The Geography of AKP Votes

Alpay Filiztekin and Ozan Bakis

Sabanci University, Turkey

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Alpay Filiztekin* and Ozan Bakis†

Abstract

The ruling Justice and Development Party (AKP) in Turkey won three elections in a row by increasing its share of votes in each election. The political studies claim that this is mostly due to a transformation marked by the reshuffling of party preferences in favor of right-wing parties at the expense of the Center–right. Yet, AKP has also shown a remarkably good performance in terms of economic development. In 2002, after a severe economic crisis the newly formed AKP managed to establish macroeconomic stability with very high growth rates. Indeed, some early micro-studies find significant evidence of economic voting, albeit not as a strong predictor of its success as ideological orientation of voters. In this paper, using province and district level data, we are investigating support for AKP in successive elections. Particularly, we are examining geographic patterning and its evolution over time by employing spatial statistics which will allow us a deeper probing of regional and contextual elements. In studies based on micro-data space and context are implicit. We argue that voters make decisions within a context which has composites of structural (socio-economic) and spatial influences with multiple layers. Hence, regional heterogeneity in Turkey and local differences may have strong implications for voting.

*Sabanci University, FASS, Orhanli-Tuzla, 34956 Istanbul. E-mail: alpayf@sabanciuniv.edu.

†Sabanci University, FASS, Orhanli-Tuzla, 34956 Istanbul. E-mail: bakis@sabanciuniv.edu.

1 Introduction

The Justice and Development Party (Adalet ve Kalkınma Partisi, AKP) won the 2002 elections by getting more than 34% of the votes despite it has been only a fifteen-month old party. In the next two elections, AKP increased its share of votes first to 46.5% in 2007 and then to almost 50% in 2011, thus became the first party since 1957 and the second since the beginning of multi-party regime in 1946 in Turkey to win three general elections in a row. Not surprisingly, then, the sudden rise of AKP to power and it's increasing success in the elections became the focus of research on understanding the voting behavior of Turkish electorate (e.g, Carkoglu, 2002; Onis and Keyman, 2003; Akarca, 2008; Akarca and Tansel, 2009 for 2002 elections and; a special issue of Turkish Studies, 2008, for 2007 elections). Who voted for the AKP or what kind of social, economic and political concerns motivated individuals voting behavior were debated in these studies. In this paper, first, we are pursuing the same questions with placing a special emphasis on local and regional context, and second, we explore whether the motivation has changed over time.

The first success of the AKP was a 'shock' to many as the party was a smaller split of younger members from Islamist Virtue Party (Fazilet Partisi, FP) who could manage to get only 15% of votes in 1999 elections. The 2007 election results were also unexpected to a certain extent, because AKP was unable to establish a convincing power in political arena, despite its success on economic front in its first term, when they had to call for early elections in 2007 (Carkoglu, 2008). Yet, the party came out with a more convincing victory over all other parties. On the other hand, Sekercioglu and Arikan (2008) argues that the success of the AKP is nothing but a continuation of a trend since the beginning of 1990s which has been defined by the collapse of Center-right, the gradual erosion of Center-left vote and rising pro-Islamist and nationalist sentiments within the Turkish society. Regardless whether the rise of AKP is a surprise or a consequence of continuing move to the right of Turkish electorate, the question, why AKP, but not any other party at the right or left of the spectrum, has become the leading party has to be explained.

Most research on Turkish elections point out a few possible explanations. The importance of economic conditions has been proven at both macro- (Akarca and Tansel, 2006) and micro-level (Carkoglu, 2008) studies. Without wholly

discarding the continuation hypothesis, Kalaycioglu (2008) points out that AKP is "a brand new phenomenon [...] that represents conservative-traditional Sunni Islamic voters on the one hand and the liberalization of the economy in market capitalism on the other." The 2002 elections followed a severe economic crisis and the existing old parties were not able to either propose or have the strength or credibility to follow sound policies. AKP offered a new alternative. In its first term AKP were very successful to bring the economy out of a recession by following liberal policies in the aftermath of the crisis. Hence, the electorate see the party as economically sound, capable of bringing macroeconomic stability and promising for the future.

The other alternative explanations are within the ideological cleavages, namely, left versus right, Islamism versus secularism, and ethnicity. Turkish society has developed for a long time around what Mardin (1973) describes as "center" and "periphery". The "center is secular and economically better off and controls the state and its political apparatus even since the Ottoman times. The "periphery" consists of mostly rural, conservative and religious masses. Throughout the twentieth century, the "periphery" moved to, first slums, then to center of cities. In the last thirty years there has also been growing economic activity in the central Anatolia, what had been rural areas in the past. Thus the emergence of new local elites from the religious and conservative sections of the society intensified the divide between "secular" and "religious". Kalaycioglu (2008) shows that party affiliation starts very early in the childhood and affected by parents' attitudes. He argues that AKP, since the first election it won, is creating its own partisan group among supporters. On the other hand, increasing incidence of terror created polarization around ethnic lines. While strong nationalism is heard in the west, the east voices more openly its discontent.

In all these studies space and context are implicit. Electoral geographers define context as locale where the routine social interaction takes place; as location which defines the place in the world economy; and as a sense of place in which the socialization occurs. They argue that all variables to explain party support in localities are affected by place-specific structures: party organization, social networks, the appeal of candidates beyond party attraction, local campaign effects, political competition and local political culture. In fact, Carkoglu (2000) and Sekercioglu and Arikan (2008) describe how votes

are clustered in space. They particularly emphasize the stabilized pro-Islamist votes in the central and eastern regions of the country and acknowledge regional heterogeneity in Turkish voting. Among very few case studies, Tosun and Tosun (2008) recognize spatial heterogeneity even within metropolitan Izmir and claim that the success of AKP in 2007 elections in the city was mostly due to the AKP's accommodating policies to the historically established social, economic and political structure in the region. In other words, these studies point out that the electorate mosaic of the country is the result of aggregate social, economic and political processes that has evolved differently in different places, yet falling short of providing a statistical anlysis of these developments.

This paper analyzes the AKP vote in the last three elections from a spatial perspective and provides a mix of spatial process and factors used to explain voting behavior in earlier research. The methodology used heavily borrows from O'Loughlin et al (1994). As in their paper, we focus on spatial heterogeneity, that regionally specific circumstances may have different influence on structural relationships; and spatial dependence, that there could be spatial diffusion and contagion.

2 Determinants of Votes

Some of the studies mentioned above are based on micro-level surveys and as such they have very rich information on individuals. These range from demographics to attitudes and perceptions. For example, the dataset employed by Carkoglu (2008) contains information on individual's age, gender, education level, and his/her parents' education. It also includes information on individuals' attitudes, for example, how religious they are, or how nationalistic they see themselves, as well as a set of variables about their perception, such as how do they see their economic prospects in the coming year. Therefore, these studies use very detailed information to understand the voting behavior. Nonetheless, while they are representative at national level, they have too few observations to measure spatial differences and interactions. Using aggregate data to incorporate these effects, on the other hand, limits the number of available explanatory variables. Based on data availability and an exploratory multivariate analysis we have chosen a number of covariates.

One of the main discussion about the evolution of Turkish society is centered around the seminal work of Mardin (1973). He poses a center-periphery paradigm where center is composed of a distinct group of elites (with a strong dominance of military and bureaucracy) that controls a coherent state apparatus and is opposed by periphery of mainly small farmers, peasantry and artisans. The center runs a coercive modernization program built around secularism and nationalism. In contrast, the periphery, deprived of most benefits of such a program, clings onto religion, regional ties and ethnicity though with conflicting interests and political strategies most of the time. The last few elections are seen as the rise of periphery against the center and AKP is regarded as their representatives (Carkoglu, 2002).

The first hypothesis is, then, regions that have been economically neglected by the state voted for the AKP. To control for economic well-being we are using unemployment rate. Yet, in many regions, particularly in the east, unemployment may not reflect people's economic prospects as most are so hopeless and do not even look for a job, thus not accounted as unemployed. Also, most women in conservative areas are not economically active, either because of tradition or because their prospects are very dim. So we choose to include labor force participation rate as another variable.

Another variable to control economic structure is the share of employment in agriculture. The economic agenda of the modernization program of the center was a structural shift from low productive agriculture to manufacturing. This caused a drive out of agriculture and its employment share steadily declined over the last fifty years. This not only caused massive migration to urban centers, but also a change in relative prices of agricultural products. Hence regions where most of the employment were in agriculture may have voted for the AKP.

The second hypothesis is based on the presumption that farmers and artisans constituted the conservative section of the society and they welcomed AKP as a party that embraces both conservative values and liberal policies that open up the opportunity for them to expand their businesses. Indeed, Filiztekin (2013) shows that the share of self-employed in total employment declined from 42% in 1994 to 29% in 2003. On the other hand, policies since 1980 not only reduced safe public sector jobs, they also weakened the power of unions. Consequently, it is also plausible that workers may have seen the

AKP as an end to their demise, particularly in 2002 elections. To capture the class effect we use share of self-employed and wage-earners[1] in the region.

It has been very commonly argued that AKP has gotten most of its votes from less educated. Education is a major characteristic that distinguishes the center form the periphery and it is also an important, if not the main determinant, of the class. Our regressions also include the average years of schooling of the voting population, that is people over the age of 18. However, the argument for education level of the voters is a little more saddle than average schooling. It argues that the 'elites' are against the AKP. So we added share of university graduates over the age of 18 to take into account possible non-linear relationship between AKP vote and education.

Most studies of AKP vote that are based on surveys emphasizes the importance of religion and religious values, as well as ethnicity. Turkey has been said to be overwhelmingly a Muslim country. Nonetheless, there are important distinctions in peoples' faith: Sunni Muslims are not only significantly different than Alevites, there are also different sects even within Sunni population. Unfortunately statistics on the distribution of religious groups are not available at aggregate level. We use AKP and other Muslim parties votes in previous elections as a proxy. As for ethnicity, we face same problem of lack of data. In this case we use the share of votes for Kurdish parties[2].

The Turnout rate in Turkish elections have always been respectably high. Carkoglu and Hinich (2006), however, point out that in 2002 elections this rate has been low in historical standards: it fell down to 79% from 87% in 1999 elections. They also report that surveys prior to the election indicated almost a quarter of the voters were undecided and one tenth even considered to cast an invalid protest vote. The Turnout rate increased to 84% and 87% in the subsequent in 2007 and 2011 elections. This fact implies some kind of alienation from the existing political parties and system in 2002 and possibly a mobilization of supporters afterwards. Thus, we use change in the Turnout

[1] A better variable would be the share of blue collar workers which we, unfortunately, do not have.

[2] Halkın Demokrasi Partisi (People's Democracy Party) in 1999 elections, Demokratik Halk Partisi (Democratic People's Party) in 2002 elections are identified as Kurdish parties. Due to 10% nationwide threshold, in 2007 and 2011 Kurdish candidates entered into the elections as Independents. We have calculated the share of Kurdish vote as the sum of these three groups' votes.

rate and lagged valid vote share[3] as explanatory variables in our estimation. As argued by O'Loughlin et al. (1994), the difference in Turnout between elections account for both demographic, that is newly-eligible voters, and political mobilization of supporters to the parties. We have also included the proportion of young voters, population size in the model, a dummy variable for the district being a provincial center and (log) distance of any district center to provincial center. We assume that young voters and those who live in larger regions may be more likely to be alienated by the system, as well as those who are too far away from the provincial center where the presence of central state is more apparent.

Finally, there has been claims that the AKP had far better public relations management and followed well-designed election strategies. For a sound strategy it is essential to identify regions where votes are distributed among many parties and regions where the race is a tight one. To capture the fragmentation we calculated a Herfindahl index based part vote shares and the difference in vote shares between the first and second party and used values in previous elections in the model.

In addition to these variables, by employing spatial techniques we also consider statistical and cultural effects. Our analysis differs from earlier studies by incorporating socializing influences. In other words, we discard the assumption that each of these variables have a constant (global) effect on voters' decision. For example, educated people may have different attitudes to the AKP's policies in different regions or contexts.

3 Data and Methodology

The data used in this paper are general election results at district level for three years, 2002, 2007 and 2011, and obtained from Turkish Statistic Institute (TURKSTAT). There are 920 districts in our dataset[4] that are administrative units with several representatives of the central government and a local municipality. Each district is formed of several boroughs, some of which are villages in rural areas. Districts are organized around a center and form the

[3]As current Turnout would be considered as a jointly dependent variable, we are using its lagged version.

[4]Some boundary changes occurred over time. We attempted to have consistent definitions by joining a couple districts in latter years.

administrative body of a province with a centrally appointed governor as the head of the state in that province. Districts have different sizes, the number of registered voters lying between 1,144 and 738,595. The distance between districts are great circle distances calculated using latitudes and longitudes of each district center. The distance matrix will be used as geographic weights later on.

The explanatory variables are obtained from General Population Census in 2000 and Address Based Population Recording System in 2007 and 2011. Unfortunately, the latter sources have fewer variables, hence we estimate two models: the first one includes all variables described above and only available for the year 2002; the second model has fewer variables, hence we call it 'restricted' model as opposed to 'unrestricted' model and applied to 2007 and 2011 elections. To discuss the robustness of our estimates we run both models for 2002 elections. Another survey conducted by the TUIS in 2011, the "Population and Housing Census", has all variables at provincial level. We have also run all regressions at provincial level.

Table 1 shows the share of the votes by ideological orientation of parties. It is obvious that the center was eroding in the last four elections before the 2002 elections. Indeed, the AKP entered into the race claiming the votes of the center-right and to a certain extent center-left. The share of votes of the other 'Islamist' party from which AKP has split also lost its constituency to this new movement. Nationalist parties won an unprecedented share in the 1999 elections and became a member of the coalition which failed miserably in 2001. 2002 elections show how they are punished by the electorate of such performance. However, the rise of AKP and discontent of certain right wing electorate of its policies, particularly about the Kurdish question, helped them to gain an important share. On the other hand, Kurdish politicians first sought seats in the parliament by joining center-left parties before mid-1990s. As the strategy not worked they have chosen to form a new party[5] In 2007 and 2011 elections, however, to get around the 10% nation-wide threshold to be elected in the parliament, they opted to enter the elections as independents. Thus we see a sharp increase in the votes of independents in the last two elections, which is more or less the Kurdish vote. Altogether the Kurdish vote in Turkey

[5]Kurdish parties are banned several times. Each time, the same politicians who were not restricted to participate in politics formed a new party.

is four to six percent despite a much higher share of Kurdish ethnic population in Turkey.

Table 1: Election Results: 1987-2011

	AKP	Center right	Center left	Islamist	Nationalist	Kurdish	Indep
1987		55.5	33.3	7.1			0.4
1991		51.1	31.5	16.8			0.1
1995		38.9	25.4	21.3	8.2	4.2	0.5
1999		25.3	30.9	15.4	19.4	4.8	0.9
2002	34.7	14.9	20.8	2.5	9.5	6.3	1.0
2007	46.5	5.4	20.9	2.3	14.3	0.0	5.3
2011	49.8	0.2	26.2	1.3	13.8	0.0	6.6

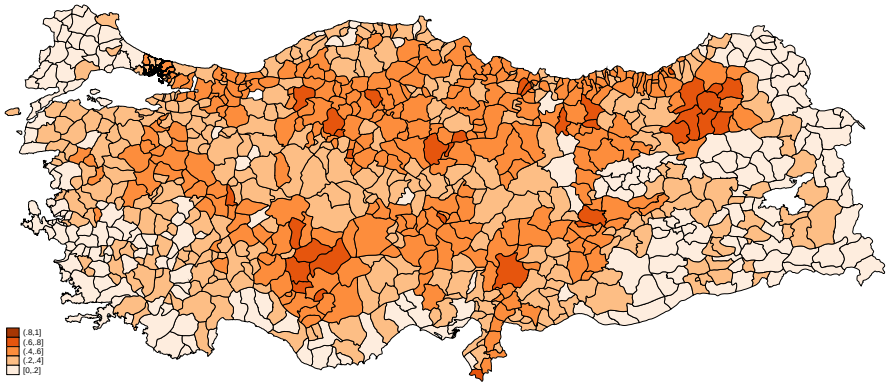
Notes: 'Center-right' includes two parties, ANAP (Motherland Party) and DYP (True Path Party), whereas 'Center-Left' is consist of CHP (Republican People's Party and DSP (Democratic Left Party). The 'Nationalists' are MHP (Nationalist Movement Party) and BBP (Great Union Party).

The AKP votes are not uniformly distributed across the geographical space. In Figure 5 dark shaded areas show the intensity of AKP votes. As time passes by the map gets darker, implying that AKP has increased its votes almost everywhere in the country. It is also clear that AKP had higher share of votes in the Central Anatolia. This is interpreted as solidification of conservative votes in the center of the country by Sekercioglu and Arikan (2008). AKP had less appeal in the Kurdish dominated and poor eastern and industrialized and rich western regions of the country. The maps unfold the importance of geography in Turkish elections and that is what we focus on in this paper.

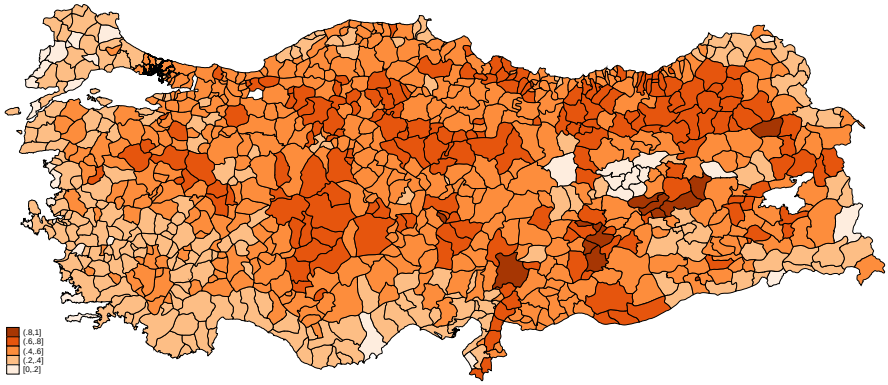
Our geographic analysis focuses on diffusion and contagion, and heterogeneity of effects. The first concept assumes that behavior in a place is related to conditions in neighboring places when these conditions are present. To capture these effects, first we use Moran's I statistic, the coefficient of spatial autocorrelation and an aggregate measure of dependence in spatial analysis. This statistic, however, does not precisely identify diffusion from heterogeneity. Hence we also report Local Indicators of Spatial Analysis developed by Anselin (1995) which serves, first, to assess the influence of individual units on the magnitude of the global statistic, and to identify local pockets of 'hotspots' or spatial non-stationarity which is also essential for analysis of heterogeneity. To estimate contagion across district borders we use Spatial autoregressive

Figure 1: Geographic Distribution of AKP Votes

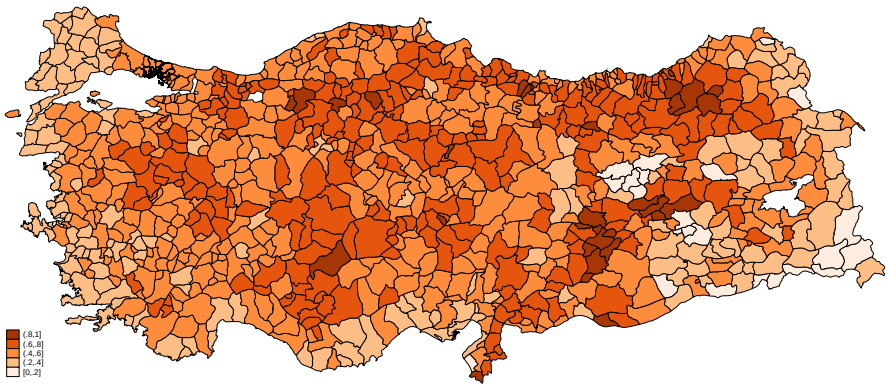
(a) 2002 Elections



(b) 2007 Elections



(c) 2011 Elections



(SAR) or spatial error (SEM) models (Anselin, 1988) that are designed for global spatial correlations.

The conventional approach to control heterogeneity is to include dummy variables into the analysis. Our approach differs from this convention and

assumes that regional heterogeneity may generate different parameters in various regions. Our first approach to this problem is to divide the country into several regions and estimate the regressions for each region specifically to test whether the coefficients of our model differ across space. The partition of a geographic unit into smaller pieces is arbitrary as existing definition of regions may not be suitable for the question at hand. Based on the earlier research, we implemented several clustering methods. Depending on the variables used, these explorations for finding the optimal number of clusters yield mostly three to four regions. While we have a large number of geographic units (920) in our data, we wanted to have large number in each cluster to have sound statistical analysis and have chosen, after inspecting the maps above, to work with three large regions: 'West' includes (NUTS1 level) Istanbul, West Marmara, Aegean and Mediterranean; 'Center' consists of East Marmara, West and Central Anatolia and West and East Blacksea; and 'East' refers to Northeast, Central-east and Southeastern regions.

We also employ Geographically Weighted Regressions (GWRs) to account for heterogeneity. GWR extends OLS and is one of the most commonly used methods to cope with spatial heterogeneity. It reveals 'localized' statistical relationships, as opposed to global ones in standard OLS approach and provide a more detailed perspective on underlying location-specific relationships between explanatory variables and voting behavior. GWR can be seen as weighted least squares estimation, very much like a kernel estimation. In weighted least squares weights are predetermined, whereas in kernel density estimation they are determined by the proximity of ith observation on a variable (or set of variables) $\mathbf{x_i}$ to $\mathbf{x}$. As such, weighting system in kernel estimation depends on the location in "attribute space" of the independent variables. In contrast, in GWR, the weighting depends on location in geographical space. The estimates are, then, a set of localized parameters estimates[6]

4 Statistical Analysis

We start our empirical analysis with 2002 elections as this is the first time AKP entered into the elections and won a considerable amount of votes surprising

[6]A detailed description of GWR can be found in Brunsdon, Fotheringham and Charlton (1996).

many. The conditions that helped a newly formed party to rise to power are interesting by themselves. Using the above described set of socio-economic variables we try to explain this phenomenon. We start with a base model and then build upon it incorporating the influence of geography. Our second hypothesis is that the effect of certain conditions have changed over time. AKP entered into 2007 and 2011 elections as an incumbent party. Typically incumbent parties in Turkey are punished by their failures. Yet, AKP was able to increase its votes all around the country (compared to 2002 elections, in 14 districts AKP's vote share has declined in 2007 and only in 5 districts in 2011.) Our presumption is that the factors that were responsible to bring the AKP to power are not the same ones that hold them in power. We then discuss the difference between the 2002 election and later elections.

4.1 The 2002 Election

The first column in Table 2 present the results of our base model at the national scale. Not surprisingly, perhaps, we find religiosity and ethnicity are very significant determinants of AKP vote. Considering that religiosity is measured as the lagged vote share of Islamist parties and that the coefficient is very close to unity, one may conclude that AKP retained Islamists' votes. The coefficient of ethnicity is negative and significant, suggesting that Kurdish population were less likely to vote for the AKP. A four percent increase in Kurdish population means one percent decline in AKP votes.

While the coefficient of turnout is negative and significant, the coefficient of previous valid vote share is negative and significant. This suggest, in 2002 AKP was not the choice of the new voters or those who were not casting a vote previously, but rather it was able to mobilize voters from other parties to its ranks.

To the extent employment status indicates the class, wage-earners were slightly less likely to vote for the AKP relative to employers and self-employed. Interestingly, however, the coefficient of the share of manufacturing employment is positive and significant. We interpret this that AKP won bluecollar workers' vote in this election. In districts where labor force participation and unemployment rate is high, AKP's vote share is decreasing. AKP could not convince people who are active in the economy, particularly unemployed did not consider AKP as a solution to their problem.

Table 2: Regression Results for the AKP Vote at National Level - 2002

	District Level		Province Level	
	Unrestr. Model	Restr. Model	Unrestr. Model	Restr. Model
Religioisty	1.055***	1.086***	1.068***	1.263***
	(0.050)	(0.050)	(0.171)	(0.146)
Kurdish	-0.263***	-0.285***	-0.124	-0.062
	(0.055)	(0.052)	(0.144)	(0.146)
Turnout	-0.245***	-0.258***	-0.502**	-0.704***
	(0.049)	(0.046)	(0.236)	(0.218)
Sh. of Valid Votes	0.276***	0.424***	0.608	0.826**
	(0.099)	(0.096)	(0.444)	(0.327)
Sh. of Self-employed	0.092		-0.635	
	(0.066)		(0.400)	
Sh. of Wage-earn.	-0.081**		-0.166	
	(0.038)		(0.240)	
Sh. of Agr. Emp.	-0.014		-0.137***	
	(0.024)		(0.044)	
Sh. of Man. Emp.	0.176**		-0.063	
	(0.073)		(0.222)	
Lab. For. Part.	-0.491***		-1.053***	
	(0.095)		(0.320)	
Unemp. Rate	-0.619***		-1.161*	
	(0.154)		(0.604)	
Avg. Sh. Years	0.018***	0.022***	0.058**	0.049*
	(0.007)	(0.007)	(0.025)	(0.027)
Sh. of Univ. Grad.	-0.767***	-0.944***	-1.966**	-1.577*
	(0.177)	(0.155)	(0.959)	(0.812)
Tight Race	-0.038	-0.010	-0.033	-0.038
	(0.060)	(0.062)	(0.205)	(0.217)
Fragmentation	-0.140	-0.236*	0.080	-0.052
	(0.136)	(0.139)	(0.609)	(0.668)
Urb. Rate	-0.082	0.141***	-0.110	0.212
	(0.064)	(0.034)	(0.296)	(0.193)
Sh. of Young	0.107	-0.403***	-0.830	-0.635
	(0.151)	(0.120)	(0.830)	(0.778)
ln(Pop.)	0.011***	0.009**	0.040***	0.028**
	(0.004)	(0.004)	(0.013)	(0.013)
Prov. Center	0.003	0.016		
	(0.018)	(0.017)		
ln(Dist. to Cent.)	-0.011**	-0.010**		
	(0.005)	(0.004)		
Constant	0.202	-0.294***	0.069	-1.134**
	(0.137)	(0.106)	(0.499)	(0.429)
Observations	920	920	81	81
R-squared	0.660	0.643	0.829	0.788

Robust standard errors in parentheses.
*** p<0.01, ** p<0.05, * p<0.1.

The coefficient estimates for education variables support the center-periphery paradigm. The coefficient of average years of schooling is positive and significant, that is more educated people are more likely to vote for AKP, yet the relationship is non-linear as the coefficient of the share of university graduates is negative and has a very high magnitude. The 'elites' who have higher degree tend to not vote for this new party.

Political strategy variables that measures the tightness of the race in the district in the previous election and fragmentation of the voters are not significant. Other demographic variables, the share of young population, urbanization rate and whether the district is the provincial center does not seem to play a role. The size of the district and the distance between the district and the provincial center are significant but have negligible sizes.

In the second column of the table we have also estimated a restricted model. Data for some of the variables are not available for later years. To provide a comparison to assess the bias due to omission of these variables in the estimations below we have estimated the equation with limited number of regressors. Except the urbanization rate and the sahre of young population, the estimated coefficients in the restricted model have the same sign and close magnitudes to the unrestricted model estimates. Share of young population in the restricted model possibly captures the effect of unemployment rate, as it is higher among young people. Also, urbanization is most likely to be correlated with the share of manufacturing.

The last two columns of the table provides estimates at provincial level. These estimates provide information to assess the effect of aggregation. In general, coefficients have same signs but different magnitudes. We conclude that our base line model is sufficiently robust to omission of some variables and aggregation.

Spatial Heterogeneity

The estimated models above assume that the relationship between explanatory variables and the dependent variable is globally stable. That is, the effect of the right-hand side variables is same in everywhere. AKP's vote share however differs significantly across three pre-determined regional level. The average share of AKP votes is 26% in the West and the East, it is 41% in the Center. The 95-percentile is 49% in the West, 58% in the East and 61% in the Center;

and 5-percentile is 8% in the West, 20% in the Center and 4% in the East. AKP had, indeed, a strong support in the Center and had a narrow (wide) distribution in the West (East).

Thus it is natural to suppose that the effects of variables may also differ across regions. To relax the stability assumption we have first estimated the structural model at three pre-determined regional level. The estimates are presented in Table 3. It is immediately obvious that not only the magnitudes but also signs of the estimated coefficients vary from such an arbitrary and very aggregate level definition of regions.

Religiosity, for example, has a much higher value in the West than in the East while both of them are significant. More importantly, however, is the change in the coefficient of Kurdish population across regions. While it is insignificant in the Center, it is significant and positive in the West and significant but negative in the East. It seems that Kurdish people who live in the western regions found AKP as a better alternative than other parties, but they have chosen to vote for another party (Democratic People's Party, DEHAP) in the East.

The turnout rate is negative and significant in the East whereas contempt for the pre-existing parties is more important in the West. It would be argued, then, that in the West AKP mobilized voters of the existing parties towards itself, while DEHAP mobilized non-voters in the previous election in the East to vote for their own party. Similarly, variables that capture economic voting have different impact on AKP's votes in the Center than the rest of the country. The coefficients of sectoral composition variables, labor force participation and unemployment rate have different signs in the Center, though they are mostly insignificant.

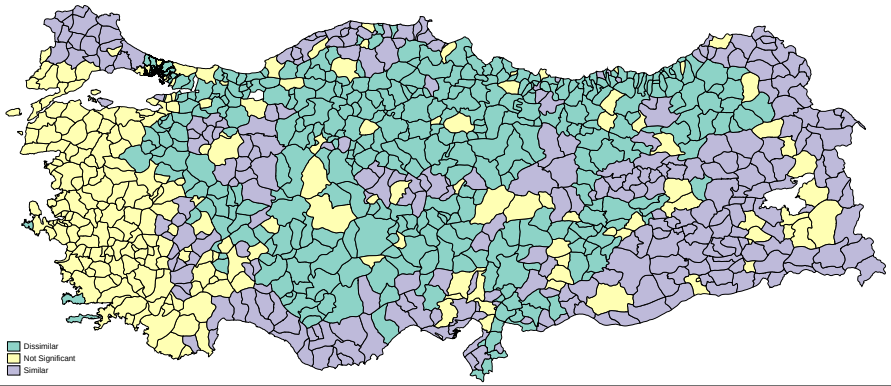
Next question we ask is whether there is also variation within aggregate regions we have defined. A map of localized indicators of spatial association (Anselin, 1995) presented in Figure 5 show spatial heterogeneity of AKP's vote shares in districts. The indicator Moran's I_i identify four different spatial clusters, high (low) values around high- (low-) value locations, and low (high) values around high- (low-) value locations. To simplify the reading of the map we colored only similar and dissimilar values along with insignificant ones. 639 districts out of 920 (almost 70%) have significant values (at 5% significance level) indicating strong spatial correlation in space.

Table 3: Regression Results for the AKP Vote by Region - 2002

	Unrestricted Model			Restricted Model		
	West	Center	East	West	Center	East
Religiosity	1.593***	0.943***	0.841***	1.687***	0.992***	0.804***
	(0.092)	(0.057)	(0.093)	(0.087)	(0.053)	(0.094)
Kurdish	0.596***	-0.368	-0.158**	0.655***	-0.284	-0.221***
	(0.141)	(0.245)	(0.073)	(0.156)	(0.248)	(0.073)
Turnout	-0.095	-0.102*	-0.229**	-0.120	-0.127**	-0.337***
	(0.093)	(0.060)	(0.098)	(0.096)	(0.059)	(0.102)
Sh. of Valid	0.841***	0.246**	0.124	1.007***	0.139	0.292
	(0.134)	(0.125)	(0.189)	(0.134)	(0.115)	(0.194)
Self-emp.	-0.061	-0.215	0.677**			
	(0.073)	(0.152)	(0.307)			
Wage-earn.	-0.009	-0.587***	0.819**			
	(0.039)	(0.191)	(0.392)			
Sh. Agr.	0.023	-0.492***	0.590*			
	(0.030)	(0.170)	(0.341)			
Sh. Man.	0.118*	-0.046	0.579			
	(0.071)	(0.098)	(0.392)			
LFP	-0.621***	0.217*	-0.510*			
	(0.121)	(0.114)	(0.290)			
Unemp.	-0.338**	0.149	-1.120***			
	(0.168)	(0.202)	(0.302)			
Shool. Year	0.013	-0.034***	0.022	0.025***	-0.035***	0.029*
	(0.009)	(0.009)	(0.014)	(0.009)	(0.008)	(0.015)
Sh. Univ.	-0.093	0.001	-0.102	-0.448**	0.084	0.306
	(0.218)	(0.303)	(0.704)	(0.182)	(0.258)	(0.701)
Tightness	-0.085	0.057	-0.121	-0.059	0.043	-0.103
	(0.069)	(0.069)	(0.134)	(0.074)	(0.069)	(0.136)
Fragm.	-0.244	-0.188	0.385	-0.262	-0.162	0.245
	(0.183)	(0.167)	(0.247)	(0.200)	(0.166)	(0.250)
Urb. Rate	-0.377***	-0.010	0.221	-0.058	-0.071	0.368***
	(0.082)	(0.109)	(0.242)	(0.039)	(0.086)	(0.095)
Sh. of Young	0.612***	0.591	-0.590	0.159	0.559	-0.808***
	(0.193)	(0.424)	(0.440)	(0.163)	(0.394)	(0.267)
ln(Pop.)	0.006	0.011**	0.024**	0.006	0.016***	0.008
	(0.005)	(0.005)	(0.010)	(0.005)	(0.005)	(0.009)
Center	0.037	-0.083***	-0.039	0.067***	-0.087***	0.030
	(0.023)	(0.027)	(0.063)	(0.021)	(0.026)	(0.074)
ln(Dist.)	0.005	-0.023***	-0.005	0.009*	-0.023***	0.003
	(0.006)	(0.006)	(0.013)	(0.005)	(0.006)	(0.015)
Constant	-0.201	0.616***	-0.795	-0.938***	0.258**	-0.464**
	(0.190)	(0.220)	(0.485)	(0.168)	(0.128)	(0.228)
Observations	308	408	204	308	408	204
R-squared	0.807	0.632	0.694	0.783	0.621	0.638

Robust standard errors in parentheses.
*** p<0.01, ** p<0.05, * p<0.1.

Figure 2: Moran's I_i – 2002



The spatial correlation aside, the figure also reveals that the support for the AKP is not uniform even within regions, particularly in the Center, where AKP had considerable support in the 2002 elections, districts with dissimilar values are clustered. On the other hand, in the East, the West Marmara and Mediterranean, where AKP had lower share of votes, districts with similar values are agglomerated, while along the Aegean region, where AKP did not perform any better, there are no statistically significant spatial clusters.

To assess the degree of heterogeneity we estimated local parameters by Geographically Weighted Regressions and the results are provided in Tables 4 and 5 for unrestricted and restricted model, respectively. The two variables that have been emphasized in earlier literature, religiosity and ethnicity, have indeed significantly spatially varying effect on the AKP vote. While the distribution of local estimates are centered around the global estimate, the spatial distribution of local coefficients of ethnicity is strongly left skewed. The median value is closer to the global estimate, yet the mean is much smaller in magnitude.

The other variables that have significant variation across space are mostly those that were insignificant in global estimation. More importantly, however, for most variables, the distribution of coefficients imply that a change in the relevant variable may have completely opposite effect in different locations. The local coefficients for the share of self-employment, for example, ranges from -0.33 to 0.65, that is a three percent rise of the share of self-employed decreases AKP's vote share one percent or increases it half a percent depending on where the district is located. The only variables that have consistent signs across space are religiosity, labor force participation and unemployment.

Table 4: Geographically Weighted Regression, Unrestricted Model - 2002

	mean	sd	min	median	max
Relig.	1.088***	0.195	0.722	1.130	1.429
Kurdish	-0.023***	0.281	-0.345	-0.190	0.438
Turnout	-0.164	0.075	-0.308	-0.148	-0.054
Sh. of Valid	0.297	0.145	-0.223	0.288	0.674
Sh. of Self-emp.	0.049***	0.328	-0.391	-0.041	0.653
Sh. of Wage Earn.	-0.085	0.078	-0.231	-0.076	0.051
Sh. of Agr. Emp.	0.013***	0.132	-0.209	-0.002	0.218
Sh. of Man. Emp.	0.258*	0.137	-0.006	0.247	0.814
Lab. For. Part.	-0.287**	0.197	-0.596	-0.275	0.062
Unemp. Rate	-0.490**	0.369	-1.400	-0.499	0.017
Avg. Sch. Years	0.007	0.011	-0.010	0.004	0.036
Sh. of Univ. Grad.	-0.306*	0.338	-0.906	-0.397	0.354
Tight Race	-0.036	0.087	-0.201	-0.059	0.170
Fragm.	-0.115	0.241	-0.511	-0.215	0.529
Urb. Rate	-0.008***	0.253	-0.356	-0.050	0.419
Sh. of Young	0.153***	0.445	-0.652	0.208	1.071
ln(Pop.)	0.009**	0.009	-0.002	0.007	0.037
Prov. Center	-0.024**	0.040	-0.081	-0.028	0.036
ln(Dist.)	-0.012*	0.010	-0.029	-0.013	0.004
Constant	0.082	0.225	-0.386	0.070	0.469

***, **, or * on variables indicates significant spatial variations in GWR coefficients of these variables at the 1%, 5%, or 10% levels, respectively.

Spatial Contagion

Figure 5 shows significant spatial autocorrelation. Indeed, tests of OLS regression residuals rejects the null hypothesis of no spatial correlation against the alternatives of both Spatial Lag and Spatial Error Models. Note that in the presence of spatial autocorrelation the estimates obtained from OLS regressions above will be still consistent but inefficient. Thus, these spatial effects must be taken into account by mixed structural-spatial specification. We estimated both Spatial Lag and Spatial Error Models and presented the results in Table 6.

The coefficients of spatial dependence are significant in all specifications, confirming spatial dependence. The negative spatial autoregressive coefficients in the Spatial Lag Models affirm clustering of dissimilar proportions of AKP

Table 5: Geographically Weighted Regression, Restricted Model - 2002

	mean	sd	min	median	max
Relig.	1.201***	0.410	0.317	1.144	2.506
Kurdish	-0.108***	0.550	-2.020	-0.201	1.715
Turnout	-0.077	0.191	-0.498	-0.062	0.419
Sh. of Valid	0.300**	0.413	-1.521	0.338	1.323
Avg. Sch. Years	-0.001	0.027	-0.078	0.001	0.066
Sh of Univ. Grad.	-0.123	0.558	-1.960	-0.239	2.480
Tight Race	-0.012	0.170	-0.465	-0.048	0.432
Fragm.	-0.054	0.401	-1.098	-0.016	0.841
Urb. Rate	0.008**	0.187	-0.510	0.019	0.357
Sh. of Young	0.117***	0.785	-1.315	0.026	2.485
ln(Pop.)	0.013	0.014	-0.025	0.011	0.083
Prov. Center	-0.038***	0.091	-0.402	-0.025	0.167
ln(Dist.)	-0.012**	0.020	-0.076	-0.008	0.045
Constant	-0.149**	0.465	-1.106	-0.197	1.189

***, **, or * on variables indicates significant spatial variations in GWR coefficients of these variables at the 1%, 5%, or 10% levels, respectively.

voters. The inclusion of spatial dependence does not affect the signs of the coefficients but the magnitudes are slightly smaller and some variables that were insignificant before are now significant. Thus we conclude that our general interpretations still hold despite the presence of spatial contagion.

4.2 The 2007 and 2011 Elections

It is true that almost all elections in Turkey have been described as different and critical turning points, yet, the following two elections happened in a different political context than the 2002 election. First, the AKP was not a new party anymore, and electorate was more informed about its potent as they had the chance to observe its performance. At the same time, Kurdish politicians decided to enter elections as independent candidates to avoid 10% threshold for any party to be able to send politicians to the Parliament, thus voters had not to worry that their votes would be wasted. Second, Turkey entered into 2007 election in a rather 'emotional and polarized atmosphere' (Carkoglu, 2008). The opposition worried about the secularist principles of the state because AKP has removed the ban on turban in universities, enabled religious

Table 6: Spatial Estimation - 2002

	Unrestricted Model		Restricted Model	
	Spat. Lag	Spat. Error	Spat. Lag	Spat. Error
Relig	0.992***	1.026***	1.003***	1.045***
	(0.046)	(0.049)	(0.046)	(0.049)
Kurdish	-0.212***	-0.222***	-0.252***	-0.248***
	(0.052)	(0.053)	(0.049)	(0.052)
Turnout	-0.142***	-0.175***	-0.136***	-0.179***
	(0.044)	(0.047)	(0.042)	(0.045)
Sh. of Valid	0.324***	0.274***	0.455***	0.406***
	(0.092)	(0.106)	(0.091)	(0.099)
Sh. of Self-emp.	0.170***	0.139**		
	(0.057)	(0.062)		
Sh. of Wage-earn.	-0.091***	-0.085**		
	(0.034)	(0.035)		
Sh. Agr. Emp.	-0.052**	-0.037		
	(0.021)	(0.023)		
Sh. Man. Emp.	0.204***	0.179***		
	(0.066)	(0.068)		
LFP	-0.363***	-0.425***		
	(0.088)	(0.096)		
Unemp. Rate	-0.508***	-0.512***		
	(0.144)	(0.150)		
Avg. Sch. Years	0.014**	0.014**	0.018***	0.018***
	(0.006)	(0.006)	(0.006)	(0.006)
Sh. of Univ. Grad.	-0.630***	-0.672***	-0.773***	-0.825***
	(0.159)	(0.167)	(0.141)	(0.147)
Tight Race	-0.078	-0.060	-0.053	-0.036
	(0.056)	(0.059)	(0.058)	(0.060)
Fragm.	-0.027	-0.068	-0.111	-0.148
	(0.128)	(0.132)	(0.131)	(0.134)
Urb. Rate	-0.078	-0.104	0.125***	0.115***
	(0.058)	(0.065)	(0.032)	(0.033)
Sh. of Young	0.139	0.174	-0.357***	-0.325***
	(0.143)	(0.152)	(0.114)	(0.117)
ln(Pop.)	0.011***	0.011***	0.010***	0.010***
	(0.004)	(0.004)	(0.003)	(0.004)
Prov. Center	-0.006	-0.003	-0.002	0.006
	(0.016)	(0.017)	(0.015)	(0.017)
ln(Dist.)	-0.010**	-0.010**	-0.010***	-0.010**
	(0.004)	(0.004)	(0.004)	(0.004)
Constant	0.776***	0.165	0.374***	-0.280**
	(0.127)	(0.150)	(0.099)	(0.110)
Spat. Coef.	-2.233***	-2.221***	-2.231***	-2.224***
	(0.053)	(0.065)	(0.054)	(0.063)
Sigma	0.084***	0.087***	0.086***	0.089***
	(0.002)	(0.003)	(0.003)	(0.003)

highschool graduates easily enter the high education and introduced strong punishment for adultery. On the other hand, AKP's candidate for presidency has been obstructed to take the seat without a convincing legitimate reason, and the military got also involved in the political process directly through a harsh statement that appeared in the official website of the armed forces. It is very likely that the response of voters in such a political turbulence to be different. Third, AKP's success in 2007 elections caused a major shift in its approach from looking for compromise between secular opposition and its policies to more one-sided considerations. In this section, we attempt to explore whether these changes in the political arena has affected the way people voted.

Table 7 reports estimation results in all three election years. Since variables to control for economic activity are not available for 2007 and 2011 we report only estimates of the restricted model. The first column as the same as the second column in in Table 2 and presented here for comparison purpose.

The 2007 election stand out to be different than the other two elections, as the sign of the coefficients of most variables are reverse. Against prior expectations, in districts where the share of Kurdish population in total increases, the share of AKP votes increases. In an election in which Kurdish politicians decided to enter independently and avoid the threshold, one would expect that Kurdish population would vote for their candidates overwhelmingly. Not only the ethnic vote but also votes of the highly educated and young people have also changed in favor of the AKP. There is also significant evidence that AKP could mobilized new voters and those who did not vote in the previous election towards its camp.

In 2011 election, the estimated coefficient have, once again, the same signs as in 2002 election, albeit the magnitudes are much smaller. The only difference is that the coefficients of strategy variables are now significant. The AKP seems to have won more votes in this election where the race was tighter in the previous one, implying that the party designed strategic campaign before this election.

Spatial Heterogeneity

The estimation results for 2007 and 2011 elections are rather confusing. One may argue that the 2002 election and the following elections may be different

Table 7: Regression Results for the AKP Vote at National Level - 2002-2011

	2002	2007	2011
Relig.	1.086***	1.019***	0.872***
	(0.050)	(0.039)	(0.034)
Kurdish	-0.285***	0.154***	-0.246***
	(0.052)	(0.057)	(0.035)
Turnout	-0.258***	0.177***	-0.003
	(0.046)	(0.044)	(0.038)
Sh. of Valid.	0.424***	0.032	0.000
	(0.096)	(0.042)	(0.040)
Avg. Sch. Years	0.022***	-0.058***	0.013**
	(0.007)	(0.007)	(0.005)
Sh. of Univ. Grad.	-0.944***	0.682***	-0.400***
	(0.155)	(0.130)	(0.089)
Tight Race	-0.010	-0.118***	0.100***
	(0.062)	(0.035)	(0.031)
Fragm.	-0.236*	-0.251***	-0.170***
	(0.139)	(0.089)	(0.055)
Urb. Rate	0.141***	-0.014	-0.001
	(0.034)	(0.016)	(0.011)
Sh. of Young	-0.403***	0.528***	-0.134**
	(0.120)	(0.145)	(0.054)
ln(Pop.)	0.009**	-0.005*	-0.010***
	(0.004)	(0.003)	(0.003)
Prov. Center	0.016	0.017	0.014
	(0.017)	(0.012)	(0.010)
ln(Dist.)	-0.010**	-0.003	0.001
	(0.004)	(0.003)	(0.002)
Constant	-0.294***	0.422***	0.226***
	(0.106)	(0.051)	(0.056)
Observations	920	920	920
R-squared	0.643	0.799	0.892

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

as the AKP entered the race as an incumbent party. Yet, how could 2007 and 2011 be so different? We suspect that there could be significant variation in response of voters to AKP's performance and, possibly, to campaign strategies in different regions.

Figure 3: Moran's I_i – 2007

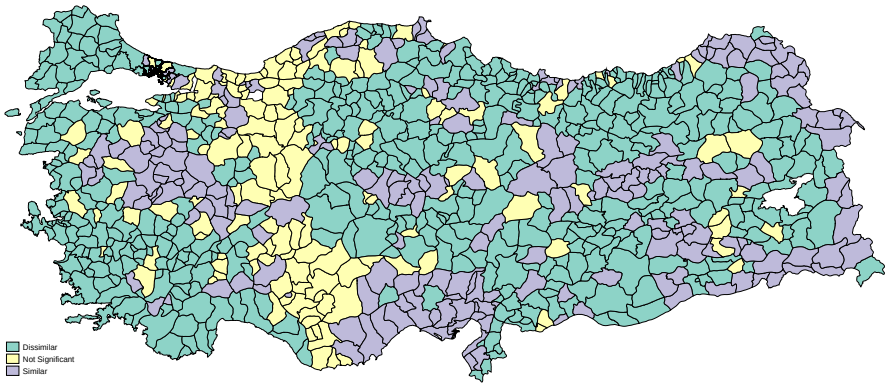
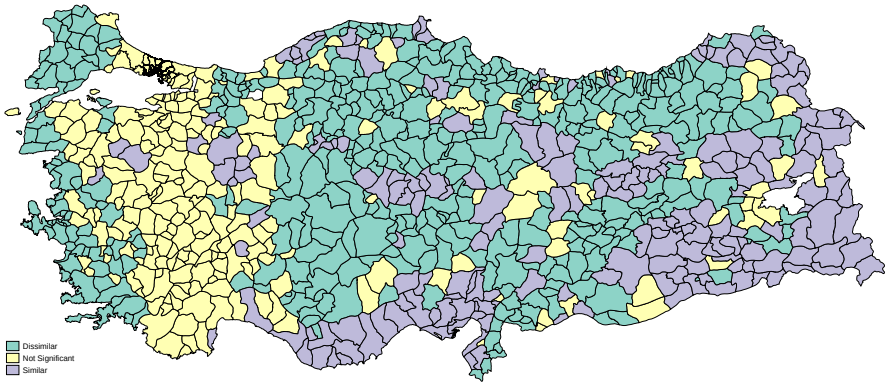


Figure 4: Moran's I_i – 2011



In 2007 AKP votes increased almost everywhere, but the change in the votes vary extremely. For example, AKP's votes increased from 26% in 2002 to 38% in 2007 in the West and from 41% to 53% in the Center, while it almost doubled, rose to 52% from 26% in the East. Figures 3 and 4 show that there is higher spatial instability both in 2007 and 2011 than in 2002, and the number of districts that have neighbors that have voted differently is much higher.

The estimation results by regions are provided in Table 8. Ethnicity matters only in the Central Anatolia and a three percentage point increase in the Kurdish population increases AKP's votes a percentage point in this region. One possible explanation is that in districts where the Kurdish party did not

have a strong candidate, Kurdish population supported the AKP. Yet, this explanation fails to explain why in other regions the coefficient estimates are insignificant.

Table 8: Regression Results for the AKP Vote by Region - 2007 & 2011

	2007			2011		
	West	Center	East	West	Center	East
Relig.	0.908***	0.851***	1.024***	0.934***	0.952***	0.772***
	(0.039)	(0.094)	(0.087)	(0.038)	(0.055)	(0.093)
Kurdish	-0.101	0.326***	0.085	-0.182	0.322***	-0.279***
	(0.155)	(0.108)	(0.093)	(0.125)	(0.067)	(0.072)
Turnout	0.101**	0.113**	0.331***	0.053	0.109***	-0.079
	(0.047)	(0.045)	(0.122)	(0.034)	(0.025)	(0.062)
Sh. of Valid.	0.000	-0.037	0.118	0.077	0.001	0.014
	(0.068)	(0.043)	(0.137)	(0.062)	(0.040)	(0.100)
Avg. Sch. Years	-0.037***	-0.010	-0.065***	-0.031***	-0.007	0.027**
	(0.011)	(0.006)	(0.016)	(0.009)	(0.005)	(0.013)
Sh. of Univ. Grad.	0.334**	-0.434**	0.653	0.263**	-0.089	-1.104**
	(0.168)	(0.174)	(1.027)	(0.116)	(0.104)	(0.489)
Tight race	-0.042	-0.059	-0.131	-0.038	0.005	0.153**
	(0.043)	(0.051)	(0.095)	(0.039)	(0.040)	(0.060)
Fragm.	0.012	-0.053	-0.307	-0.063	-0.100	-0.113
	(0.133)	(0.108)	(0.203)	(0.125)	(0.063)	(0.134)
Urb. rate	0.008	-0.017	-0.039	0.018	-0.036***	0.031
	(0.020)	(0.017)	(0.064)	(0.018)	(0.012)	(0.045)
Sh. of Young	0.099	0.500***	0.195	-0.013	0.014	-0.074
	(0.171)	(0.161)	(0.269)	(0.024)	(0.042)	(0.086)
ln(Pop.)	-0.003	-0.008**	0.007	-0.007**	-0.014***	-0.000
	(0.004)	(0.003)	(0.010)	(0.003)	(0.002)	(0.008)
Prov. Center	0.006	0.063***	-0.040	-0.006	0.009	0.057
	(0.016)	(0.016)	(0.064)	(0.009)	(0.012)	(0.050)
ln(Dist.)	-0.003	0.010***	-0.016	0.000	-0.001	0.005
	(0.004)	(0.004)	(0.014)	(0.002)	(0.003)	(0.012)
Constant	0.363***	0.267***	0.448**	0.321***	0.323***	0.040
	(0.097)	(0.057)	(0.191)	(0.091)	(0.047)	(0.158)
Observations	308	408	204	308	408	204
R-squared	0.851	0.787	0.717	0.931	0.897	0.885

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

The summary of local coefficient estimates are shown in Table 9. Figure 5

provides a visual comparison of the distribution of estimates of the ethnicity variable in different years. In 2007, even in many eastern districts where Kurdish population dominates, ethnicity worked in favor of the AKP. Interestingly, in 2011 Kurdish dominated districts did not vote for the AKP, despite its new "Kurdish Initiative". Since we cannot provide any convincing argument for these phenomena we leave it to further investigation.

There are also sign switches for other variables in 2007. The coefficient of turnout rate is positive and significant in all regions in 2007. AKP has somehow attracted new voters in this election, but this variable looses it's significance in the West and in the East in 2011 election. The 'change of heart' of educated people in 2007 elections, however, occurred mostly in the West where highly educated strongly voted in favor of other parties in the previous election, and stayed as it is even in the 2011 election.

Spatial Contagion

Our tests of spatial autocorrelation in the latter years yields almost the same result of strong contagion effects as before. Results of spatial models are presented in Table 10 and despite they indicate the importance of spatial correlation, the estimated coefficients have the same signs and very close magnitudes.

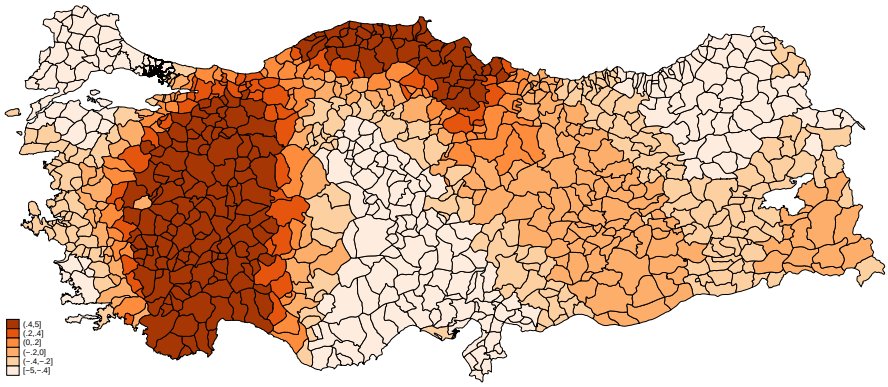
Table 9: Geographically Weighted Regression, Unrestricted Model - 2007 & 2011

2007 Election					
	mean	sd	min	median	max
Relig.	0.929**	0.130	0.751	0.890	1.246
Kurdish	0.231***	0.346	-1.012	0.215	0.899
Turnout	0.160*	0.145	-0.100	0.177	0.600
Sh. of Valid.	0.023	0.122	-0.324	-0.014	0.489
Avg. Sch. Years	-0.030***	0.029	-0.109	-0.024	0.024
Sh. of Univ. Grad.	0.022***	0.714	-2.947	-0.183	2.350
Tight Race	-0.067	0.065	-0.252	-0.071	0.230
Fragm.	-0.121***	0.324	-0.931	-0.051	0.650
Urb. Rate	-0.011**	0.055	-0.146	-0.010	0.302
Sh. of Young	0.312	0.298	-0.744	0.362	1.141
ln(Pop.)	-0.004	0.007	-0.028	-0.003	0.019
Center	0.027***	0.055	-0.165	0.024	0.160
ln(Dist.)	0.000**	0.012	-0.048	0.002	0.024
Constant	0.318**	0.182	-0.157	0.326	0.990
2011 Election					
Relig.	0.872***	0.221	-0.322	0.899	1.283
Kurdish	-0.191***	0.272	-1.199	-0.160	0.307
Turnout	0.023*	0.104	-0.357	0.058	0.273
Sh. of Valid	-0.021	0.114	-0.327	-0.026	0.305
Avg. Sch. Years	-0.007***	0.030	-0.045	-0.017	0.101
Sh. of Univ. Grad.	-0.062***	0.569	-2.560	0.084	1.964
Tight Race	0.010	0.094	-0.354	0.013	0.271
Fragm.	-0.008**	0.291	-0.378	-0.094	1.166
Urb. Rate	-0.011*	0.046	-0.131	-0.011	0.202
Sh. of Young	-0.078	0.192	-0.924	-0.016	0.162
ln(Pop.)	-0.006*	0.009	-0.031	-0.006	0.025
Center	-0.004**	0.048	-0.224	0.000	0.194
ln(Dist.)	-0.003***	0.011	-0.052	-0.001	0.028
Constant	0.290	0.242	-0.427	0.319	1.159

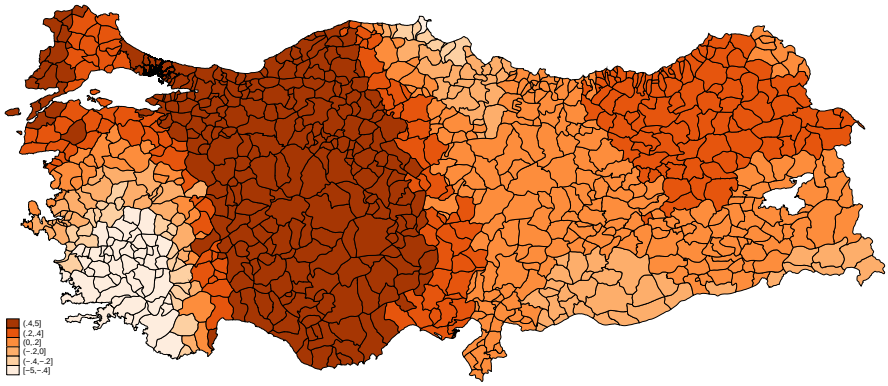
***, **, or * on variables indicates significant spatial variations in GWR coefficients of these variables at the 1%, 5%, or 10% levels, respectively.

Figure 5: Variations in Coefficients of Ethnicity

(a) 2002 Election



(b) 2007 Election



(c) 2011 Election

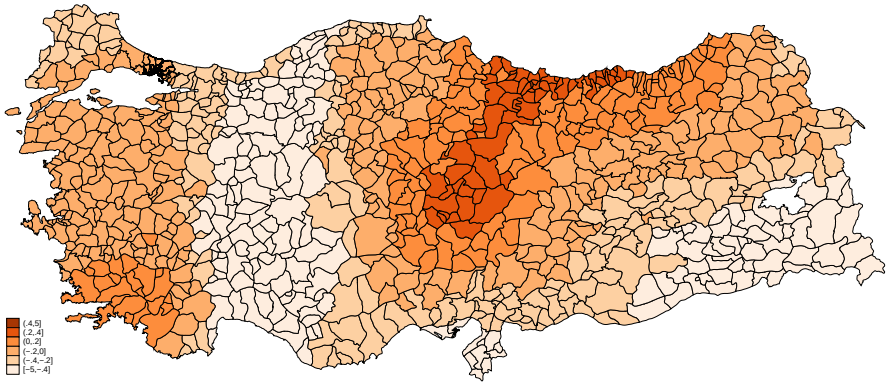


Table 10: Spatial Estimation - 2007 & 2011

	2007		2011	
	Spat. Lag	Spat. Error	Spat. Lag	Spat. Error
akpsh_lag	1.008***	1.014***	0.863***	0.872***
	(0.040)	(0.040)	(0.034)	(0.033)
kurtsh_lag	0.153***	0.144**	-0.246***	-0.235***
	(0.056)	(0.057)	(0.034)	(0.034)
turnout	0.185***	0.182***	0.003	0.002
	(0.044)	(0.043)	(0.037)	(0.037)
validsh_lag	0.066	0.064	0.025	-0.006
	(0.049)	(0.048)	(0.043)	(0.042)
schyear18	-0.056***	-0.055***	0.013**	0.013**
	(0.007)	(0.007)	(0.005)	(0.005)
collsh18	0.656***	0.640***	-0.394***	-0.393***
	(0.128)	(0.129)	(0.087)	(0.089)
urbrate	-0.011	-0.009	-0.002	-0.004
	(0.016)	(0.016)	(0.011)	(0.011)
youngsh	0.474***	0.442***	-0.129**	-0.125**
	(0.145)	(0.148)	(0.053)	(0.051)
tight_lag	-0.109***	-0.105***	0.102***	0.094***
	(0.035)	(0.035)	(0.030)	(0.031)
herf_lag	-0.271***	-0.282***	-0.180***	-0.156***
	(0.089)	(0.091)	(0.055)	(0.057)
lnpop	-0.004	-0.004	-0.009***	-0.010***
	(0.003)	(0.003)	(0.003)	(0.003)
center	0.014	0.014	0.010	0.013
	(0.012)	(0.012)	(0.010)	(0.010)
lndisttocent	-0.003	-0.002	0.000	0.000
	(0.003)	(0.003)	(0.002)	(0.002)
Constant	0.519***	0.397***	0.363***	0.230***
	(0.074)	(0.052)	(0.084)	(0.058)
Spat Coef.	-0.265*	-1.813***	-0.305**	-1.853***
	(0.147)	(0.369)	(0.155)	(0.411)
Sigma	0.070***	0.070***	0.053***	0.053***
	(0.002)	(0.002)	(0.002)	(0.002)
Observations	920	920	920	920

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

5 Conclusion

Our analysis of electoral support for the AKP suggests that location matters. Regional heterogeneity and local differences within regions were important to understand how structure affects the outcome. It is true that social, political and economic policies have varying effects on different regions. But as important is the way each locality perceives and responds to changes. Despite we use district level aggregate data (thus, unable to capture the effects of friends, neighbors etc.), our investigation underlies the importance of the context in which individuals make their voting decisions.

It is a rare occasion in modern Turkish politics that a newly founded party wins three elections in a row and it deserves careful investigation of its causes, especially after ten years of its foundation, a very strong economic performance and three undeniably sweet election victories the country faces a severe polarization. There has been several important studies to understand the reason or reasons why the AKP has gotten so many votes in so many socially and economicly different geographic regions. Our research is an attempt to contribute to this literature by incorporating spatial context onto structural explanations, as well as to understand the extent these effects do change over time.

The AKP sprang from an Islamist party not more than fifteen months earlier than 2002 election and won considerable support from the electorate. Our findings confirm earlier research that religiosity and ethnicity played an important role. Both of these factors were more pronounced in the west of the country. Equally important in the west was that the AKP were able to mobilize center-right votes to its own success. Electorate seems not have voted for the AKP because of it's economic promises, nor the highly educated elites supported the new party.

Our research also suggests that the 2007 elections are indeed special, as our estimates have opposite signs than the estimates for the elections just before and after. The swing of Kurdish votes towards the AKP in this election needs further explanation. So does the question how could the AKP appeal to the new voters and educated electorate in this election.

Both in 2007 and 2011 elections we have found that many districts are neighboring dissimilar ones, implying different regimes of spatial association. Estimates of local coefficients by geographically weighted regressions indicate

that their spread is declining over time as well. Even if individuals are getting more polarized politically, their reaction to social and economic conditions are getting more similar.

There are a few issues we have not considered in this paper. Despite we use data from several elections, we did not undertake a dynamic approach. Particularly we did not investigate the intra-distributional movements of districts over time. Neither do we deal with representation issues as the election system is proportional and imposes a threshold of 10% for any party to be entitled to any seats in parliament. Equally important is, of course, the structural-spatial modelling of the votes for the opposition, which we have left for further research.

References

Akarca, A. (2008). "Inter-party vote movements in Turkey between 1999 and 2002: A statistical analysis using cross-provincial election data," *Munich Personal RepEc Archive* no. 9627.

Akarca, A. and A. Tansel (2006). "Economic performance and political outcomes: An analysis of the Turkish parliamentary and local election results between 1950 and 2004," *Public Choice* 129, 77–105.

Akarca, A. and A. Tansel (2009). "Social, Political and Economic Determinants of Turkish Voter Choice in the 2002 Parliamentary Election," *ERF Working Paper* no. 459.

Anselin, L. (1988). *Spatial Econometrics: Methods and Models*. Kluwer Academic, Boston, MA.

Anselin L. (1995). "Local indicators of spatial association – LISA," *Geographical Analysis*, 27:2, 93–115.

Brunsdon C., A. Fotheringham and M. Charlton (1996). "Geographically weighted regression: a method for exploring spatial nonstationarity," *Geographical Analysis*, 28, 281–298.

Carkoglu, A. (2000). "The geography of the April 1999 Turkish elections," *Turkish Studies*, 1:1, 149-171.

Carkoglu, A. (2002). "The Rise of the New Generation Pro-Islamists in Turkey: The Justice and Development Party Phenomenon in the November 2002 Elections in Turkey," *South European Society and Politics*, 7:3, 123-156.

Carkoglu, A. (2008). "Ideology or Economic Pragmatism?: Profiling Turkish Voters in 2007," *Turkish Studies*, 9:2, 317 —344.

Carkoglu, A. and M. Hinich (2006). "A spatial analysis of Turkish party preferences," *Electoral Studies*, 25, 369-392.

Kalaycioglu, E. (2008). "Attitudinal Orientation to Party Organizations in Turkey in the 2000s," *Turkish Studies*, 9:2, 297-316.

Mardin, S. (1973). "Center periphery relations: a key to Turkish politics?," *Deadalus*, 2:1, 169-190.

O'Loughlin, J.; C. Flint and L. Anselin (1994). "The geography of the Nazi Vote: Context, Confession, and Class in the Reichstag Electon of 1930," Annals of the Association of American geographers, 84:3, 351-380.

Onis, Z. and F. Keyman (2003). "A new path emerges," *Journal of Democracy*, 14:2, 95-107.

Sekercioglu, E. and G. Arikan (2008). "Trends in Party System Indicators for the July 2007 Turkish Elections," *Turkish Studies*, 9:2, 213-231.

Tosun, G. E. and T. Tosun (2008). "Voter Preferences in zmir from the November 3, 2002 to the July 22, 2007 Elections: Has the Election Map Altered?," *Turkish Studies*, 9:2, 247-295.