parliamentary and presidential elections in 38 developed and developing countries, and Chappell and Veiga (2000) on 136 parliamentary elections in 13 Western European countries. However Peltzman (1990) analyzing U.S. presidential, senatorial and gubernatorial election outcomes, using pooled cross-state time-series data, and Abrams and Butkiewicz (1995) analyzing the outcome of a U.S. presidential election, using cross-state data, concluded that voters consider information from the incumbent's whole term, not just its final year. Their results nevertheless indicate that voters give relatively more weight to recent past of an administration than its distant past. Strumpf and Phillippe (1999) analyzing U.S. presidential election results, utilizing pooled cross-state time-series data, found growth in per capita real personal income two years prior to an election to be most relevant to its outcome. Genç, Şahin and Bekmez (2005) who studied 10 National Assembly elections in Turkey between 1950 and 1991 have argued against voter myopia in the case of Turkish voters. However, their assertion is not based on any statistical testing but solely on the fact that in two elections (out of 10) the major incumbent party won despite negative growth rates during the election year.[14] Furthermore, their approach fails to control for other factors.

The estimates obtained by the studies cited above except one, for the vote gained by the incumbent government due to a percentage increase in the election year growth rate, range from 1.0 to 1.8 percent of the total vote, when the growth rate is measured as the percentage change in real GDP, real GNP or real income, and range from 0.2 to 1.4 percent, when the growth rate is measured as the percentage change in per capita real GDP, per capita real GNP or per capita real income. Strumpf and Phillippe's (1999) estimate of 3.0 in this regard is an outlier. Our coefficient estimate of 0.88 is right in the middle of the 0.2 to 1.4 range. However, this is much higher than the

estimate of 0.37 we (2002) have obtained using the results of the 1995 Turkish parliamentary election at the provincial level. Nevertheless, our conclusion here concerning the memories of voters is the same as the one we reached in our (2002) cross-section study.

Unlike the growth rate, there is no consensus in the literature on the importance of the inflation rate in economic voting. Our conclusion concerning the role of inflation rate in the Turkish case, namely that its recent level, but not its values more than one year before the election, matters and that its influence is less than that of the growth rate, is supported by only some of the studies mentioned above. The only study among them to consider separately, the inflation rate during the election year and the one preceding it, is Wilkin, Haller and Norpoth (1997). They found both to be insignificant. Fair (1978, 1982, 1988, 1996, 2002) who considered average inflation rates for various pre-election periods, concluded that the average inflation rate during the 15 quarters preceding a U.S. presidential election is the most explanatory of them all. He estimated its influence on the vote to be about the same in magnitude as that of the average growth rate during the 3 quarters preceding the election. He offered no plausible explanation however, as to why voters have longer memories when it comes to inflation. Burdekin (1988) and Gleisner (1992) considered the average inflation rate during the two years preceding a U.S. presidential election. They found this variable to be significant and marginally significant, respectively. In the former, the magnitude of its effect is found to be about half as much as that of average growth rate in real GNP during the election year. In the latter study however, this influence, in absolute value, is estimated to be about equal to that of the average growth rate in per capita real GNP during the second and third quarters of the election year. Chappell and Suzuki (1993), Kiewiet (1998), Chappell and Veiga (2000) and Lynch (2002) found the inflation rate during the election year to impact the incumbent party's vote share in the House of Representatives elections. The first and the fourth of these have estimated the coefficient of the inflation rate to be about four times in magnitude of that of the growth rate. In the second one, the estimated parameter of the inflation rate was either slightly higher or slightly lower than the estimated parameter of the growth rate, depending on the income series used. In the third paper, even though the estimated coefficient of the inflation rate was significant, the growth rate's was not. The impact of the inflation rate during the four quarters preceding the election is found to be significant also by Powell and Whitten (1993) for their cross-national data, and by Chappell and Suzuki (1993) for presidential and senatorial elections.

The estimated coefficient of the inflation rate in vote share equations, in studies, that find it significant, range from –0.1 to –0.8. Our estimate of –0.13 is in the lower end of this spectrum. However, it will move closer to the center, if we consider also the many studies in which this parameter turned out to be not significantly different than zero. We should note that in making a comparison

with other studies, one has to take into consideration the fact that the inflation rate in Turkey, is higher in general than in most of the other countries studied.

Our other main finding, namely that voters distinguish between major and minor parties in a governing coalition and hold only the primary incumbent party accountable for economic growth, is also supported by the few studies that examined this issue in other countries. Wilkin, Haller and Norpoth (1997) who analyzed 38 presidential and parliamentary elections in 38 developed and developing countries, Tucker (2001) who analyzed data from 10 post-communist parliamentary elections in 5 Eastern European countries, and Akarca and Tansel (2002) who analyzed cross-provincial data on one Turkish election, have reached the same conclusion we have in this regard.

According to our model, due to strategic voting by the electorate and due to depreciation in its political capital as a result of the tough decisions it makes, the major incumbent party is anticipated to lose 23 percent, 28 percent, 33 percent, and 38 percent of its vote share after ruling one, two, three and four years, respectively. Studying the 1995 Turkish parliamentary general election, we (2002) had estimated an erosion of 35 percent in the vote share of the major incumbent party after four years of ruling. A vote equation fitted by Çakmak (1985) to the cross-section data for the 1957 Turkish parliamentary election, implies a 43 percent vote loss after about 3.5 years of ruling for the incumbent party. What we found here is almost the same as what was found in these two studies.

Depreciation in the votes of incumbent parties is not unique to Turkey but well established in the literature. The magnitude and speed of the depreciation however varies from study to study. Whitten and Palmer (1999), analyzing a pooled data involving 142 elections in 19 industrialized democracies, measured the vote loss of incumbent parties between two elections to be 47 percent when the clarity of government's responsibility is high, 25 percent when it is mixed and only 11 percent when it is low. Chappell and Veiga (2000) studied a pooled data involving 136 parliamentary elections in 13 Western European countries and found the vote loss by incumbent parties between elections to be typically about 30 percent. These estimates are not too different than ours.

Our results also indicate a 6 percent drop in the primary incumbent party's vote share in local and by elections relative to parliamentary general elections. While we cannot make a direct comparison on this with studies on other countries, the estimates of the drop in the vote share of the president's party in midterm House elections in the U.S. can give us some basis for comparison. Controlling for other variables, Alesina, Londregan and Rosenthal (1993) and Alesina and Rosenthal (1995) found that the presidential party's U.S. House vote decreases between an on-year election and the midterm election that follows it. They attribute this to strategic voting by the electorate in an attempt to establish better checks and balances against the administration in power. Our vote equation implies that the major incumbent party will lose

$[18 + (2 \times 5) + 6] = 34$ percent of its vote share between a parliamentary general election and a local election held two years later. This is well within the 28–41 percent range obtained by Lynch (2002) for the vote loss of the incumbent party in the U.S. in midterm House election relative to the party's previous presidential vote share but larger than the 14 percent drop in the share of the president's party between on-year and off-year congressional elections, estimated by Alesina, Londregan and Rosenthal (1993) and Alesina and Rosenthal (1995). However, the latter two studies also estimate a vote loss of 26 percent in the incumbent party's presidential vote share relative to the party's vote share in the previous house election. This figure is comparable to $[18 + (2 \times 5) - 6] = 22$ percent vote loss, estimated by our equation for the primary incumbent party, between local and parliamentary elections two years apart.[15]

6. Summary and Conclusions

Our statistical analysis of the results of the Turkish parliamentary and local elections since 1946, the year the multi-party democracy was introduced in Turkey, and the economic and political conditions surrounding them, leads us to conclude that Turkish voters take changes in economic conditions into account in casting their ballots. In evaluating a government's performance, they take into consideration the growth both in their income and in the prices they face. However, they appear to emphasize the former over the latter. Also, they seem to not look back beyond more than a year in making their assessment and they seem to hold only the major party in a coalition government responsible for their economic growth but all parties in power for the inflation. The evidence found also shows that a sizable portion of the electorate votes strategically to diffuse power by shifting their support from the incumbent parties to the opposition parties. This is more pronounced in local and by elections than in parliamentary general elections. The decisions they make while in office also appear to result in a steady depreciation of the political capital of all incumbent parties, major or minor. These conclusions are essentially in conformity with the findings of studies on other countries and our earlier study on the 1995 Turkish parliamentary election. They are also very robust across various specifications. One key lesson obtained from our study is that it is inappropriate in general, to analyze the vote shares of incumbent parties in the aggregate, a practice quite common among researchers of economic voting.

Our findings suggest that at the root of the relatively short tenures of Turkish governments, their frequent indulgence in populist policies, and the frequency of elections that are called sooner than their time, lie the behavior of the Turkish electorate.

Table A1. Political and economic conditions, and electoral outcomes

Election date	Election type[a]	Provinces covered by the election	Incumbent parties[b]	Vote share (%) Major incumbent party	Vote share (%) All incumbent parties	Previous vote share (%) Major incumbent party	Previous vote share (%) All incumbent parties	Time in power since last election (Years) Major incumbent party[c]	Time in power since last election (Years) All incumbent parties[d]	Growth rate[e] (%) t	Growth rate[e] (%) t − 1	Inflation rate[f] (%) t	Inflation rate[f] (%) t − 1
July 21, 1946	A	63 of 63	CHP	54.0	54.0								
May 14, 1950	A	63 of 63	CHP	39.4	39.4	54.0	54.0	3.75	3.75	−3.5	−0.2	−0.2	0.4
Sep. 16, 1951	B	17 of 63	DP	52.7	52.7	52.7	52.7	1.25	1.25	9.2	7.1	4.3	−2.1
May 2, 1954	A	64 of 64	DP	57.6	57.6	52.7	52.7	2.50	2.50	4.8	8.7	4.9	3.2
Oct. 27, 1957	A	67 of 67	DP	47.9	47.9	57.6	57.6	3.50	3.50	3.6	1.9	20.3	11.7
Oct. 15, 1961	A	67 of 67	Military	36.7[g]	36.7[g]	41.1[g]	41.1[g]	1.25	1.25	−0.7	0.0	4.2	3.9
Nov. 17, 1963	L	67 of 67	CHP/YTP/CKMP	36.2	45.8	36.7	64.4	2.25	1.50	6.8	3.5	5.7	9.5
June 7, 1964	S	26 of 67	CHP	40.8	40.8	36.2	36.2	0.50	0.50	4.2	5.1	4.1	7.6
Oct. 10, 1965	A	67 of 67	AP/CKMP/YTP/MP	52.9	65.1	50.3	56.8[h]	0.50	0.50	0.1	i	4.2	i
June 7, 1966	S + B	24 of 67	AP	56.5	56.5	52.9	52.9	0.75	0.75	4.6	0.1	5.2	4.2
June 2, 1968	L	67 of 67	AP	49.1	49.1	56.5	56.5	2.00	2.00	3.7	5.4	5.3	6.5
Oct. 12, 1969	A	67 of 67	AP	46.5	46.5	49.1	49.1	1.25	1.25	2.5	4.7	6.5	4.6
Oct. 14, 1973	A	67 of 67	AP/CGP	29.8	35.1	46.5	53.1	4.00	2.50	1.7	4.3	19.2	12.8
Oct. 12, 1975	S + B	27 of 67	AP/MSP/CGP/MHP	41.3	53.0[j]	29.8	50.3	0.75	0.50	4.4	i	21.0	i
June 5, 1977	A	67 of 67	AP/MSP/CGP/MHP	36.9	53.7	41.3	53.0[j]	1.75	1.75	4.7	6.3	19.4	18.0
Oct. 14, 1979	S + B	29 of 67	CHP/CGP/DP2	29.2	31.6[k]	41.4	45.1	1.75	1.75	−2.2	−0.6	68.4	46.7
Nov. 6, 1983	A	67 of 67	Military										
Mar. 25, 1984	L	67 of 67	ANAP	41.5	41.5	45.1	45.1	0.25	0.25	4.1	i	48.2	i

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Table A1. (Continued)

Election date	Election type [a]	Provinces covered by the election	Incumbent parties [b]	Vote share (%)		Previous vote share (%)		Time in power since last election (Years)		Growth rate [e] (%)		Inflation rate [f] (%)	
				Major incumbent party	All incumbent parties	Major incumbent party	All incumbent parties	Major incumbent party [c]	All incumbent parties [d]	t	$t-1$	t	$t-1$
Sep. 28, 1986	B	10 of 67	ANAP	32.1	32.1	41.5	41.5	2.50	2.50	3.9	2.3	40.3	51.9
Nov. 29, 1987	A	67 of 67	ANAP	36.3	36.3	32.1	32.1	1.25	1.25	7.1	4.7	33.6	36.0
Mar. 26, 1989	L	71 of 71	ANAP	21.8	21.8	36.3	36.3	1.25	1.25	−0.6	5.3	70.8	42.5
Oct. 20, 1991	A	74 of 74	ANAP	24.0	24.0	21.8	21.8	2.50	2.50	0.9	4.5	58.7	62.6
Mar. 27, 1994	L	76 of 76	DYP/SHP	21.4	35.0	27.0	47.8	2.25	2.25	2.8	4.5	77.5	64.7
Dec. 24, 1995	A	79 of 79	DYP/CHP	19.2	29.9	21.4	39.6[l]	1.75	1.75	5.3	−7.1	87.2	106.5
Apr. 18, 1999	A	80 of 80	ANAP/DSP/DTP[m]	13.2	36.0	19.6	34.3[n]	2.00	1.75	−0.4	6.3	70.7	80.0
Nov. 3, 2002	A	81 of 81	DSP/MHP/ANAP	1.2	14.7	22.2	53.4	3.50	3.25	2.4	−6.2	46.3	53.6
Mar. 28, 2004	L	81 of 81	AKP	41.7	41.7	34.3	34.3	1.25	1.25	5.7	4.2	18.2	22.5

Notes. a/ A: National Assembly general election. B: National Assembly by election. S: Senate election. L: Local (Provincial General Assembly) election. S + B: Senate election plus National Assembly by election (only in provinces where no Senate election was held simultaneously).

b/ The party listed first in the table is the major incumbent party. The Turkish acronyms used in the table and the parties they represent are as follows: CHP: Republican People's Party DP: Democrat Party YTP: New Turkey Party CKMP: Republican Peasant's Nation Party AP: Justice Party MP: Nation Party CGP: Republican Reliance Party MSP: National Salvation Party MHP: Nationalist Action Party DP2: Democratic Party ANAP: Motherland Party DYP: True Path Party SHP: Social Democratic People's Party DSP: Democratic Left Party DTP: Democrat Turkey Party AKP: Justice and Development Party.

c/ 0.25 times the number of quarters since last election during which the major incumbent party was in power majority of time, either alone or with other parties.

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Table A1. (Continued)

d/ 0.25 times the number of quarters since last election during which all incumbent parties were in power simultaneously majority of time, with or without other parties.

e/ The growth rate of per capita real GDP during the one-year period preceeding the election, g_t and its value lagged one year, g_{t-1}, are computed as follows:

$$g_t = mG_t + (1 - m)G_{t-1}$$

$$g_{t-1} = nG_{t-1} + (1 - n)G_{t-2}$$

where G_t, G_{t-1} and G_{t-2} are the growth rates for the year in which the election is held, the one prior to that and so on. $m = 0.00$ if the election is held between January 1 and February 14, $m = 0.25$ if the election is held between February 15 and May 15, $m = 0.50$ if the election is held between May 16 and August 15, $m = 0.75$ if the election is held between August 16 and November 15, $m = 1.00$ if the election is held between November 16 and December 31, except for elections in 1965, 1975 and 1984, when m is taken as unity because the governments then were either not in power during the year preceding the election or were in power for less than half a quater. $n = m$, except for elections in 1951, 1961, 1966, 1979 and 2004, when n is taken as unity because the governments then were in power during the year preceding the election but either not during the year before that or for less than half a quarter.

For years 1948 and 1968 growth rate of per capita real GNP is substituted for missing growth rate figures for per capita real GDP.

f/ The inflation rate in GDP deflator during the one-year period preceding the election, p_t, and its value lagged one year, p_{t-1}, are computed in a similar way as g_t and g_{t-1}, explained above. For the years 1948, and 1968 however, rate of change in GNP deflator is substituted for missing figures for the rate of change in GDP deflator.

g/ Vote share of CHP.

h/ Vote share of only AP, CKMP and YTP. MP did not enter the 1964 election.

i/ The government was in power less than a year. Observation is not used in regression involving g_{t-1} and p_{t-1} as independent variables.

j/ Vote share of only AP, MSP and MHP. CGP did not enter the 1975 election.

k/ Vote share of only CHP and CGP. DP2 did not enter the 1979 election.

(Continued on next page)

Table A1. (Continued)

l/ Vote share of DYP, CHP and SHP in 1994. SHP merged with CHP in 1995. So SHP and CHP are treated as one party.

m/ A minority government formed by DSP was in power during the four months preceding the election but it was just a caretaker government. For that reason the coalition government in power prior to that for over eighteen months is taken as the incumbent.

n/ Vote share of only ANAP and DSP. DTP was formed in 1997 and thus did not enter the 1995 election.

Sources of data. The dates and the coverage of elections, and the make-up of governments and their time in power, are determined using the information given in Tuncer (2002), Tuncer, Kasapbaş and Tuncer (2003) and by the State Institute of Statistics (SIS) of the Republic of Turkey.

All vote shares, except the one for 1946, are computed by the authors, using the data provided by Tuncer (2002), and Tuncer, Kasapbaş and Tuncer (2003) on the Senate and the National Assembly general and by elections, by Tuncer and Kasapbaş (2004) on the 2004 local election, and by the SIS on other local elections and on 1975 and 1979 Grand National Assembly by elections. Vote share of the incumbent party in the 1946 National Assembly election is taken from Çarkoğlu (1997) as no information was available on it from the sources cited above.

The growth rates are computed by the authors, using the data provided by the SIS on per capita real GDP growth rate for all years except 1948 and 1968. For 1948 and 1968, per capita real GNP growth rate is substituted for the missing growth rate in per capita real GDP. In computing the former, the population growth rate, provided by the SIS, and the real GNP growth rate, provided by the State Planning Organization (SPO) of the Republic of Turkey were utilized.

The inflation rates are computed by the authors, using the rate of change in GDP price deflator for all years except 1948 and 1968, for which the rate of change in GNP price deflator was used instead. The GDP deflator is obtained by dividing nominal GDP by real GDP, both provided by the SIS. The rate of change in GNP deflator is provided by the SPO.

Notes

1. The nature of data errors in these studies will be discussed in detail below.
2. Since 1965, except for the period 1971–1973, political parties in Turkey are entitled to state support in the form of funds and free time on state television and radio. However only parties with nationwide vote shares higher than a threshold (which varied between 5–10 percent) or with number of members in the parliament higher than a threshold level (which varied between 3–20 members out of 450–550) were eligible for the state support. For more detail on public support to political parties and how it changed over time, the reader is referred to Gençkaya (2000).
3. In fifteen out of twenty-five observations in our data, the lagged vote share is that of the previous parliamentary general election and in the rest of the cases, it is strongly correlated with the vote share in previous parliamentary general election.
4. The first of these changes occurred due to the death of the party leader. The other two occurred as a result of prime minister getting elected president.
5. Events surrounding this election are discussed in detail in Bacik (2004).
6. The rank and file of the Republican People's Party welcomed and supported the military takeover in 1960. Of the two major parties in existence then, the Democrat Party and the Republican People's Party, which won respectively 47.9 and 41.1 percent of the vote in 1957, the military regime abolished the former, executed its leader and imprisoned almost all of its members of parliament, while letting the latter party operate freely and play an important role in the writing of the new constitution and the election law. There is no doubt that the military regime was rooting for the Republican People's Party during the 1961 election and used its influence to have the party's leader become the prime minister in the coalition government formed after the election. In contrast, the military authorities which took over in 1980, abolished, and imprisoned the leaders, of all parties in the parliament.
7. We made these exceptions so that we will not fall into the type of trap Çarkoğlu (1997) has. His approach involved using the rates of growth and inflation for the election year if the election was held in the second half of the year, and using the values of these variables in the previous year if the election was held in the first half of the year. This led him to pair the vote for Motherland Party in 1984 with the economic conditions prevailing in 1983, even though the party was in power only for 17 days in 1983.
8. We should note that the vote shares for "all incumbent parties," reported in table A1, differ in case of eleven elections, from those given in Çarkoğlu (1997), the only other time-series regression study on Turkish elections. This is partly due to his identification of wrong parties as incumbents in the 1963, 1964 and 1979 elections. In 1963, the Republican People's Party, and not the Justice party, was in coalition with the New Turkey Party and the Republican Peasant's Nation Party. In 1964, the Republican People's Party was in power, and not the coalition government involving the Justice Party, the New Turkey Party and the Republican Peasant's Nation Party. Finally, during the 1979 election, the Republican Reliance Party and the Democratic Party were also in the government besides the Republican People's Party. Our vote share figures differ from Çarkoğlu's for the 1966, and 1975 elections as well because for these he took only the results of the Senate elections, whereas we aggregated the Senate and National Assembly by election results to increase the number of provinces covered. We are at a loss however in explaining the differences in the vote shares for 1950, 1954, 1957 and 1977 elections since the incumbent parties and the types of elections he lists are the same as ours. Unfortunately, Çarkoğlu (1997) does not cite any sources for his political data, only for his economic data. Another error in Çarkoğlu (1997) is that, he refers to elections for Provincial Councils as municipality elections. This creates a confusion as to whether he has used the results of the election for the former or for the City Councils. Only from his figures for 1968, 1984, 1989 and 1994 elections, which

match ours, we were able to decipher that by municipality election, he means election for Provincial Councils. In some regards, our data also contradicts that of Genç, Şahin and Bekmez (2005). They take the major incumbent party as the winner in 1973, 1977 and 1991 elections, even though it can be verified from their own sources that is not the case. Justice Party was the major incumbent during the 1973 and 1977 elections and the Motherland Party during the 1991 election. Both parties came in second in the respective elections.

9. The Durbin-Watson statistic is not utilized to test for autocorrelation in the residuals, as the lagged dependent variable is used as an independent variable in all of the regressions.

10. In 1999, elections for National Assembly and local administrations were held simultaneously. A cross-provincial analysis of split voting at that time could shed more light on the issue of strategic voting by the Turkish electorate.

11. We should note here that we have tried, but for brevity not presented, regressions in which separate dummy variables for 1973 and 1975 were used instead of the variable $Z73_t$. These produced coefficients for the two dummy variables with opposite signs but almost equal absolute values, justifying our parsimonious representation of the situation through the variable $Z73_t$. Again, although for brevity we did not present it, we have fitted equation 1 without the 1961 observation in the sample, and verified that our potentially controversial choice of taking Republican People's Party as the incumbent in the 1961 election did not alter our results in any noticeable manner.

12. In this regression, V_t, V_{t-k}, and r_t differ from those in Equation (1) as shown in Table A1 of the Appendix.

13. However, the hypothesis that the coefficient of the lagged vote share variable equals to one, can not be rejected at significance levels less than 11 percent.

14. Actually Genç, Şahin and Bekmez (2005) list 1954, 1965 and 1991 elections as cases in point. However, as we have mentioned in endnote 8, the major incumbent party did not win the 1991 election.

15. We should note that we have refrained from comparing our results to those of Çarkoğlu (1997), the only other time series study on economic voting in Turkey, because a number of severe errors in his data render his results unreliable.

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