Voter Sophistication and Voting Behavior in Türkiye

Türkiye'de Seçmen Karmaşıklığı ve Oy Verme Davranışı

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ABSTRACT

The objective of this study is to test MacDonald, Rabinowitz and Listhaug's (1995) argument suggesting a link between voter sophistication and two models of spatial theory of party competition, the proximity model and the directional model. MacDonald and his colleagues argued that as the proximity model is more cognitively demanding than the directional one, it provides a more eligible formula for understanding the voting behavior of the educated and politically knownledgeable voters. Although they did not find supporting evidence for their argument, we suggest that this may be due to their case selection and methodological preferences. We think that in a country, where there are striking implications of differences between education levels and there is high political knowledge, a different picture may emerge. It is also suggested here that an alternative measurement for political sophistication, which was constructed by the multiplication of education and actual political knowledge, would be a more objective and appropriate proxy for voter sophistication. In this research, 2015 round of Comparative Study of Election Systems (CSES) data for Türkiye were employed. The final dataset holds answers of 249 respondents, which are voters of the four most-voted political parties in Türkiye. The findings provide proofs largely confirming the MacDonald and his colleagues' argument.

ÖZ

Bu çalışmanın amacı, MacDonald, Rabinowitz ve Listhaug'ın (1995) seçmen karmaşıklığı ile parti rekabetine dair uzamsal teoriye ilişkin iki rakip model olan yakınlık modeli ve yön modeli arasında bir bağlantı öneren argümanlarını test etmektir. MacDonald ve arkadaşları, yakınlık modelinin yön modelinden bilişsel açıdan daha talepkar olduğundan, eğitimli ve siyasetle ilgili seçmenlerin oy verme davranışlarını anlamak için daha uygun bir formül sunduğunu ileri sürmüşlerdir. Bu argümanı destekleyen bir kanıt bulamamış olsalar da, biz bunun vaka seçimi ve metodolojik tercihlerinden kaynaklanabileceğini önermekteyiz. Eğitim seviyeleri arasındaki farkların sonuçlarının belirgin ve siyaset hakkındaki bilginin daha yüksek olduğu bir ülkede farklı bir tablonun ortaya çıkabileceğini düşünmekteyiz. Ayrıca eğitim ve siyasi bilginin çarpımıyla oluşturulan alternatif bir ölçümün seçmen karmaşıklığın daha objektif ve uygun bir göstergesi olabileceğini önermekteyiz. Bu araştırmada, Karşılaştırmalı Seçim Sistemleri Çalışması'nın (CSES) Türkiye için 2015 dönemine ait verileri kullanılmıştır. Nihai veri seti, Türkiye'de en çok oy alan dört siyasi partinin seçmenlerinden oluşan 249 katılımcının yanıtlarını içermektedir. Bulgular, Macdonald ve arkadaşlarının argümanını büyük oranda olarak doğrulayan kanıtlar sunmaktadır.

1. Introduction

Building on Stokes' (1963) criticism of the Downsian spatial model arguing that masses are tend to understand issues in binary and simple forms, MacDonald, Rabinowitz and Listhaug, in their 1995 research titled *Political Sophistication and Models of Issue Voting*, suggested a link between voter sophistication and two models of spatial theory of party competition: the proximity model and the directional model. Basing on a simple cognitive rule, they argued that for respondents, replacing themselves or a political party on an exact ideological or issue point of a 0-10 axis is more cognitively demanding than choosing a side on the same axis. As the proximity formula requires choosing an exact point and the directional formula requires choosing a side, the proximity formula should be more appropriate to understand voting preferences of those respondents who are more educated and politically involved. Departing from this perspective, they compared the two competing models based on their ability to predict voting preferences in two countries, the US and Norway. They used survey data from 1988 presidential election in the US and 1989 parliamentary election in Norway. The US and Norway are much different not only in terms of their political systems but also their populations' ethnic, religious and socioeconomic backgrounds. While in the US a single-member-district (SMD) system is in effect since 1842. In most states the most voted candidate is elected using first-past-the-post system. Whereas, in Norway, there is a well-established proportional (PR) electoral system with multi-member 19 districts since 1919 and the votes are translated into seats using Sainte-Laguë method. While the US is more diverse and homogenous in terms of ethnic and religious backgrounds, Norway is more heterogenous. Based on this variation, they suggested a stronger position for the generalizability of their finding. Nevertheless, it should be noted that their selection of sample is far from being representative of all the countries. Both countries are economically advanced ones with long and uninterrupted democratic history. State and education systems are well established. Education and economic sources are well spread across different segments of the society. As a result, their findings did not support their argument, which we believe does derive from case and variable selections. Whereas, in a non-Western society where there are many implications derived from striking educational differences across socioeconomic and political groups, the results may differ. Moreover, in Türkiye, a party-list proportional representation system with D'Hondt method is in effect in 87 electoral districts. In 2015 November elections, a total number of 16 political parties competed. In a totally different political environment and electoral system, a different picture can be expected. Moreover, in their study, the authors calculated political sophistication with an multiplication index generated using education and political interest variables. We, on the other hand, followed a more objective analytical strategy and replaced subjective political interest variable with a battery of actual political knowledge and generated a multiplication index of political sophistication using education and political knowledge variables.

To test our view, the current paper is designed as in the following: The next section lays the foundations of the theory regarding the two alternative models of political preference, the third section introduces data and methods adopted for this study, the fourth section presents findings of the analyses and the final section discusses findings regarding to their theoretical connections.

2. Political Sophistication And Alternative Models Of Voting

Since Down's first interpretation, in 1957, of the spatial model in electoral behavior and party competition, the model has undertaken two different tracks proposed to link mass issue positions with the way people evaluate parties and candidates. Although both has based themselves on the important role of the voters' utility calculations in their voting decisions, each has diverged on how voters calculate these utilities. Known as the proximity model, the first one argues that the voters' utility is calculated as the distance between their and the parties' positions. As a result, the voters support political parties that are the closest to their own positions that represented with a point on a two-poled axis. In return, to be successfully congruent, parties should locate their issue positions as close as possible to those of the median voter (Downs, 1957; Enelow and Hinich, 1984; Hinich and Munger, 1994; Hinich and Pollard, 1981; Çarkoğlu and Hinich, 2006; MacDonald, Rabinowits and Listhaug, 1995; Adams and Merill, 1999; Arıkan-Akdağ, 2016). The directional model also relies on the fundamental idea that voters consider policy positions important, and their electoral choices are influenced by utility calculations based on these positions. Yet, according to the directional model, voters have only general preferences for the sides of issue debates. As such, the calculation of utility varies significantly. Voters tend to support parties that align with their side of the two-dimensional policy spectrum, preferring those that are more extreme than their own position but still within an acceptable range. Therefore, parties should emphasize issues where the majority of voters are on their side

(MacDonald, Listhaug and Rabinowitz, 1991; MacDonald, Rabinowitz and Listhaug, 1995; 1998; 2001; Iversen, 1994; Kedar, 2005; Kedar, 2005; Toms and Houweling, 2008).

Since then, a considerably large body of literature has developed to test the validity of either of the approaches (Grofman, 2004; Toms and Houweling, 2008). Some of these studies indicated that each model's explanatory power is conditional on country level characteristics such as the type of electoral system of a country or individual level characteristics such as voter sophistication. At the country level, although MacDonald, Listhaug, and Rabinowitz (1991, 1995, 1998, 2001) argue that the directional model is superior for both majoritarian (SMD) and proportional representation (PR) electoral systems, other studies present conflicting findings (Meyer and Müller 2014; Lewis and King 1999; Westholm 1997). Westholm (1997) contends that proximity voting better explains voting behavior in PR electoral systems, while the directional model is more suitable for SMD systems. Using the same data but with revised measurements for each theory, he retests the hypothesis with the 1989 Norwegian elections—where a proportional electoral system is in effect—and finds supporting evidence for his argument. Several other studies (Ames, 1995; Cox, 1990) have also tested the effect of the electoral system on voters' evaluations of candidate positions, favoring the appropriateness of proximity voting in proportional systems (İnan and Arıkan-Akdağ 2024). İnan and Arıkan-Akdağ (2024) found evidence of the superiority of the proximity model in understanding electoral preferences of voters in Türkiye, a country applying proportional representation for parliamentary elections. Interestingly, Blais et al. (2001) found support for the proximity model in their analysis of the data from 1997 Canadian elections, despite Canada is governed by a majoritarian system. Thus, existing research presents mixed findings favoring both models, making it challenging to determine the superiority of either model. Even more importantly, by focusing only on the type of the electoral system, they leave untouched the possible presence of variations in electoral utility calculations of each voter and individual level factors that may affect these variations.

At the individual level, several studies have indicated that voters' strategies are not uniform but diverging (Macdonald, Rabinowitz and Listhaug, 1995; Toms and Houweling, 2008). In their experiment applied among American Voters, Toms and Houweling have found evidence that although most of the voters uses the proximity approach while making their voting decisions, some uses the directional one (Toms and Houweling, 2008: p. 304). In another research, by investigating whether political sophistication influence the way in which voters use issues in evaluating parties and candidates; Macdonald, Rabinowitz and Listhaug (1995) suggest that the two approaches' ability to explain voting behavior may be conditional on voter's sophistication. They argue that the proximity approach is a more cognitively demanding than the directional one. As such, the proximity approach is more tend to explain the voting behavior of more educated and more politically interested voters, whereas the directional approach is more of an appropriate tool to understand the voting behavior of less educated and less politically interested ones. They justified this hypothesis by suggesting the idea that determining an exact policy position requires more cognitive assets than deciding for a policy side. They test this idea with survey data from 1988 Presidential Election in the US and 1989 Parliamentary Election in Norway. Nevertheless, their findings did not support their expectations indicating that the directional approach is a more of an effective tool to explain voting behavior of both American and the Norwegian voters from all the sophistication levels. First, we think that this finding might be biased against countries of the test. Second, we also argue education level and political interest may not properly measure political sophistication. As such, for political sophistication, we multiplied political education and actual political knowledge, which we believe is a better proxy for sophistication and conducted the same experiment for the voters of a non-Western country with different socipolitical environment.

3. Data And Methodology

Testing MacDonald, Rabinowitz and Listhaug's (1995) argument which suggests a link between voter sophistication and voting behavior requires comparing the power of two competing models of spatial theory of party competition. The proximity model suggests that voters support the political parties or candidates whose ideological positions are closest to their own, whereas the directional model suggests that voters support candidates or parties on their half of political spectrum who are more extreme than their own while still falling within the acceptability region. MacDonald, and his colleagues argue that the proximity approach is more cognitively demanding than the directional one. Therefore, according to the authors, while the proximity approach is a more eligible tool to understand the voting behavior of those voters with higher education and political interest, the directional approach is more appropriate for understanding the voting behavior of those with low education and political interest. Nevertheless, scholars have failed to find supporting evidence of their argument. In our research, to overcome the original research's inability to validate its main argument, we suggest two revisions. We test their hypothesis with data from a different country and with a different measurement of political sophistication.

Yet, our hypothesis is in line with their original one:

H1: As deciding for the exact data point on an ideological continuum is more cognitively demanding than deciding for the side of the continuum, the proximity formula relative to the directional formula is more strongly associated with voter embracement for highly educated and politically knowledgeable voters.

To test this hypothesis, we employed Comparative Study of Election Systems (CSES) data for Türkiye. The CSES provides the most appropriate dataset to investigate voter perspectives on political parties. An international committee of scholars of electoral politics, political science and methodology designed the CSES research agenda. Using a common set of survey questions on a wide range of fields, including demographics, voting choice, voter perceptions about parties and leaders and party families, the CSES project allows researchers to conduct comparative as well as single country studies. Currently, the project involves data for 55 countries. Türkiye has involved in the 2011, 2015 and 2018 rounds. Nevertheless, variables of our interest can only be found in the 2015 round. In the final dataset we have 249 respondents, whom are voters of the four prominent political parties in Türkiye: Adalet ve Kalkınma Partisi (AK Parti), Cumhuriyet Halk Partisi (CHP), Milliyetçi Hareket Partisi (MHP), and Halkların Demokratik Partisi (HDP).[1]

To reveal association between our variables, we used Simple Linear Regression Analysis technique. Results of the analysis assess associations between party embracement and issue distance formula representing proximity approach as well as issue scalar product representing directional approach for three sophistication levels. Since our major purpose is to replicate MacDonald, Rabinowitz and Listhaug's (1995) model for the Turkish electorate, we selected measures similar to the ones used in this study. Within this realm, to construct the dependent variable, we employed the questionnaire item measuring voter utility for each political party.[2] The questionnaire item required the participants to select to what extent they like/dislike each political party on a 10-point scale, where 0 represents strongly dislike and 10 represents strongly like.

The key independent variables are the voters' utilities calculated by the proximity and directional formulas. We have used the voters' self and their perceived party positions on the ideological spectrum when calculating voter utilities.

As the authors did not specify the radius of the region of acceptability for the issue scalar product, we specified it as 80%. This means that a qualified majority of the ideological area is accepted as the region of acceptability while 20% extreme is regarded as the penalty region.

We also modified the operationalization of their voter sophistication variable in line with the dataset in hand. Their analytical strategy for the sophistication variable changes across countries as the two countries has different education systems.

The high group in the US: Who have completed collage and say they are somewhat interested or very interested in the political campaign and those with some education beyond high school and those with some education beyond high school who say they are very interested in the campaign.

The low group in the US: All those with less than high school education, and those with high school education who say they are not much interested in the political campaign.

The high group in Norway: Those who have completed *gymnas* and say they are little or not at all interested in politics.

The low group in Norway: Those who have not completed *gymnas* and say they are little or not at all interested in politics. Distributions in the two countries are similar.

They found that in the US for each level of sophistication the directional model explains more variance than the proximity model. Similarly, in Norway, the directional model explains more variance than the proximity model for support for five out of seven parties even among highly sophisticated voters. The proximity model prevails the directional model only for the sophisticated group, which supports the Labour and Christian People's Party, yet the differences are marginal. Moreover, their analysis of the pooled data revealed the supremacy of the directional model over the proximity one clearly. After including all the controls, in both candidate and party analyses in the US, and party analysis in Norway, for all levels of sophistication, the directional model prevails the proximity model. The difference between the explanatory powers of the models is even greater as the sophistication increases. On the other hand, more variance is explained in Norway than in the US.

Nevertheless, in the light of the existing debates, we believe gauging political sophistication with self-perceived political interest is problematic. First, self-perception is a biased and not an objective measure. Second, political

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[1] **Table A1** in the appendices presents questionnaire items' codes and wording together with the codes and names of the constructed variables.

[2] A significant critique of employing voters' evaluations of political parties as a stand-in for electoral support revolves around the question of validity. However, since our research focuses on replicating the authors' hypothesis in the context of Türkiye, our main priority was ensuring consistency rather than validity. For a comprehensive discussion on the potential benefits and drawbacks of using this proxy, refer to the work of MacDonald, Rabinowitz, and Listhaug (1995: pp. 461-463).

interest is not to be an indispensable element of political sophistication since people may have interest in politics but may not be politically sophisticated at all. For these two main reasons, we have decided to replace political interest with actual political knowledge item of the CSES, which is a more important element of political sophistication, and measure it for each political party constituency (Luskin, 1990).

Table 1. Descriptive Statistics of Variables

Party	Education Level (Mean 0-3)	Political Knowledge (Mean 0-4)	Sophistication Score (Mean 0-12)	Total Count
Ak Parti	1.76	2.67	4.76	92
CHP	1.94	2.82	5.51	86
MHP	1.97	2.82	5.69	46
HDP	1.40	2.92	4.08	25
Data: Comparative Study of Electoral Systems (Türkiye, 2015)				

As such, for education, we recruited IMD2003 item in the CSES data. The variable has four answer categories in Turkish surveys. While recoding, '0' was assigned for no education, '1' for primary, '2' for higher secondary and '3' for university categories. On the other hand, for political knowledge, we used four dichotomized items from IMD3015_1 to IMD3015_4 inquiring political knowledge levels of respondents: IMD3015_1: the finance minister before the recent election, IMD3015_2: current employment rate, IMD3015_3: which party/alliance/coalitions came in second in seats in the lower house/parliament, IMD3015_4: who is the current secretary general of the UN. The final political sophistication variable was constructed as an index generated multiplying education and political knowledge variables. We generated it by multiplying education and political information scores for each observation. The final political sophistication variable holds values from 0 to 12, higher values representing higher political sophistication. We divided the sample into three groups: Low, middle and high level of sophistication. The variable recoded and 0-3 values were categorized as low, 4-8 as middle and 9-12 as high.

Table 1 presents descriptive statistics of the variables that were used in the analyses. In the first and second columns, the percentage distribution of respondents from each education and political knowledge levels for four political party electorates are presented. In the third column mean sophistication scores for political party electorate are given. The last column shows the number of respondents from each party electorate in the final dataset. As one can see in the table, there are some important differences between party electorates in terms of their education and political knowledge levels. The final sophistication scores show that while political sophistication levels are the highest in the electorates of the MHP, which was followed by those of the CHP and of the AK Parti, it is the lowest in the electorates of the HDP. Overall, political sophistication level of the Turkish electorate emerged to be 5.12 out of 12.00.

4. Findings

This research compares two formulas in terms of their power to predict party embracement for voters from different sophistication levels. The following four tables present the relationship between voter embracement of each political party and two alternative formulas that is suggested by the proximity and directional approaches across levels of sophistication. Each table presents the analyses of the data for one of the four political parties.

Table 2 presents the results of six simple linear regression models predicting voter embracement for the AK Parti using the proximity and the directional formulas across low, middle and high sophistication levels. As can be seen from the significance level and coefficient score, proximity formula is statistically significantly associated with voter embracement for the AK Parti for those voters with low sophistication ($b_i = 0.76, \mathrm{p} \leq 0.00$). The model produces 0.59 R^2 score, which means that 59% of the variance in the embracement of AK Parti can be explained with issue distance only. However, the relationship can not be assesed for the directional formula for which the independent variable was omitted because of collinearity. When we look at the results for the middle sophistication category while the proximity formula is statistically significantly associated with the voter embracement of the AK Parti, the directional formula does not ($b_i = 0.77, \mathrm{p} \leq 0.00$ and $b_i = -0.03, \mathrm{p} = 0.142$, respectively). Similarly, the proximity model prevails directional model by 0.39 R^2 score over 0.00. The same result can also be observed for the highly sophisticated group. The proximity formula is significantly associated with the voter embracement of the AK Parti, but the directional formula does not ($b_i = 0.73, \mathrm{p} \leq 0.00$ and $b_i = 0.01, \mathrm{p} = 0.456$, respectively). Similar to the previous models, R^2 score is 0.33 for the proximity model while it is -0.00 for the directional one. Concerning our main hypothesis when the relationship between

different level of political sophistication and distance formula is analyzed, we see that the data do not support our argument as different sophistication levels produced comparable b values yet decreasing R^2 scores with increasing sophistication levels. On the other hand, the data indicates that directional voting has no statistically significant effect in neither of the sophistication levels.

Table 2. Comparison of Models for the Low/Middle/High Level Sophisticated Voters
(Dependent variable: embracement of the AK Parti)

Political Sophistication	*Issue Distance*		*Issue Scalar Product*		*Issue Distance*		*Issue Scalar Product*		*Issue Distance*		*Issue Scalar Product*	
	b	*(se)*	*b*	*(se)*	*b*	*(se)*	*b*	*(se)*	*b*	*(se)*	*b*	*(se)*
Low	0.76***	(0.16)	Omitted									
Middle					0.77***	(0.08)	-0.03	(0.02)				
High									0.73***	(0.09)	0.01	(0.02)
Constant	7.77***	(0.90)	-	-	7.68***	(0.42)	5.05***	(0.38)	5.96***	(0.46)	3.23***	(0.39)
Adjusted *R²*	0.59		-		0.39		0.00		0.33		-0.00	
N. of cases	15		15		122		122		112		112	

Significance levels: *$p \leq 0.05$; **$p \leq 0.01$; ***$p \leq 0.001$
Note: Entries are simple linear regression coefficients with standard errors in parentheses.
Data: Comparative Study of Electoral Systems (CSES), 2015.

Table 3 presents the results of regression models predicting embracement of the CHP with two formulas for three sophistication levels. Similar to the results in the previous table, proximity formula is always more significantly associated with embracement of the CHP. Although less significant and interestingly negative, directional formula also seems to have some significant association this time. While for the low sophistication level, proximity formula has a mild significant association ($b_i = 0.57, \text{p} = 0.012$) the directional formula has no significant association with the embracement of the CHP ($b_i = -0.19, \text{p} = 0.098$). A similar result can be observed for the middle association level. While the proximity formula is positively and strongly, the directional formula negatively and weakly associates with embracement of the CHP ($b_i = 0.74, \text{p} < 0.000$ and $b_i = -0.07, \text{p} = 0.017$, respectively). In the highly sophisticated group, the association of the proximity formula with embracement of the CHP is positive and strong while it is negative and weak for the directional formula. Yet, both are statistically significant ($b_i = 0.81, \text{p} < 0.000$ and $b_i = -0.14, \text{p} = 0.003$, respectively). As can be seen the different in coefficient scores is even more striking for middle and highly sophisticated groups. When R^2 scores are observed, the precedence of the proximity model to directional can be seen clearly. R^2 scores in the low sophistication group; 0.35 for the proximity, 0.13 for the directional, in the middle sophistication group; 0.43 for the proximity and 0.03 for the directional, in the high sophistication group 0.49 for the proximity and 0.13 for the directional models. For the proximity model, the results indicate a considerable increase of the b value from 0.35 to 0.49 for low to high sophistication level. Although directional model, has some statically significant effects on voter preferences for the CHP, the b values of each level of sophistication does not support the argument of its increasing effect of the directional model as the level of sophistication increases. Overall, negative association between the directional formula and voter utility is completely opposite to theoretical expectations. As higher sophistication is associated with higher association with the proximity formula in general, this finding largely supports our hypothesis.

Table 3. Comparison of Models for the Low/Middle/High Level Sophisticated Voters
(Dependent variable: embracement of the CHP)

Political Sophistication	Issue Distance		Issue Scalar Product		Issue Distance		Issue Scalar Product		Issue Distance		Issue Scalar Product	
	b	(se)	b	(se)	b	(se)	b	(se)	b	(se)	b	(se)
Low	0.57*	(0.19)	-0.19	(0.10)								
Middle					0.74***	(0.07)	-0.07*	(0.03)				
High									0.81***	(0.07)	-0.14***	(0.03)
Constant	5.97***	(1.23)	4.63***	(1.21)	7.25***	(0.42)	4.59***	(0.42)	8.19***	(0.43)	5.61***	(0.42)
Adjusted R^2	0.35		0.13		0.43		0.03		0.49		0.13	
N. of cases	15		15		122		122		112		112	

Significance levels: *$p \leq 0.05$; **$p \leq 0.01$; ***$p \leq 0.001$
Note: Entries are simple linear regression coefficients with standard errors in parentheses.
Data: Comparative Study of Electoral Systems (CSES), 2015.

Table 4 presents the results of the same analysis for the embracement of the MHP. For the middle and highly sophisticated group, while the proximity formula associates with embracement of the MHP positively and strongly the directional formula does not. In the lowly sophisticated group neither formula predicts the outcome variable significantly. For the low sophistication level, proximity formula and the directional formula has no statistically significant association with the embracement of the MHP ($b_i = -0.14, \text{p} = 0.457$ and $b_i = -0.03, \text{p} = 0.245$, respectively). For those respondents with middle sophistication, while the proximity formula is statistically and significantly associated with the embracement of the MHP ($b_i = 0.54, \text{p} < 0.000$), the directional formula seems to have no statistically significant association with it ($b_i = -0.00, \text{p} = 0.880$). Lastly, for the highly sophisticated group while the proximity formula is significantly associated, the directional formula is not ($b_i = 0.74, \text{p} < 0.000$ and $b_i = -0.01, \text{p} = 0.374$, respectively). Both the coefficient scores and R^2 scores tell a similar story. While the directional formula explains more variability in the dependent variable than the directional formula does for the middle and highly sophisticated groups, the coefficient scores of the proximity formula as well as the R^2 scores of the model increases as one moves from low to middle and high sophistication levels.

Table 4. Comparison of Models for the Low/Middle/High Level Sophisticated Voters
(Dependent variable: embracement of the MHP)

Political Sophistication	Issue Distance		Issue Scalar Product		Issue Distance		Issue Scalar Product		Issue Distance		Issue Scalar Product	
	b	(se)	b	(se)	b	(se)	b	(se)	b	(se)	b	(se)
Low	-0.14	(0.19)	-0.03	(0.02)								
Middle					0.54***	(0.08)	-0.00	(0.00)				
High									0.74***	(0.08)	-0.01	(0.02)
Constant	1.65	(1.23)	2.88***	(0.83)	4.99***	(0.41)	2.88***	(0.33)	6.15***	(0.39)	3.42***	(0.35)
Adjusted R^2	-0.03		0.03		0.25		-0.00		0.43		0.00	
N. of cases	15		15		122		122		112		112	

Significance levels: *$p \leq 0.05$; **$p \leq 0.01$; ***$p \leq 0.001$
Note: Entries are simple linear regression coefficients with standard errors in parentheses.
Data: Comparative Study of Electoral Systems (CSES), 2015.

Table 5 presents associations between embracement of the HDP and two alternative formulas. For the low sophistication group, the proximity formula is statistically significantly associated with the embracement of the HDP, ($b_i = 0.40, \text{p} < 0.000$) while this is not the case for the directional formula ($b_i = -0.01, \text{p} = 0.494$). For the middle sophistication group while the proximity formula is significantly associated the directional formula simply is not ($b_i = 0.46, \text{p} < 0.000$ and $b_i = -0.03, \text{p} = 0.353$, respectively). Lastly, the picture is quite similar for the highly sophisticated group. While the proximity formula is significantly associated, the directional formula is not ($b_i = 0.35, p < 0.000$ and $b_i = 0.01, p = 0.491$, respectively). Expectedly, R^2 scores for the low group are 0.01 and -0.01, for the middle group are 0.27 and -0.00 and finally for the highly sophisticated group are 0.15 and -0.00 for respective formulas. The table shows that the proximity model prevails the directional model clearly. Nevertheless, the comparison of the coefficient and R^2 scores produced by the successive proximity models indicate that middle sophistication group's voting behavior relative to low can be even better explained by the

proximity formula which supports our hypothesis party. Yet, a similar increase in the coefficient and R^2 scores can not be observed when the highly sophisticated group is compared to the middle level sophisticated group.

Table 5. Comparison of Models for the Low/Middle/High Level Sophisticated Voters
(Dependent variable: embracement of the HDP)

Political Sophistication	Issue Distance *b*	(se)	Issue Scalar Product *b*	(se)	Issue Distance *b*	(se)	Issue Scalar Product *b*	(se)	Issue Distance *b*	(se)	Issue Scalar Product *b*	(se)
Low	0.40	(0.05)	-0.01	(0.01)								
Middle					0.46***	(0.06)	-0.03	(0.04)				
High									0.35***	(0.07)	0.01	(0.02)
Constant	3.23*	(1.21)	2.93*	(1.12)	4.26***	(0.42)	2.01***	(0.32)	3.32***	(0.43)	1.66***	(0.31)
Adjusted R^2	0.01		-0.01		0.27		-0.00		0.15		-0.00	
N. of cases	15		15		122		122		112		112	

Significance levels: *$p\leq0.05$; **$p\leq0.01$; ***$p\leq0.001$
Note: Entries are simple linear regression coefficients with standard errors in parentheses.
Data: Comparative Study of Electoral Systems (CSES), 2015.

Table 6. Comparison of Evaluation Models

Party/Sophistication Level	Proximity Models Low	Middle	High	Directional Models Low	Middle	High
AK Parti	0.59	0.39	0.33	-	0.00	-0.00
CHP	0.35	0.43	0.49	0.13	0.03	0.13
MHP	-0.03	0.25	0.43	0.03	-0.00	0.00
HDP	0.01	0.27	0.15	-0.01	-0.00	-0.00

Note: Entries are Adjusted R^2 coefficients.

5. Conclusion

This research was set out to test MacDonald, Rabinowitz and Listhaug's (1995) argument that proximity model of voting is more appropriate for sophisticated voters than the directional model of voting with Turkish data. Although they were not able to find supporting evidence in their analysis of the data from the US and Norway, in Türkiye the results emerged differently. Our analysis of the 2015 data for Türkiye largely supported their argument. Although their findings indicate the strength of the directional model to explain voters' embracement, our findings strongly favor the proximity model in general and explanatory power of the model increases in general as the sophistication level increases.

The authors argued that "the assumptions of the proximity model are more likely to be fulfilled when there are several political parties competing and giving clear cues about their issue positions". In Turkish case, while the first condition is fulfilled, we can confidently argue that the second is not. The number of the competing parties is high but parties are following populist strategies and targeting the median voter with catchall policies. The number of competing parties might be one reason of the proximity model prevailing over the directional one, yet, coming to any conclusions surely requires a series of empirical tests to be conducted.

An important point that should be made clear is about the variation of the results across the parties. The high variation between the results justifies our division of the pooled data into party grassroots. It seems that ideology, maybe more than education and sophistication, plays role in deciding which spatial model of voting is more appropriate for which group of voters. Different formula may be more useful to explain voting behavior of left and right wing voters. Left and right wing political parties' education strategies of for their grassroots regarding to

their policy stances can be an important factor here. This can well be a potential direction to proceed in the research agenda on the link between voter features and spatial models of voting.

Lastly, we used the CSES data for our analysis as it is the only available data for conducting such an analysis. Nevertheless, it should be noted that there are some limitations of the data. These are general limitations endogenous to research using spatial analysis. As MacDonald, Rabinowitz and Listhaug pointed out in their paper, voters tend to place parties they support closer to their own issue position than their actual position (see also Brody ad Page 1972). Thus, the voter placement of parties might have been biased. Another limitation of the study is that voting behavior is a very complex type of behavior and not to be explained with spatial models alone. Although voter evolutions are in parallel with votes in the 2015 elections, we should always approach these type of research with enough level of suspicion.

Appendices

A1. Variables of the Analyses

Questionnaire Code	Questionnaire Wording	Variable Name	Original Value	Recoded Value
IMD2003	Education of the respondent (Highest educational attainment)	Education	0=None / No education illiterate 1=Primary education/ Lower secondary education 2=Higher secondary education 3=University education	1= None / No education illiterate 2=Primary education/ Lower secondary education 3=Higher secondary education 4=University education
IMD3015_1	The name of the finance minister.	Political Interest_1	0=Incorrect 1=Correct	Political Interest= IMD3015_1+ IMD3015_2+IMD3015_3+ IMD3015_4
IMD3015_2	Unemployment rate.	Political Interest_2	0=Incorrect 1=Correct	
IMD3015_3	Party with the second biggest seat share in the parliament.	Political Interest_3	0=Incorrect 1=Correct	
IMD3015_4	Current general Secretary of the UN.	Political Interest_4	0=Incorrect 1=Correct	
Political Sophistication= Education X Political Interest			1=Lowest … 16=Highest	0-3=Low 4-8=Middle 9-16=High
IMD3005_3	Party identification: Who	Party Identification	7920001=AK Parti 7920001=CHP 7920001=MHP 7920001=HDP	7920001=AK Parti 7920001=CHP 7920001=MHP 7920001=HDP
IMD3006	Ideology Left-Right Self	Issue Distance/ Issue Scalar Product	00=Left … 10=Right	00=Left … 10=Right
IMD3007_ A/B/C/D	Ideology Left-Right Party A/B/C/D		0=Left … 10=Right	0=Left … 10=Right
MD3008_ A/B/C/D	Like-Dislike Party A/B/C/D	Voter embracement	0=Strongly Dislike … 10=Strongly Like	0=Strongly Dislike … 10=Strongly Like

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