Norman Schofield · Gonzalo Caballero · Daniel Kselman *Editors*

Advances in Political Economy

Institutions, Modelling and Empirical Analysis

This book presents latest research in the field of Political Economy, dealing with the integration of economics and politics and the way institutions affect social decisions. The focus is on innovative topics such as an institutional analysis based on case studies; the influence of activists on political decisions; new techniques for analyzing elections, involving game theory and empirical methods.

Schofield · Caballero
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Table 1 Vote shares (%)—1999–2011. Source: www.ysk.gov.tr; www.resmigazete.gov.tr

Party name		Vote shares			
		1999	2002	2007	2011
Justice and Development Party	AKP	–	34.28	46.58	49.80
Republican People's Party	CHP	8.71	19.39	20.88	25.98
Nationalist Action Party	MHP	17.98	8.36	14.27	13.02
Felicity Party	SP[a]	–	2.49	2.34	1.26
Virtue Party	FP	15.41	–	–	–
Democrat Party	DP		–	5.42[b]	0.65
Democratic Left Party	DSP	22.19	1.22	–[c]	0.25
True Path Party	DYP	12.01	9.54		0.15
Motherland Party	ANAP	13.22	5.13	–[d]	–
Genc Party	GP	–	7.25	3.04	–
People's Democracy Party	HADEP	4.75	–	–	
Democratic People Party	DEHAP[e]	–	6.22	–	–
Independents		0.87	1.00	5.24[f]	6.59[g]
Others		4.86	5.13	2.25	2.29
Total		100.00	100.00	100.00	100.00
Turnout		87.09	79.14	84.25	83.16

[a]Felicity Party is the successor to Virtue Party, which was banned by the Constitutional Court

[b]DYP changed its name to Democrat Party in a failed attempt to merge with ANAP

[c]The candidates of DSP entered the elections in the CHP lists

[d]ANAP withdrew from elections and asked their supporters to vote for DP

[e]Democratic People Party is the successor to People's Democracy Party, which was banned by the Constitutional Court

[f]Majority of independent candidates are supported by Democratic Society Party (DTP), which is the successor to DEHAP

[g]Majority of independent candidates are supported by Democratic Society Party (DTP), which is the successor to DEHAP

a party with a strong emphasis on a secularist agenda. In the 2007 elections, AKP consolidated their power by receiving 46.6 % of the votes while CHP increased their share of the vote by only 1.5 percentage points to 20.9 %. In addition, the Nationalist Action Party (MHP) and independent candidates supported by the pro-Kurdish Democratic Society Party (DTP) were able to win seats in the 2007 elections.

The changes in electoral politics brought about several important questions: What are the main issues that shape political debate? How can we describe the position of AKP and other parties on issues that are relevant for voters? How can we explain the voters' preferences in this new electoral landscape? The characterization of political parties and voters along a left-right continuum has been widely-used and helpful in making comparisons across political systems. However, the reduction of political views to a single dimension may conceal the diversity of issues that may

Table 2 Seats—1999–2011. Source: www.ysk.gov.tr; www.resmigazete.gov.tr

Party name		1999	2002	2007	2011
Justice and Development Party	AKP	–	363 (66)	341 (59.56)	327 (59.45)
Republican People's Party	CHP	–	178 (32.36)	112 (20.4)	135 (24.55)
Nationalist Action Party	MHP	129 (23.45)	–	70 (12.75)	53 (9.64)
Felicity Party	SP	–	–	–	–
Virtue Party	FP	111 (20.18)	–	–	–
Democrat Party	DP	–	–	–	–
Democratic Left Party	DSP	136 (24.73)	–	–	–
True Path Party	DYP	85 (15.45)	–	–	–
Motherland Party	ANAP	86 (15.64)	–	–	–
People's Democracy Party	HADEP	–	–	–	–
Independents		3 (0.55)	9 (1.64)	26 (4.74)	35 (6.36)
Others		–			–
Total		550 (100.00)	550 (100.00)	549 (100.00)	550 (100.00)

cut across each other. Moreover, the substantive content of the left-right continuum may change across countries and over time. It has been discussed that economic and social issues that define the political space in advanced industrial democracies were not sufficient in describing the electoral politics in Turkey in 2000s (Onis 2009). Self-placement of voters on a left-right continuum is explained by ethnic and sectarian differences rather than socioeconomic characteristics (Carkoglu 2007). Religion and nationalism emerge as the primary dimensions that separate voters and political parties in the spatial analyses of 1999 and 2002 elections. AKP is located on the right on the religion axis albeit closer to the electoral mean than the Islamist parties while CHP is located on the left. On the nationalism axis, there is pro-Kurdish DTP on the one end and Turkish nationalist MHP on the other end with other parties placed in between (Carkoglu and Hinich 2006; Schofield et al. 2011). In this paper, we apply the spatial model described in the following section to the 2007 elections in order to trace the changes in the position of voters and parties.

2 Spatial Model of Elections

We start our analysis with a pure spatial model $\mathbb{M}(\lambda, \beta)$ which includes the distance between the position of the voters and the political parties and the *exogeneous* valence (Schofield 2008). The valence term refers to the voters' perceptions of political leaders that are independent from their policy positions (Stokes 1963). In the

139 model, the utility that voter i with position x_i gets from voting for party j with
140 position z_j equals

$$u_{ij}(x_i, z_j) = \lambda_j - \beta \|x_i - z_j\|^2 + \epsilon_j$$

143 In the equation, $\|x_i - z_j\|$ denotes the Euclidian distance between the voter i's ideal
144 point and the party j's policy position. ϵ_j is an error vector with a type I extreme
145 value distribution. The intercept term λ_j gives the exogeneous valence of party j.
146 The valence is exogeneous in the sense that it is not determined by the characteristics
147 of the voter. We use a multinomial logit model to estimate the coefficients.
148   We continue our analysis with the calculation of convergence coefficient c which
149 gives information about whether or not the position of the mean voter would be an
150 Local Nash Equilibrium (LNE) given the spatial coefficient and the relative valence
151 terms in the model. Schofield (2007) proves that $c < 1$ is a sufficient and $c < \omega$ is
152 a necessary condition for electoral mean to be a LNE, where ω is the number of
153 dimensions. By simulation, we search for a LNE and see whether the small parties
154 have any incentive to diverge from the center given the spatial coefficient and the
155 relative valence terms.
156   Finally, we incorporate the demographic characteristics of voters into the spatial
157 model. In the joint model $\mathbb{M}(\lambda, \beta, \theta)$, the utility of voter x_i from voting for party z_j
158 equals

$$u_{ij}(x_i, z_j) = \lambda_j + (\theta_j \cdot \eta_i) - \beta \|x_i - z_j\|^2 + \epsilon_j$$

161 where $(\theta_j \cdot \eta_i)$ refers to the sociodemographic valence of voter i for party j
162 (Schofield 2007).

## 3 2007 Elections in Turkey

168 We analyze 2007 elections based on World Values Survey (WVS) conducted on a
169 nationally representative sample in 2007.[3] We limit our analysis to the voters who
170 indicated that they would vote for a political party in the following elections and
171 answered all the questions used in the factor analysis.[4,5] We use factor analysis to

173 [3]World Values Survey 1981–2008 official aggregate v.20090901 (2009). World Values Survey As-
174 sociation (www.worldvaluessurvey.org). Aggregate File Producer: ASEP/JDS, Madrid.

175 [4]Due to low levels of response to survey questions used to measure the position of voters, DTP
176 voters are underrepresented in the sample compared to the election results, which may have a
177 deflating influence on the valence term for DTP.

178 [5]We excluded the voters of Felicity Party, Young Party and Democratic Left Party from our anal-
179 ysis. The vote shares for Felicity Party and Young Party were below 5 % in the 2007 elections
180 (see Table 1). As explained in Table 1, after a failed attempt to merge with ANAP, DYP changed
181 its name to DP in the 2007 elections. ANAP withdrew from the elections but their leader recom-
182 mended that their voters vote for DYP. We decided to include these two parties separately in our
183 analysis because at the time survey was conducted and until the elections, they were two distinct
184 parties with different voter profiles.

Fig. 1 Voter distribution and party positions in the 2007 election
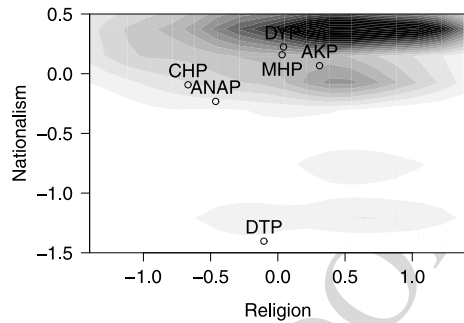
identify the issues that differentiate voters from each other. We start with a long list of questions about the attitudes of voters toward religion and nationalism as well as economic and social issues.[6] Similar to previous studies, our analysis shows that religion and nationalism are principal dimensions that characterize the ideological position of Turkish voters.[7]

Figure 1 shows the position of voters with the x axis corresponding to the religion dimension and the y axis corresponding to the nationalism dimension. A movement from left to right on the x axis indicates a view that favors an increasing role of religion in private and public life. A movement from south to north on the y axis indicates an increasing association with Turkish nationalism. The variance on the x axis is 0.729 while the variance on the y axis is 0.498. The covariance between the two axes is 0.073. Thus the voter covariance matrix is the 2×2 matrix:

$$\nabla = \begin{bmatrix} 0.729 & 0.073 \\ 0.073 & 0.498 \end{bmatrix}$$

with trace(∇) = 1.227. The covariance matrix reveals two important points that differ from the analysis of previous elections.[8] First, the variance on the nationalism dimension is considerably smaller. The majority of voters are concentrated on the northern part of Fig. 1 with higher levels of association with Turkish nationalism. There is another group of voters concentrated on the southern part of the figure, most of whom are the voters of the pro-Kurdish DTP. Second, the covariance between the two axes is considerably smaller, which implies that the attitudes toward nationalism are not related very strongly to the attitudes toward religion.

The position of parties is calculated by taking the mean position of its voters on the religion and nationalism dimensions respectively. The party positions are given by the following matrix:

[6]The questions used in the factor analysis and the model are listed in Appendix 1.

[7]The factor loadings of the analysis are given in Appendix 2 (Table 6).

[8]See Carkoglu and Hinich (2006) and Schofield et al. (2011) for a spatial analysis of 1999 and 2002 elections in Turkey.

Table 3 Pure spatial model for 2007 elections. Normalized with respect to MHP

Party name		λ	Std. error	|t-value|
Justice and Development Party	AKP	1.413[*]	0.129	10.93
Republican People's Party	CHP	0.623[*]	0.151	4.138
Nationalist Action Party	MHP	–	–	–
Democratic Society Party	DTP	-1.688[*]	0.36	-4.684
True Path Party	DYP	-1.479[*]	0.269	-5.507
Motherland Party	ANAP	-1.676[*]	0.302	-5.551
Spatial Coefficient β		0.658[*]	0.061	-10.758
Convergence Coefficient		1.537		

n = 558; Log likelihood = -603.57; McFadden $R^2 = 0.114$

[*]Significant with probability <0.001

$$z^* = \begin{bmatrix} Party & AKP & CHP & MHP & DTP & DYP & ANAP \\ x: religion & 0.31 & -0.67 & 0.03 & -0.1 & 0.04 & -0.46 \\ y: nationalism & 0.07 & -0.09 & 0.16 & -1.4 & 0.22 & -0.23 \end{bmatrix}$$

The position of parties is similar to the previous elections with relatively minor differences. On the religion axis, CHP and AKP are located at the opposite ends with all the other parties located in between. Although position of AKP on the religion dimension is closer to the center compared to the position of pro-Islamist parties in previous elections, it is located to the right of the electoral mean. On the nationalism axis, there is a polarization between the pro-Kurdish DTP on the one hand, and all the other parties on the other hand. As discussed above, the position of parties other than DTP are very close to each other on this dimension. We are cautious, however, to interpret this as a change in the position of parties since we used questions that are different from the previous analyses. Due to the lack of questions related to policies on issues such as language, we used questions that measure association with Turkish nationalism. Interestingly, and unlike the previous years, the nationalist MHP is closer to the center on this dimension than DYP; however, this may be related to the small number of DYP supporters both in the population in 2007 elections and in our sample.

We use the pure spatial model $\mathbb{M}(\lambda, \beta)$ to estimate the relationship between the ideological position and valence of political parties, and their electoral success. The results are summarized in Table 3. The spatial coefficient β is 0.658 and statistically significant. The valence terms are calculated with respect to MHP. The vector of relative valences is

$$(\lambda_{AKP}, \lambda_{CHP}, \lambda_{MHP}, \lambda_{DTP}, \lambda_{DYP}, \lambda_{ANAP})$$
$$= (1.413, 0.623, 0, -1.688, -1.479, -1.676)$$

The party with the lowest valence is DTP with $\lambda_{DTP} = -1.688$. According to the model, when all parties are located at the electoral mean, the probability that a voter chooses DTP is

ρ_{DTP}

$$= \frac{\exp(-1.688)}{\exp(1.413) + \exp(0.623) + \exp(0.0) + \exp(-1.688) + \exp(-1.479) + \exp(-1.676)}$$

$$= \left[\exp(3.101) + \exp(2.311) + \exp(1.688) + \exp(0) + \exp(0.209) + \exp(0.012)\right]^{-1}$$

$$= [22.225 + 10.084 + 5.409 + 1 + 1.232 + 1.012]^{-1}$$

$$= 0.024$$

The standard error for λ_{DTP} is 0.36. Accordingly, the 95 % confidence interval for λ_{DTP} is $[-2.398, -0.978]$ and the 95 % confidence interval for ρ_{DTP} is $[0.01, 0.05]$. As explained above, DTP did not participate in the 2007 elections but supported independent candidates; therefore, it is difficult to assess the vote share of DTP in 2007. Table 1 shows that the independent candidates received 5.24 % of the votes; however, this includes candidates that were not supported by DTP as well. The respondents that indicated that they would vote for DTP constitute 2.5 % of our sample.

Schofield (2007) shows that the Hessian of the DTP is governed by the convergence coefficient of the pure spatial model, which is given by:

$$c = 2\beta(1 - 2\rho_{DTP}) \operatorname{trace}(\nabla)$$

$$= 2 \times 0.658 \times (1 - 2 \times 0.024) \times 1.227$$

$$= 1.537$$

Schofield (2007) further shows that if $c < 1$, than the Hessian will have negative eigenvalues, giving a local equilibrium at the origin. In addition a necessary condition for this convergence is that $c < 2$. We calculate a conservative confidence interval for the convergence coefficient using the upper bound of the β coefficient and the lower bound of ρ_{DTP} and vice versa. The standard error for β is 0.061 so the 95 % confidence interval for β is $[0.538, 0.778]$. Thus, the 95 % confidence interval for the convergence coefficient is $[1.188, 1.871]$. The confidence interval for the convergence coefficient satisfies the necessary condition for the electoral mean to be an LNE since the upper bound is smaller than 2. It does not, however, satisfy the sufficient condition since the lower bound is greater than 1.

The Hessian, or the characteristic matrix of DTP:

$$C_{DTP} = 2\beta(1 - 2\rho_{DTP})\nabla - I$$

$$= 2 \times 0.658 \times (1 - 2 \times 0.024)\nabla - I$$

$$= 1.253 \begin{bmatrix} 0.729 & 0.073 \\ 0.073 & 0.498 \end{bmatrix} - I$$

$$= \begin{bmatrix} -0.087 & 0.091 \\ 0.091 & -0.376 \end{bmatrix}$$

The eigenvalues of the characteristic matrix are -0.06 with the eigenvector $(-0.961, -0.278)$ and -0.403 with the eigenvector $(-0.278, 0.961)$. We calculate a confidence interval for the Hessian using the upper bound of the β coefficient and the lower bound of ρ_{DTP} and vice versa.

$$C_{DTP} = 2\beta(1 - 2\rho_{DTP})\nabla - I$$

$$= 2 \times 0.538 \times (1 - 2 \times 0.05)\nabla - I, 2 \times 0.778 \times (1 - 2 \times 0.01)\nabla - I$$

$$= 0.968 \begin{bmatrix} 0.729 & 0.073 \\ 0.073 & 0.498 \end{bmatrix} - I, 1.525 \begin{bmatrix} 0.729 & 0.073 \\ 0.073 & 0.498 \end{bmatrix} - I$$

$$= \begin{bmatrix} -0.294 & 0.071 \\ 0.071 & -0.518 \end{bmatrix}, \begin{bmatrix} 0.112 & 0.111 \\ 0.111 & -0.241 \end{bmatrix}$$

The eigenvalues of the lower bound for the characteristic matrix are -0.273 with the eigenvector $(-0.96, -0.279)$ and -0.539 with the eigenvector $(-0.279, 0.96)$. The eigenvalues of the upper bound for the characteristic matrix are 0.144 with the eigenvector $(-0.961, -0.277)$ and -0.273 with the eigenvector $(-0.277, 0.961)$.

As mentioned above, Schofield (2007) shows that a necessary and sufficient condition for the electoral mean to be LNE is that the eigenvalues of the characteristic matrix are both negative. As we see above, the point estimate and the lower bound for the characteristic matrix have negative eigenvalues, which implies that the electoral mean should be LNE. The upper bound for the characteristic matrix has one positive and one negative eigenvalue, and a negative determinant (-0.15). Hence, the upper bound gives a saddle point.

By simulation based on the point estimates of the spatial coefficients and the valence terms, we can verify that the electoral mean is an LNE in our case. When all the parties are located at the electoral mean their predicted vote shares were calculated as:

$$\rho^{z_0} = \left(\rho_{AKP}^{z_0}, \rho_{CHP}^{z_0}, \rho_{MHP}^{z_0}, \rho_{DTP}^{z_0}, \rho_{DYP}^{z_0}, \rho_{ANAP}^{z_0}\right)$$

$$= (0.543, 0.246, 0.132, 0.024, 0.03, 0.025)$$

We compare this to votes shares in our sample:

$$(s_{AKP}, s_{CHP}, s_{MHP}, s_{DTP}, s_{DYP}, s_{ANAP})$$

$$= (0.556, 0.231, 0.134, 0.025, 0.03, 0.023)$$

This comparison is important as it tells us about whether the low valence parties have any incentive to move to the electoral mean. Schofield and Gallego (2011, 190) call an equilibrium at position z a *stable attractor* when the lower 95 % bound of predicted vote shares of low valence parties at the equilibrium are higher than their actual vote shares. If an equilibrium is not a stable attractor than the party activists would have more incentive to pull the party from the electoral mean to z^*. As we see in the vectors, the equilibrium at the electoral mean is not a stable attractor for DTP or DYP.

Fig. 2 Local Nash
equilibrium
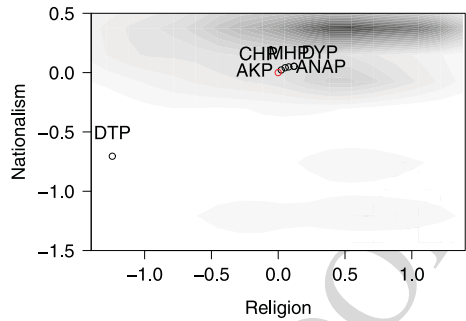
By using simulation, we found another LNE with the following party positions:

$$z_1 = \begin{bmatrix} Party & AKP & CHP & MHP & DTP & DYP & ANAP \\ x: religion & 0.02 & 0.05 & 0.08 & -1.24 & 0.12 & 0.12 \\ y: nationalism & 0.02 & 0.04 & 0.05 & -0.7 & 0.05 & 0.05 \end{bmatrix}$$

As can be seen in Fig. 2, all the parties other than DTP are concentrated around the
electoral mean and DTP is on the southwest of the graph. The difference between
the initial party positions and the party positions at the equilibrium is given by the
following matrix:

$$z^* - z_1 = \begin{bmatrix} Party & AKP & CHP & MHP & DTP & DYP & ANAP \\ x: religion & 0.29 & -0.72 & -0.05 & 1.14 & -0.08 & -0.58 \\ y: nationalism & 0.05 & -0.13 & 0.11 & -0.7 & 0.17 & -0.29 \end{bmatrix}$$

This matrix shows how much and in which direction the parties are pulled from the
equilibrium point by the party activists. The most obvious differences are seen in
the positions of CHP and DTP. The former takes a position far to the left of the
equilibrium position on the religion axis and the latter takes a position far to the
south of the equilibrium position on the nationalism axis. The predicted vote shares
at the equilibrium were calculated as:

$$\rho^{z_1} = \left(\rho_{AKP}^{z_1}, \rho_{CHP}^{z_1}, \rho_{MHP}^{z_1}, \rho_{DTP}^{z_1}, \rho_{DYP}^{z_1}, \rho_{ANAP}^{z_1} \right)$$
$$= (0.539, 0.245, 0.131, 0.03, 0.03, 0.025)$$

Compared to the sample vote shares the equilibrium provides a higher predicted
vote share for CHP, DTP and ANAP.

Finally, we supplement the spatial model with the demographic characteristics of
voters. Following previous studies, we include age, education, ethnicity and socio-
economic status as independent variables. We measure ethnicity by the primary lan-
guage that the respondents speak at home and construct it as a dummy variable that
takes the value 1 for Zaza and Kurdish, and 0 for Turkish and all other languages.[9]

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[9]See Appendix 2 for the list of questions used to measure demographic characteristics.

Table 4 Joint model for 2007 elections. Normalized with respect to MHP

Variable	Party	Coefficient	Std. error	|t-value|
Spatial Coefficient β		0.603[***]	0.066	−9.167
Relative Valence λ_k	AKP	−0.694	1.228	−0.565
	CHP	−1.171	1.625	−0.72
	DTP	−5.183[*]	2.229	−2.326
	DYP	11.571	3083.355	0.004
	ANAP	11.583	4329.811	0.003
Age	AKP	0.025[*]	0.012	2.205
	CHP	0.032[*]	0.013	2.411
	DTP	0.004	0.032	0.109
	DYP	0.063[**]	0.019	3.266
	ANAP	0.025	0.025	0.995
Education	AKP	−0.227[*]	0.095	−2.392
	CHP	0.118	0.107	1.104
	DTP	−0.285	0.288	−0.988
	DYP	−0.228	0.193	−1.181
	ANAP	−0.113	0.209	−0.542
Kurdish	AKP	1.486	1.045	1.423
	CHP	−0.359	1.441	−0.249
	DTP	4.653[***]	1.245	3.738
	DYP	−14.527	3083.354	−0.005
	ANAP	−14.965	4329.811	−0.003
Socio-economic Status	AKP	0.314[*]	0.145	2.164
	CHP	0.288	0.174	1.651
	DTP	−0.36	0.484	−0.744
	DYP	0.252	0.305	0.826
	ANAP	0.541	0.36	1.503

n = 558; Log likelihood = −565.6; McFadden R^2 = 0.17

[***]Significant with probability <0.001

[**]Significant with probability <0.01

[*]Significant with probability <0.05

Previous studies point to a relationship between religious sect and vote choice. More specifically, Alevi voters were more likely to vote for CHP compared to other parties (Schofield et al. 2011). We were not able to include religious sect in our analysis because the question was not asked to the respondents.

In the joint model, which is summarized in Table 4, the spatial coefficient is smaller than the pure spatial model but it is still statistically significant. However, none of the valence terms except the one for DTP are statistically significant. Among the demographic characteristics, the only one that is both substantively and statisti-

cally significant is ethnicity. Not surprisingly, Kurdish speakers are more likely to vote for DTP compared to the baseline, which is the nationalist MHP. If we compare the McFadden R^2 of the pure model to the joint model, we see that the joint model provides a better fit.

4 Comparison with Previous Elections

A comparison of our results with previous analyses of 1999 and 2002 elections enables us to trace the change in electoral politics in Turkey during the last decade. In order to facilitate comparison, we rerun the model by using DYP as the baseline and summarized the results in Table 5.[10] The considerable increase in the relative valence of the three parties in the parliament compared to DYP points to the culmination of the decline of center-right parties. The valence of AKP increased compared to both CHP and MHP. This can be explained by the good performance of AKP's economic policies.[11] It is important to note, however, that it is practical rather than ideological considerations about economic policy that effect voters' preferences. Our factor analysis did not detect any coherent attitudes toward economic policy that explain the variance among voters. Economic policy can be thought as part of the valence term to the extent it is perceived as the competence of the party leaders. The positive valence terms for all three parties—AKP, CHP and MHP—can also partly be explained by the role party activists in providing financial and organizational resources.

One of the critical findings of our comparison is the decrease in the convergence coefficient from 5.9 in 2002 to 1.5 in 2007, which implies an increas-

Table 5 Comparison with previous years.[a] Normalized with respect to DYP

Party name	1999	2002	2007
Justice and Development Party	–	0.78*	2.893*
Republican People's Party	0.734*	1.33*	2.102*
Nationalist Action Party	0.666*	−0.12	1.479*
Democratic Society Party	−0.071	0.43	−0.209
Motherland Party	0.336	−0.31	−0.197
Democratic Left Party	0.724*	–	–
Spatial Coefficient β	0.375*	1.52*	0.659*
Convergence Coefficient	1.49*	5.94*	1.54*

[a]The entries for 1999 and 2002 are the results of the analysis in Schofield et al. (2011)

[10]In the previous section, we use MHP as the baseline because the small number of DYP supporters in our sample result in large standard errors in the joint model.

[11]In an analysis of 2007 elections, Kalaycioglu (2010) points that economic satisfaction is the primary determinant of both party identification and party preference for AKP voters.

ing likelihood of convergence to the electoral mean. By using simulation, we verified that electoral mean gives an LNE in 2007 elections. We also found another LNE with all parties except DTP aligned close to the electoral mean and DTP located in the southwest of the ideological space. We argue that the electoral strength of AKP pulls the equilibrium point to the right of electoral mean on the religion axis. The initial position of all parties except DTP and AKP are to the left of the equilibrium. The initial positions of parties except DTP on the nationalism axis got closer to each other compared to 2002 elections. DTP takes a position that is to the south of the equilibrium point. None of the parties except DTP diverge from the electoral mean on this axis in the equilibrium.

Appendix 1: Survey Questions

The analysis of 2007 elections in this paper is based on World Values Survey (WVS).[12] The survey was conducted between January and March 2007, that is three—six months before the 2007 elections. The questions used in our analysis are the following:

Vote Choice

If there were a national election tomorrow, for which party on this list would you vote?

Secularism

(1) How strongly do you agree or disagree with each of the following statements? Strongly Agree, Agree, Neither Agree Nor Disagree, Disagree, Strongly Disagree
  (a) Politicians who do not believe in God are unfit for public office.
  (b) It would be better for Turkey if more people with strong religious beliefs held public office.
(2) For each of the following, indicate how important it is in your life. Would you say it is Very important, Rather important, Not very important, Not at all important? Religion

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[12]World Values Survey 1981–2008 official aggregate v.20090901 (2009). World Values Survey Association (www.worldvaluessurvey.org). Aggregate File Producer: ASEP/JDS, Madrid.