Culture, Socio-Economic Development, and Refugee Immigration:

A Spatial Analysis of the 2017 Referendum in Turkey

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Abstract

The 2017 referendum on controversial constitutional amendments witnessed a fierce competition in Turkey. Despite the joint campaign of AK Party (current ruling party) and MHP (nationalist party), the electoral outcome yielded only a slight edge for accepting the amendments (Yes 51%, No 49%). Why was there such a narrow margin of victory? What explains the defection among MHP voters at the aggregate level? Our paper examines these questions through a unique dataset along with spatiallyautoregressive and multilevel modeling techniques. We collect the sub-provincial and provincial level electoral results since 2002, and match them with the 2004 socioeconomic development data from the Ministry of Development and the 2017 development data from the Ministry of Health. In addition, we add provincial level mosque information, and sub-provincial level official Syrian refugee numbers to the dataset. The advanced geospatial and multilevel models show strong empirical support for our hypotheses. Cultural indicators are as likely as socioeconomic features to explain the 2017 referendum results in Turkev after controlling for political factors. The number of Syrian refugees in provinces diminishes the level of support for "yes" whereas the number of mosques boosts its support. The refugee migration also explains the MHP voters who defected in the referendum: the higher the number of refugees in a sub-province, the more likely that the voters in that sub-province vote against the constitutional amendments. All models show that voting in Turkey has considerable levels of spatial dependency - the neighborhood matters.

Keywords: Turkish elections, referendum, spatial analysis, politics, socioeconomic status, culture.

The 2017 referendum on constitutional amendments witnessed a fierce competition between its supporters and opponents. The former coalition officially included the ruling party - AK Party - and the nationalist party - MHP. They ran a joint campaign supporting these amendments that transform the system from a parliamentarian system to a presidential system. Both pundits and pollsters expected a higher level of support for the approval of these amendments. Despite such a large official coalition favorable to the amendments, the results were tight: Yes votes received only fifty one percent of the eligible votes. What explains this narrow margin of victory for the Yes campaign? Is there a geographical basis for it? If so, how does it play into the results? Which one is more powerful in predicting the results: politics, socioeconomic conditions, or culture? What is the most important aggregate-level variable that explains the defection among MHP voters who voted against the constitutional amendments?

In this paper, we attempt to answer these questions by contributing to the study of Turkish elections in at least three ways. First, our paper provides a comprehensive approach to the study of this important election by assessing the relative importance of political, socioeconomic, and cultural explanations. Rather than focusing on a single explanation, we intend to provide and compare multiple explanations of the referendum results. Second, our paper goes beyond the mostly descriptive nature of studies that provide a geographical examination of Turkish elections. We use advanced spatial autoregressive models to expand the scope and breadth of research on the geography of elections. The spatial modeling enables us to filter out and test spatial dependency in the referendum. Last, we offer a theoretical and empirical way of examining the 2017 referendum results at the aggregate level by using a unique dataset. All of our analyses are primarily based on the sub provincial ("ilce") level. We retain most of the variance in individual voting behavior with a lower aggregation than provincial level analysis - a common unit of analysis in electoral studies on Turkey. By doing so, we minimize the threat of ecological fallacy. And, our paper is the most recent empirical

analysis of the 2017 referendum in Turkey at the aggregate level (please see Aytaç et al. (2017) for an analysis at the individual level).

There are five important findings in our paper. First, the 2017 referendum results reflect strong party-line voting, except for MHP. The sub-provinces that voted for AKP in the November 2015 election are more likely than others to vote "yes" in the 2017 referendum. Sub-provinces with CHP (the main opposition party) and HDP (party of mostly Kurdish minority) voters are more likely to vote "no" in the referendum. Despite being in the ruling party coalition and campaigning for Yes, MHP sub-provinces mostly vote for No. Second, the socio-economic dynamics - both at the sub-provincial and provincial levels play a role in explaining the aggregate results in the 2017 referendum. Controlling for political predictors, the higher the socio-economic jump in a sub-province between 2004 and 2017, the less likely that it extends support for the constitutional amendments in the 2017 referendum. Third, culture also plays a statistically significant role in explaining the aggregate referendum results. We measure culture using two variables: The number of Syrian refugees living in sub-provinces and the number of mosques per capita in provinces. As the number of Syrian refugees increases in a sub-province, the number of "yes" votes goes down, on average. And, the number of mosques per capita in provinces boosts "yes" votes in the 2017 referendum, other things being equal. Fourth, the single most important nonpolitical variable that explains the defection among MHP voters is the number of Syrian refugees living in a particular sub-province. We can conclude that cultural concerns are likely to push MHP voters away from voting "Yes" in the referendum. Finally, all models show that there is a strong and undeniable geographic component to all of our findings. Politics, socioeconomic status, and culture act in space while predicting aggregate results in sub-provinces.

Predictors of Voting in Turkey

Party Identification

Voting in Turkey has rarely followed party-line voting as the party system had been immature and non-institutionalized (Heper, 2002; Sayari and Esmer, 2002; Özbudun, 2013). Turkish voting was volatile and fragmented until the 2002 election - the year AK Party won the majority of the seats in the parliament for the first time (Çarkoğlu, 2002a). However, at least since the 2011 election, many argue that Turkey has evolved into a dominant party system in which the ruling party, AK Party, has been consolidating and increasing its vote share over time (Çarkoğlu, 2011). Individual level analyses show that party identification has been the most critical variable in predicting vote choice in contemporary Turkish elections (Kalaycıoğlu, 2013, 2014; Erişen, 2013, 2016; Kalaycıoğlu, 2017). Aggregate-level analyses also show support for stabilization of party identification in contemporary Turkish elections. Kumbaracıbaşı (2016) shows that AK Party has consolidated pro-Islamist, culturally conservative, and traditional support at the district-level since 2002.

More recently, by using individual-level panel data, Aytaç et al. (2017) show that partisanship largely explains the support for transformation to a presidential system. On average, they find that AK Party and MHP identifiers support the constitutional amendment whereas CHP and HDP supporters oppose the change to a presidential system. Despite being politically unsophisticated about the system change, Turkish voters rely heavily on partisan cues when they express support or opposition for a presidential system instead of the current parliamentarian system (Aytaç et al., 2017). This study was conducted between June 2015 and November 2015, before the actual referendum in April 2017. If the individual-level findings held, we would expect a supporting coalition (AK Party + MHP) to reach at least 60 percent support among the electorate based on the November 2015 election results. But, it did not. support for the constitutional referendum in 2017 was slightly above 51 percent.

There were defectors in the coalition supporting the amendments. We argue that the

narrow victory is due to lower level of support among MHP voters at the sub-province level. That is, we expect party identification to predict the referendum results in a way that:

- 1. As AK Party votes in the November 2015 election increases, Yes votes in the 2017 referendum increases at the sub-province level;
- 2. As MHP, CHP, and HDP votes in the November 2015 election increases, Yes votes in the 2017 referendum decreases at the sub-province level.

We measure the November 2015 votes based on the official electoral results announced by the Supreme Electoral Council of Turkey. The variables are coded to range from 0 to 1.

Sociodemographic Predictors

Earlier scholarship argues that Turkish politics can be summarized as a relationship between "center" and "periphery" (Mardin, 1973). The organized elite occupies the center that is more nationalist, educated, and secular. The heterogenous periphery, on the other hand, is less educated, conservative, and more religious (Mardin, 1973; Kalaycioğlu, 1994). These two sociodemographic domains compete with each other electorally.

Despite some scholarly opposition against it, the center-periphery argument still finds empirical support in data. For example, Kalaycioğlu (1994) finds that gender, education, and religiosity play a critical role in determining party preferences in the 1990s. Those who are at the periphery subscribe to the pro-Islamist/conservative parties; and those who are at the center support social democratic and liberal parties. In a more recent study, Aytaç et al. (2017) find that support for a presidential system comes mostly from less educated and highly religious people, which "resonates with the centre-periphery cleavage in Turkish politics" (9).

By using provincial-level indicators, Çarkoğlu (2000) finds that as socioeconomic development increases, the likelihood of supporting CHP increases as well. In contrast, the

pro-Islamist parties and MHP find more support in less developed areas. In his aggregate-level socioeconomic analysis of the first electoral victory of AK Party in 2002, Çarkoğlu (2002a, 152) concludes that "socio-economic cleavages across Turkish provinces continue to shape electoral preferences:" AK Party and MHP find support in provinces with a lower human development index whereas CHP's vote share increases in socioeconomically developed provinces.

We argue that the same relationship also holds for the 2017 referendum results. The opposition against the constitutional amendments will be higher among socioeconomically developed sub-provinces. As the sub-provinces become more developed, we expect to find lower levels of "Yes" votes in the referendum, on average.

Measuring socio-economic development at the sub-provincial level is arguably the most challenging (but also the most novel) aspect of our paper. We find two sets of data that measure socio-economic status at the sub-provincial level in Turkey. The first set of data comes from what is now called the Ministry of Development, previously the State Planning Organization (SPO). They collected multiple socio-economic indicators in 2004: Level of urbanization, agricultural sector, industrial sector, service sector employment, unemployment, literacy, infant mortality, income per capita, tax share in GDP, and agricultural production. We created an index of these variables (Cronbach's alpha = .72) that range from 0 to 1 - the higher the level of socioeconomic development, the higher the score. The second and more recent measurement of socioeconomic development at the sub-provincial level comes from the Ministry of Health. Each sub-province gets a score that is used for salary, promotion and assignment among its personnel. Socioeconomically less developed sub-provinces get higher scores and vice-versa. Therefore, a staff member or a doctor can earn more scores and higher salaries by working in less developed areas. We collect the 2017 scores and reverse it so that higher scores refer to more developed sub-provinces. We also recode that variable to range from 0 to 1. To eliminate contemporaneous error, we difference the 2004 and 2017 socioeconomic development scores. In the end, we have a variable that measures the change in socioeconomic development at the sub-provincial level between 2004 and 2017. We also collected the 2011 socioeconomic development score at the provincial level. These data come from the Turkish Statistical Institute. We hypothesize that as this change in socioeconomic status score gets higher, the number of Yes votes will go down among the sub-provinces.

Culture: Religiosity and Refugee Migration

Our third predictor is culture. It is a prominent part of the center-periphery cleavage concerning the role of religiosity in Turkish public opinion (Mardin, 1973). The center is occupied by the secularists who benefit from and defend the system; the periphery is occupied by the pro-Islamists. This cultural clash finds strong empirical support at the individual level. Çarkoğlu and Hinich (2006) finds that the dominant ideological dimension of Turkish voters' issue attitudes follows the secularists vs. pro-Islamists clash. A similar clash exists between more liberal Alevis - a more heterodox approach to the Islamic belief system - and conservative Sunnis Çarkoğlu (2005). In his analysis of the 2010 referendum, Kalaycıoğlu (2012, 17) reports that the divide between seculars and pro-Islamists "is married with left-right ideological orientations." The major cultural divide in Turkey concerns religion that is politicized over time (Çarkoğlu, 2007). In a more recent study, Aytaç et al. (2017) provide support for this religiosity based conflict in Turkish public opinion. They find that as religiosity increases the likelihood of supporting a presidential system transformation also increases at the individual level in the post-June 2015 survey (Aytaç et al., 2017).

We observe the cultural fault line in voting at the aggregate level as well. Spatial analyses show that there is a strong geographical basis for the cleavage between secularists and pro-Islamists (Çarkoğlu, 2000). The former has been gaining electoral popularity in the coastal provinces and larger cities whereas the latter has been gaining support among inland provinces and rural areas over time (Kumbaracıbaşı, 2016).

While religiosity is a major component in the ongoing cultural polarization, the recent refugee immigration from Syria into Turkey has the potential to introduce new layers of cultural clashes into Turkish voting behavior. According to the United Nations High Commissioner for Refugees (UNHCR), there are more than three million Syrian refugees living in Turkey.¹

Despite this huge and fast influx of refugees, there are only a handful of empirical studies examining the behavioral implications of such a dramatic (and traumatic) event.² Using an original survey experiment, Lazarev and Sharma (2017) find that prejudice toward Syrian refugees has a strong religious dimension. When the experiments manipulate the denomination of the refugee to Sunni and Muslim, the prejudice toward Syrians goes down at statistically significant levels. Shared religious identity plays a crucial role in determining dislike toward the refugees (Lazarev and Sharma, 2017).

Hypotheses and Measurement We hypothesize that as the level of religiosity increases in provinces, the number of Yes votes supporting the 2017 constitutional amendments will also increase. We follow the common way of measuring geographical religiosity by using the number of mosques per capita in provinces (Özcan, 1994; Ayata, 1997; Marschall et al., 2016).³ The data come from the Directorate of Religious Affairs in Turkey - an official state institution that oversees affairs pertaining to faith.

Our second cultural hypothesis concerns the number of refugees. We expect to find that as the number of refugees increases in sub-provinces, the number of Yes votes will decrease. In addition, we expect to find a positive relationship between the number of refugees and MHP voters who defect at the sub-provincial level. The refugee data are provided by the Directorate General of the Migration Management operating under the Ministry of Interior.

¹Please see İçduygu (2015) for an excellent comprehensive analysis of the Syrian refugee crisis, and its implications in Turkey.

²Please see Cagaptay (2014) for an economic analysis of the refugee crisis in Turkey.

³Unfortunately, the number of mosques at the sub-provincial level are not available. We address this different levels of measurement issue in the modeling stage.

They report the number of refugees at the sub-provincial levels in June 2016.

Geography and Voting

Geography constitutes an essential predictor of voting behavior (Berelson et al., 1954; Campbell et al., 1960; Gimpel et al., 2008; Tam Cho and Gimpel, 2009). Voters are likely to rely on contagious geographical effects as informational shortcuts (Popkin, 1991; Tam Cho, 2003). Empirical studies on Europe and the United States repeatedly document the importance of spatial effects on party performance, party support, political participation, campaign donation, and ultimately voting (Caramani, 2004; Sartori, 2005; Ignacio and Montero, 2010; Dunleavy and Boucek, 2003).

Research on geography and Turkish voting behavior is also burgeoning. Earlier studies suggest that electoral results at the provincial level are subject to both regionalization and geographical polarization (Çarkoğlu, 2000, 2002b; West, 2005). Similarly, Şekercioğlu and Arikan (2008) empirically show how AK Party geographically expands into Western and Southeastern Turkey. Akarca and Başlevent (2011) find that geographical patterns of voting have remained stable between 1999 and 2009. In a more recent and comprehensive study, Ozen and Kalkan (2017) find a strong spatial dependency in Turkish parliamentary elections between 2002 and 2015. They show that electoral competitiveness and concentration are geographically dependent, and space plays a significant role in political parties' electoral appeal in Turkey (Ozen and Kalkan, 2017).

We argue that the 2017 referendum results have a geographical dimension. Space played a significant role in predicting support for and opposition against the constitutional amendments that transform the current rule toward a more presidential system.

Models and Findings

We argue that the 2017 referendum results are spatially dependent. Political, socioeconomic, and cultural variables will predict the votes within a geography. Neighborhood effect will play a role in how these dynamics predict the votes. In this paper, we use two modeling strategies to test our hypotheses. The first one is spatial-autoregressive model (SAR) and the second one is multilevel modeling.

SAR, also known as Cliff-Ord models (Cliff and Ord, 1981), allows for cross-unit interactions in the outcome variable. A generalized version of SAR that allows for these interactions in the explanatory variables are called SARAR models. SARAR will estimate two SAR parameters, λ and ρ , that "will measure the dependence of [outcome variable] on neighboring outcomes via spatial lag ..." (Drukker et al., 2013, 223). As these spatial parameters approximate 0, the models will be statistically indifferent from an ordinary least squares estimation. We use a user-written command -spreg- in Stata to estimate SARAR coefficients (MacMillan et al., 2009; Franzese Jr and Hays, 2008).

The model findings are presented in the second column of table 1. The SAR coefficient estimates on the party votes provides empirical support for our political hypotheses. As the AK Party votes in November 2015 increase, support for the 2017 constitutional amendments across sub-provinces also increases at statistically significant levels. In contrast, CHP, MHP, and HDP support indicates an opposition against the amendments. This is an interesting result. Despite the joint campaign effort between AK Party and MHP, support for the latter in November 2015 is not available in the 2017 referendum. Most MHP voters defect in 2017, and do not support the amendments.

We also find empirical support for our hypothesis regarding socioeconomic status. As sub-provinces get more socioeconomically developed between 2004 and 2017, they are less likely to generate support for the amendments in the 2017 referendum. The coefficient estimate on this predictor is also statistically significant. In terms of cultural dynamics,

the SAR model includes the number of Syrian refugees at the sub-provincial level. Even though the coefficient estimate is in the expected direction (negative), the estimate is not statistically significant. We argue that this is due to the lack of the other cultural variable in the SAR model - the number of mosques per capita. The next model will handle this issue using the multilevel estimation strategy.

Before we get into the next model, though, we would like to talk about SAR spatial parameters as well. They show that there is a strong spatial dependency in the referendum results. The negative and statistically significant λ estimate indicates that the Yes votes in a given sub-province are influenced by the Yes votes of the neighboring sub-provinces. Similarly, positive and statistically significant ρ estimate shows that the model disturbance terms are spatially dependent. That is, an exogenous shock to one sub-province will cause strong changes in the Yes votes in the neighboring counties (Drukker et al., 2013). The spatial parameters provide strong support for the hypothesis that the vote in the 2017 referendum is spatially dependent.

Next we estimate a multilevel model with the same outcome variable - the number of Yes votes in the 2017 referendum - using provincial level data in addition to the sub-provincial level indicators. This model introduces two additional predictors: the number of mosques per capita and the socioeconomic development at the provincial level.⁴

The findings are presented in the third column of table 1. The findings from the previous model remain identical in the multilevel model. The political variables are in the expected direction, and they are all statistically significant. A positive change in socioeconomic development is associated with opposition against the constitutional amendments - both at the sub-provincial and provincial levels. Both cultural variables are also in the expected di-

⁴We acknowledge that there are two socioeconomic development variables in the multilevel model. Although this may introduce some estimation inefficiency, we have theoretical reasons to include both indicators in the model. Socioeconomic development at the sub-provincial level may not reflect the provincial level dynamics in socioeconomic status and vice versa – particularly, in very large metropolitan and small rural provinces. Therefore, we argue that these variables should be separately included in the model.

rections with statistically significant estimates. As the number of Syrian refugees increases, the number of Yes votes decreases in the sub-provinces. And, as the number of mosques per capita increases at the provincial level, the number of Yes votes increases as well. Hence, the cultural dynamics play a significant role in predicting the support for the constitutional amendments in 2017. The likelihood ratio test compares the model to OLS. It is statistically significant. The multilevel model provides a better fit to the data.

Table 1: SAR and Multilevel Models Predicting "Yes" Votes in the 2017 Referendum

| | SAR Model | Multilevel Model |
|---|-----------------------------------|---------------------|
| AK Party Votes (Nov. 2015) | 0.45*** (0.01) | 0.46*** (0.01) |
| CHP Votes (Nov. 2015) | -0.52*** (0.01) | -0.50*** (0.01) |
| MHP Votes (Nov. 2015) | -0.14*** (0.01) | |
| HDP (Nov. 2015) | -0.43*** (0.01) | -0.43*** (0.01) |
| Change in Socioeconomic Development (2004-2017) | -0.08*** (0.01) | |
| Number of Syrian Refugees | -0.03 (0.03) | -0.05^a (0.03) |
| Mosques per capita (provincial) | _ | 0.05** (0.02) |
| Socioeconomic Development (2011 - provincial) | _ | -0.08*** (0.01) |
| Constant | 0.60*** (0.02) | 0.60*** (0.01) |
| SAR Spatial parameters | | |
| λ | -0.11* | _ |
| ρ | (0.05) $5.29***$ | _ |
| σ^2 | (0.12) 0.001^{***} (0.0001) | _ |
| LR test vs. linear model | _ | 47.89*** |
| N | 944 | 944 |

Note: Standard errors in parentheses

 $[^]a$ p<0.05 (one-tailed) * p<0.05, ** p<0.01, *** p<0.001

Who defected among MHP voters?

Our paper argues that the cultural dynamics play an important role in explaining the defection among MHP voters at the aggregate levels. Cultural concerns such as the number of refugee migration might push MHP voters agains the joint campaign by the ruling party, AK Party, and their own party. Although we acknowledge the fact that the defection is best measured at the individual level, we attempt to approximate a defection measure at the sub-provincial level by using the following formula:

 $MHP Defection_i = AK Party November_i + MHP November_i - Yes Votes_i$

where *i* represents the sub-provinces. The formula assumes that for the referendum, the joint campaign would yield a summation of AK Party and MHP votes they receive in the November elections. It subtracts the actual "Yes" votes from the ideal condition to get a proxy measure of MHP defection at the sub-provincial level.

Since there are variables measured at both provincial and sub-provincial level, we estimate a multi-level model with the defection as our outcome variable. The findings are in table 2. The likelihood ratio test compares the model to OLS. It is statistically significant. The multilevel model provides a better fit to the data. We find strong empirical support for our MHP defection hypothesis. As the number of Syrian refugees increases at the sub-provincial level, the likelihood of MHP defection also increases at statistically significant levels. Religiosity, as measured by the number of mosques at the provincial level, diminishes the probability of MHP defection. This is what we would expect given the morally conservative position of AK Party as a front-runner of the referendum campaign. Last, political variables also predict the MHP defection. CHP votes in the November 2015 election contribute to the number of MHP defects positively at the sub-provincial levels; whereas HDP votes do the opposite. Given the stark contrast between HDP and MHP, we would expect

to observe a diminishing MHP defection in sub-provinces with larger HDP voters.

Table 2: Multilevel Models Predicting MHP Defection in the 2017 Referendum

| | Multilevel Model Estimates |
|---|----------------------------|
| CHP Votes (Nov. 2015) | 0.15*** |
| OIII VOICS (NOV. 2019) | (0.02) |
| HDP Votes (Nov. 2015) | -0.14*** |
| | (0.02) |
| Change in Socioeconomic Development (2004-2017) | -0.01 |
| | (0.02) |
| Number of Syrian Refugees | 0.11* |
| | (0.05) |
| Mosques per capita (provincial) | -0.11* |
| | (0.04) |
| Socioeconomic Development (2011 - provincial) | 0.11*** |
| | (0.03) |
| Constant | 0.70*** |
| | (0.01) |
| LR test vs. linear model | 64.091*** |
| N | 944 |

Standard errors in parentheses

Conclusion

In this paper, we explain the 2017 referendum votes using advanced spatial modeling techniques. We hypothesize that party-based voting, socioeconomic development, and cultural dynamics will predict the number of Yes votes at the sub-provincial level. The number of Syrian refugees play an important role in predicting the MHP defection in the referendum. The party-based voting data come from the November 2015 parliamentary election results.

^{*} p < 0.05, ** p < 0.01, *** p < 0.001

Socioeconomic development is measured both at the sub-provincial and provincial levels by using multiple indicators from different years. And, cultural dynamics is measured by two variables: (1) The number of Syrian refugees in sub-provinces in 2016 (2) The number of mosques per capita in provinces.

We used three models to test our hypotheses. In the first model, SAR estimates provide empirical support for our hypotheses. While AK Party votes positively predict the Yes votes, other party votes oppose the constitutional amendments in 2017. MHP votes, despite the joint campaign, do not support the amendments. The SAR model also shows that socioeconomic development is negatively related to the number of Yes votes. The support for the amendments is significantly lower among socioeconomically developed sub-provinces.

The second estimation uses a multilevel model to include both cultural variables. The model generates similar results with respect to the first model. Additionally, it provides empirical support for our cultural hypotheses. As the number of Syrian refugees increases, the number of Yes votes decreases in sub-provinces. The number of mosques per capita in provinces, on the other hand, is positively related to support in the 2017 referendum.

In the final model, we explain the number of MHP defection in the referendum. The multilevel model results show that the number of Syrian refugees boosts the number of MHP defects in the referendum. MHP voters refrain from supporting the joint campaign at the sub-provinces that receive large number of refugee migration.

All models indicate that the electoral results in Turkey are spatially dependent at statistically significant levels. What happens to Yes votes in one sub-province is likely to influence the number of Yes votes in the neighboring sub-provinces. And, exogenous shocks to the votes in one sub-province are likely to impact the direction of the votes in neighboring sub-provinces. In summary, politics, socioeconomic status, and culture act in space while significantly predicting the votes in the 2017 referendum. In the next version of our paper, we plan to include several maps supporting our hypotheses, test for the robustness of our

results, and provide further tests for spatial dependency of voting in Turkish elections.

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