Persistence in regional voting patterns in Turkey during a period of major political realignment

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Abstract

Using province level data from five nationwide elections held during the past decade, we examine the main voting patterns in Turkey. By means of cluster analysis, we classify the 81 provinces according to vote shares of the major parties and independent candidates, and repeat this exercise for each election held between 1999 and 2009. We find that 3-way and 5-way partitions of the country adequately capture the main political cleavages in Turkey. While the conservative right-wing parties receive a plurality of votes in all regions of the 3-way partition, they receive significant challenge from left-wing and Turkish-nationalist parties in the west and the Kurdish-nationalist parties in the east. In addition to these patterns, the 5-way partition brings out also shifts in the relative strength of the parties within each main division. Our results also show that, despite the major political realignment which occurred during the period under examination, the groupings of provinces remain mainly unchanged. Therefore, we construct “composite clusters” by classifying provinces in the group in which they appear the majority of the time. The distinct socio-economic and demographic characteristics of the composite clusters suggest that differences in social and economic structures lie at the root of differing regional political tendencies and their persistence.

Keywords:

elections, voter behavior, party choice, political geography, cluster analysis, Turkey

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1. Introduction

Turkey went through an unprecedented political transformation between 1999 and 2009. After experiencing rampant corruption, poor economic performance, and constant infighting under various coalition governments during the preceding decade, voters in the November 2002 election ousted all of the parties which had entered the parliament in 1999. Included among these were the Motherland Party (ANAP), which held the premiership during 1983-1991 and 1997-1999, the True Path Party (DYP) and the Democratic Left Party (DSP) which led governments during the 1991-1996 and 1999-2002 periods, respectively, and the Nationalist Action Party (MHP) which was part of the ruling coalition between 1999 and 2002 together with the DSP and the ANAP. None of them was able to surpass the ten percent nationwide vote share threshold required to be represented in the Turkish Grand National Assembly. In addition, the Virtue Party (FP), the successor to the Welfare Party (RP) - which was the only other party to lead a government during the nineties - was already banned in 2001 by the Constitutional Court, just as its predecessor. The combined share of votes for the parties mentioned was 81 percent in 1999 but only 24 percent in 2002 (see Table 1). Of these parties, so far only the MHP has been able to engineer a come-back. The party's vote share of 16 percent in 2009 was almost the same as it was in 1999. The rest of the parties continued to lose ground after 2002, seeing a further decline in their combined share from 16 to 7 percent by 2009. The ANAP did not contest the 2007 election and received less than one percent of the votes in 2009. The DSP entered the 2007 election under the banner of the CHP, and received less than 3 percent of the votes in 2009. The DYP, now named the Democrat Party (DP), has fared a little better with an almost 4 percent share of the vote in 2009.

In hindsight, the building of voter frustration was quite visible. In each of the parliamentary elections since 1987, a different party finished first. Since 1991, each election produced a coalition government involving different combinations of parties. During this post-cold war period, rapid urbanization, the market-oriented economic restructuring initiated earlier, and greater integration with the global economy led to a major transformation of the Turkish society which many of the existing parties failed to recognize and adjust to.¹ Based on a 2001 survey, Çarkoğlu and Hinich (2006) find that rising disenchantment with existing parties at the time was the most pronounced among the large segment of voters positioned at the center of the secularist vs. pro-Islamist and the Turkish vs. Kurdish nationalist cleavages which - according to the authors - dominate the ideological competition in the Turkish party system. Given their finding, it would have been easy to anticipate eventual replacement of the existing centrist parties by a new movement that would capture much electoral support by pursuing moderate conservative policies.

In 2002, observing no change in party leaderships and policies despite diminishing vote shares, voters finally lost faith in most of the established parties and cast their votes overwhelmingly for three parties: the Justice and Development Party (AKP), the Young Party (GP), and the Republican People's Party (CHP). The first two of those were formed shortly before the election, and the last one had been out of the parliament during the

previous legislative term, having received less than ten percent of the votes in the 1999 election. The AKP, which emerged from the ashes of the banned FP, received the lion's share of the votes under the leadership of Recep Tayyip Erdoğan, a former mayor of Istanbul. The party's disavowal of its Islamist roots, its embrace of political and economic reforms necessary for Turkey's accession to the European Union, the non-corrupt and populist image of its mayors at the local level, and the likelihood of its forming a single-party government, all appealed to the electorate which deserted the right-wing ANAP, DYP and MHP.² Interestingly, this support did not come at the expense of the traditional pro-Islamist voter base which also transformed like the rest of the society. The Felicity Party (SP), the other party rooted in the FP, towed the old party line and received only a couple percent of the votes, as opposed to the AKP which captured just over 34 percent of it. The AKP expanded its vote share to 42 percent in 2004 and to 47 percent in 2007, but it declined to 38 percent in 2009. The CHP vote share has been hovering around 20 percent, and has exceeded 23 percent in 2009. The GP however turned out to be a flash in the pan. Its 7 percent share in 2002 fell to 3 percent in 2007 and to zero in 2009 when it did not even participate in the election.

In short, a massive shift in votes occurred between 1999 and 2009, which was far more than what could be attributed to the usual depreciation in the political capital of ruling parties or voter dissatisfaction with poor economic performance. What occurred during this period would be better described as a realignment of the electorate, in that a large number of voters changed the party which they identified as representing their interests and ideological leanings.³ In this period, the center-right parties ANAP and DYP, which dominated the Turkish politics during the eighties and nineties, melted away. After capturing former supporters of the FP, ANAP, and DYP, the AKP now represents much of the right-wing, except its Turkish-nationalist branch, which is still represented mainly by the MHP. The center-left parties, which used to capture collectively about a third of the votes, even reaching 40 percent on occasion, are now able to capture no more than a quarter. With the virtual disappearance of the DSP, the CHP is left as the only center-left party. Despite having leftist elements in its program, the Democratic Society Party (DTP) should be viewed primarily as a Kurdish-nationalist party.⁴ The fact that the combined vote share of the ANAP, DYP, DSP and GP was quite small in 2009, and has stabilized in the last two elections can be taken as an indication that the realignment in question has essentially come to an end.⁵

The main purpose of this paper is to study the extent of the change in the political map of Turkey during the realignment process by identifying regions that are distinct from the rest of the country in terms of voting patterns and discussing specific patterns within them. This will be accomplished in the next section with the application of cluster analysis to cross-provincial data from five elections held between 1999 and 2009. Due to its size, geography, and history, Turkey exhibits a great deal of regional diversity in terms of demographic, economic, social, and cultural characteristics, and consequently, in terms of political tendencies. It is a European and an Asian country at the same time. It can be simultaneously characterized as being in the Middle East, in the Caucasus and in the Balkans. It is one of the countries on the shores of the Black Sea and one of those on the Mediterranean as well. Its size is more than twice that of Germany, and more than three

times that of the United Kingdom. It borders European Union countries Greece and Bulgaria on one end and Iran, Iraq, and Syria on the other. Turkey was at the center of the Ottoman Empire and is its successor state. Consequently it houses people with various ethnic roots. For example, its southeastern region is home to a majority of Kurds, and some Arabs. The Marmara region is where those who migrated from the Balkans and Crimea during the decay of the Ottoman Empire are concentrated, whereas eastern Black Sea region is where those arriving from the Caucasus settled heavily. While the religion of overwhelming majority of Turkish people is Islam, not all belong to the same sect, and the degree of their religiosity and the emphasis they place on religious freedoms and secularism vary. Turkey incorporates many different types of climates and thus different types of economic activity. For example, the main crops produced along the Black Sea are hazelnuts and tea, whereas there are cotton and olives in the Aegean and Mediterranean regions. Central Anatolia, which is sealed from the climactic effects of the Black Sea in the north and the Mediterranean in the south by high mountain ranges running along the seas mentioned grow mainly wheat, other types of cereals, and sugar beets. The provinces lying around the northern, eastern and southern shores of Marmara are heavily industrialized, whereas those along the Aegean and Mediterranean rely heavily on tourism and light industry based on industrial crops. In the mountainous east, animal husbandry is important.

With this much diversity, it is natural to expect people in different parts of the country to have different economic interests and ideologies, and consequently, to vote differently.⁶ Furthermore, in light of the much-discussed link between culture, economic development, and political outcomes in the works of scholars such as Ronald Inglehart and Robert Putnam, it is likely that the electorates within each region alter their votes in tandem when changing economic and social conditions dictate it.⁷ For this reason, there seems to be a lot of merit in carrying out an empirical analysis of regional voting patterns during a period of political realignment. In an attempt to observe whether political outcomes are indeed related to other characteristics of society, the current study also briefly examines whether the ‘political’ clusters obtained are useful representations also of underlying social and economic disparities.

2. Cluster analysis of voting patterns in Turkey

Before discussing the provincial clusters obtained, it will be useful to explain in greater detail, the methodology employed in achieving them. To avoid arbitrariness in partitioning a population or sample, researchers often employ cluster analysis. This technique is designed to arrange the units in a population or sample into groups (or clusters) of relative similarity with respect to a number of characteristics. In our case, the 81 provinces are classified according to vote shares of the major parties and independent candidates, and this exercise is repeated for each election held between 1999 and 2009. Three of these elections (1999, 2002, and 2007) were held to elect members of the parliament, and two (2004 and 2009) were for local administrations. In case of the latter, we took the results of contests for provincial councils as the electorate for these are the same as for the parliamentary elections.⁸

There are two types of **algorithms** one can use in cluster analysis: hierarchical clustering and k-means clustering. In the former, initially each unit in the population is treated as a separate cluster. Then clusters which are closest to each other are merged successively, until all units form a single cluster. The practitioner then decides, depending on the context, which level of agglomeration is the most appropriate to work with. In the latter approach, first the number of clusters to be formed (k) is decided, and the units in the population are assigned randomly to one of the k clusters. The units are then moved between the clusters so as to minimize variability within clusters and maximize it between clusters. We selected the k-means procedure for our analysis. As West (2005) explains, for making comparisons between partitions involving different numbers of clusters, as we intend to do, the partitions obtained with the k-means method are more meaningful. In hierarchical clustering, each step in the process of aggregation is built upon the organization of all the previous steps. This means that the composition of both of the clusters to be compared is embedded in the initial pairings. In contrast, with the k-means clustering, each cluster pattern begins from an independent organization of the units in the population. The hierarchical method also tends to produce unevenly-sized clusters which are less likely to reveal the main political patterns.

As to the value of k , since our ultimate aim is to compare and contrast voter bases, we tried different values until a meaningful picture emerged. It turned out that, for each of the five elections between 1999 and 2009, a 3-way partition of the provinces captures much of the variation in voter behavior across the country, but a 5-way partition allows a little finer separation. There are two reasons why we decided not to work with even larger number of clusters. First of all, the two stopping rules available in the Stata program, namely the Calinski & Harabasz and the Duda & Hart indices, were inconclusive. Secondly, when the value of k was increased beyond 5, it resulted in new clusters which were quite similar to the existing ones in terms of vote shares, or contained very few provinces which stood out as having atypical voting patterns (usually having to do with the candidacy of a locally popular person). Consequently we reached the conclusion that the 5-way partition yields maps which adequately capture the main political divisions in Turkey.

Cluster analysis has previously been applied in several studies to group Turkey's provinces based on voting patterns. Çarkoğlu (2000, 2002, and 2010) do this for the 1999, 2002 and 2009 elections, respectively, West (2005) for the 1999 and 2002 elections, and Şekercioglu and Arıkan (2008), for the 2007 election. Three-way partitions of the provinces emerge as useful representations of the main voting patterns in those studies as well.⁹ However comparisons between the findings of these studies are not entirely appropriate, as they differ in the clustering method and the algorithm used. Our aim is to minimize such concerns by applying the exact same methodology to each data set at hand.¹⁰

2.1 The 3-way and 5-way groupings of the provinces

We now turn to the spatial characteristics of the clusters obtained with the methodology discussed in the previous section, and discuss how they have evolved over time. The 3-way partitions obtained for each election are given in Figure 1. It is remarkable that so many of the provinces remain in the same cluster election after election, in a period of major political turmoil. Going from west to east, the first cluster, which is painted black, typically follows the Mediterranean, Aegean and Marmara coasts and juts out from eastern Marmara Sea inland all the way to Kırşehir. It also includes provinces which are adjacent to the coastal ones along the Aegean. In 1999, the cluster includes almost the entire Black Sea region as well, but after 2002 only a few provinces scattered along that coast remain in it. Actually, some of the provinces along the Marmara-Kırşehir axis leave the region in 2002, but their departure is only temporary. The number of provinces in this cluster ranges from 25 to 33, and with the exception of 2002, these provinces account for more than half of the electorate. The second cluster, painted dark gray, covers much of the rest of the nation apart from the mid-eastern and south eastern Anatolia. It accounts for just over a third of the electorate with the exception of the 2002 elections in which it makes up nearly 60 percent of the voters. The third cluster, painted light gray, covers a triangular region made up of south-eastern and mid-eastern Anatolian provinces. It includes 10 to 15 provinces and less than 10 percent of the voters. This region is populated heavily by ethnic Kurds.

Going from west to east, the clusters in the 5-way partition are numbered 1 through 5, and they are shown in white-dotted black, black, dark gray, white-dotted dark gray, and light gray, respectively, in the map given in Figure 2. Comparing the $k=3$ and $k=5$ maps for each election, one can see that the provinces which make up the new black cluster in each election come, almost exclusively, from the black and dark gray clusters of the 3-way partition. Only one light gray province in the 1999 and 2009 elections becomes black in the 5-way partition, and none in the 2002, 2004 and 2007 elections. A similar comparison reveals that the white-dotted dark gray clusters in the $k=5$ maps are made up, almost exclusively, of the provinces that are in clusters 2 and 3 of the corresponding $k=3$ maps. Only one province in 1999 and 2009 and two provinces in 2004 are black in the 3-way partition, but turn white-dotted dark gray in the 5-way partition. No provinces change from black to white-dotted dark gray in the 2002 and 2007 elections. In light of these figures, we expect to find the newly-formed clusters to display a mixture of the main patterns captured through the 3-way partition of the country.

As in the previous ones, it is noticeable in the 5-way partition maps that some drastic changes occurred in 2002. In 1999, the provinces in the Aegean and Marmara regions are white-dotted black, but the coastal provinces of both the Mediterranean and Black Sea are black. The dark gray cluster is land-locked and is in two separate pieces. In 2002, the Mediterranean coast turns white-dotted black and remains that way until 2009. On the other hand, Istanbul, Turkey's largest metropolis lying on two continents along the northern Marmara coast changes from white-dotted black to black and remains that way in the next three elections as well. The dark gray cluster becomes contiguous and expands mainly at the expense of the black and white-dotted dark gray clusters. The eastern half of

the Black Sea coastline and parts of the western Black Sea and southern Marmara Sea areas turn dark gray. Although the black color returns to these areas again in 2004, it is only until the next election. In 2007 and 2009, most of the Black Sea coast, except for a few provinces, is in cluster 3. The 5-way maps also show that there is considerable mobility between white-dotted black and black provinces. That is probably because the voting patterns in those two regions are quite similar, as we will explain below. The white-dotted dark gray cluster mostly contains the provinces located along the southeastern border of $k=3$'s dark gray cluster and the eastern border of $k=3$'s light gray cluster. Some other provinces scattered around the country also become white-dotted dark gray in one election or another but not persistently.

2.2 Composite clusters

As discussed in the previous section, in both the 3-way and 5-way partitions, provinces which change clusters between elections are few in number, and those with multiple changes are even fewer. The stability of regional groupings brings to mind the possibility of obtaining a summative picture of the political divisions in the country throughout the decade under examination. In other words, it seems reasonable to construct 'composite' 3-way and 5-way maps by placing provinces under the cluster color which they take on majority of the time. The clusters we have constructed in that manner will be presented in this subsection and utilized in ensuing analyses as the basis of inter-regional comparisons.

In obtaining the composite clusters, it was found that ties occur between two colors in the cases of one province in the $k=3$ maps and nine provinces in the $k=5$ maps. In those cases, the tie was broken in favor of the cluster which is numbered closer to the one in which the province appears once (assuming that cluster numberings order these regions in terms of the similarity in voting patterns as well). There were also two provinces (Kars and Bartın), which take on four different colors. For the sake of completeness, an "average" cluster number was computed to classify them by taking into account the voting patterns in all clusters involved.

The resulting maps are presented in Figure 3. It is interesting that these groupings reflect the current situation closely. For example, the 3-way composite map differs from the 2009 election's 3-way map only in four provinces. This finding may be interpreted as another indication that after a long realignment, Turkey's political map may be stabilizing near what may be considered a long-term equilibrium. The maps also reveal an advantage of working with composite clusters which is that they eliminate outlying observations at the provincial level. In many cases, it is observed that provinces which change their color return to their previous color after one election. By construction, the composite clusters eliminate such anomalies from the picture.

Comparing the 3-way and 5-way composite maps in Figure 3, one can see that the black cluster of the former splits almost evenly into two in the latter. Fifteen of the twenty-nine black provinces, along the Mediterranean, Aegean, and western Marmara turn white-dotted black. However, fourteen of them along the very east Mediterranean, Black

Sea and, eastern, southern and northern Marmara coasts, together with four previously dark gray provinces make up the new black region. Twenty-nine of the thirty-eight dark gray provinces in the 3-way composite map stay dark gray in the 5-way map. The remaining five, together with two light gray provinces from the 3-way division, compose the white-dotted dark gray cluster in the 5-way composite map. Finally, the twelve light gray provinces in the 5-way partition are all among the fourteen light gray provinces in the 3-way partition.

2.3 Socio-economic characteristics of the composite clusters

Before discussing the differences in voting patterns between the composite clusters, it will be useful to examine the differences in their socio-economic and demographic characteristics first, which we turn to next. Since the most recent population census was carried out in 2000, the figures we make use of, in this regard, will pertain to that year.

The population-weighted averages of province level data, given in Table 2, reveal that the first cluster in the 3-way partition is the most urbanized, most densely populated, richest, most educated, and most modern (as indicated by the median age, the proportion of non-agricultural employment and women's share in it) of the three regions. It has a positive net migration rate as opposed to negative ones for the other two. It also incorporates more mobile and more cosmopolitan segments of the population with close to half of its population born in another province than the one they were born in. Cluster 3 lies at the other extreme and cluster 2 lies somewhere in between, but is closer to the third cluster than the first. The second cluster is not that different from the first in median age and education level but differ significantly in all other areas. On the other hand, the second cluster is similar to the third in urbanization and proportion of non-agricultural employment but differ from it considerably in income, net migration, education, median age, and share of females in the non-agricultural employment. Although no reliable recent data exists on ethnic composition of provinces, the projections made by Mutlu (1996) from 1965 to 1990, show that all of the provinces with a Kurdish share of more than 40 percent, except one, are in the composite cluster 3. The provinces in cluster 2 all have less than 20 percent, and those in cluster 1 all have less than 10 percent Kurdish population shares. Thus the third region differs from the other two in terms of ethnic composition as well as the other aspects presented here.

In the 5-way partition, cluster 2 emerges as the most urbanized, most densely populated, most industrialized, most educated, most cosmopolitan and the richest region. It ranks second to cluster 1 only in median age and net migration rate. However, the latter is partially due to two major earthquakes which hit a number of the provinces in cluster 2 in 1999. It should also be noted that clusters 1 and 2 do not differ much from each other, with respect to education level, per capita income, median age, female share in non-agricultural employment, and net migration rate. Moving in the eastern direction, all of the reported indicators decline, except the ratio of non-agricultural employment to total employment, which is slightly higher in cluster 5 than in cluster 4. The net migration rates in clusters 3 through 5 are negative in contrast to the first two clusters where the rate is positive. As a consequence of this, the proportion of people residing in another province

than the one they were born in is significantly higher in the first two clusters than the last three.

In the absence of data from nationwide surveys on attitudes and beliefs, the variation in cultural norms that lead to different political outcomes in different parts of the country is not easy to demonstrate. However, in view of the well-documented link between cultural characteristics and economic development and education, the socio-economic evidence provided in this section can be taken as evidence for the presence of a similar amount of cross-regional variation in cultural characteristics. The specific regional voting patterns to be discussed in the next section, involving major inter-regional discrepancies in conservative and/or nationalistic tendencies, are indeed suggestive of a society with multiple political cultures.

2.4 Voting patterns in the composite clusters

Up to this point, we have identified the regions which consist of provinces that exhibited similar voting patterns during the past decade, and compared them in terms of various socio-economic characteristics. However, we still have not discussed what those “voting patterns” are. We now do this by summarizing the vote shares of the major parties in each one of our composite clusters in the five elections being studied. Interested readers can find the vote share figures in Akarca and Başlevent (2010a). For brevity and to facilitate our explanations, we will discuss voting patterns in the 5-way partition first.

The AKP has a significant presence in all regions. However there is a tendency for the party’s vote share to increase from west to east, reaching a maximum either in region 3 or 4, and then declining a little. The FP and the SP exhibit a similar pattern and reach their peak in the fourth cluster. The AKP vote share peaks in 2007 in all clusters except the first one, where it reaches its peak in 2004. The vote losses experienced by the AKP between 2007 and 2009 also show a tendency to rise from west to east peaking in cluster 4. Contrary to the impression created by the maps presented in the Turkish media immediately after the March 2009 election, the decline in the party’s vote share is the lowest in cluster 1. As a matter of fact, of the fifteen provinces in this cluster, the party’s vote share increased in three and declined by less than five percentage points in five. The SP is almost non-existent in cluster 1. In the remaining clusters, its vote share tends to rise in local elections (2004 and 2009) and fall in parliamentary ones, which is consistent with the concept of “strategic voting”. In other words, the religious-right voters seem to be using this party to send a warning to the ruling party in local elections, without any risk of toppling the government. At the same time, they do not risk wasting their vote either, as the ten percent national threshold does not apply in local administration elections

The CHP and the DSP votes are the highest in cluster 1. They decline a little in cluster 2 and drop sharply in the eastern direction. In 2002, the combined vote share of these two parties drops to its lowest levels in all clusters. Although the vote share increases between 2002 and 2009, in clusters 1 and 2, it never reaches its 1999 level. In the other clusters, the already-low vote share of the two parties either stays that way or

declines further. Thus, it might be argued that these parties are increasingly becoming regional parties with significant presence only in the western provinces of the country. Actually, the DSP has become negligible even in the west. As for the MHP, the party's vote share generally declines from cluster 1 to 2, but increases from 2 to 3, peaking in that region, and then declines continuously and sharply towards the east. In cluster 1, the party's vote share is higher in 2009 than in 1999. However, in the remaining clusters the situation is the opposite. In other words, the center of gravity for the party's support appears to be shifting towards the west. The GP votes decline steadily from west to east whereas the DYP/DP and ANAP votes appear to be distributed almost evenly across the country. However all three parties seem to be moving towards extinction or marginalization over time, in all of the clusters. Finally, the votes of the Kurdish-nationalist parties (HADEP in 1999, DEHAP in 2002, SHP in 2004, and DTP in 2007 and 2009) come mostly from region 5 and to some extent from region 4 (See the notes to Table 1 for an explanation on DTP 2007 figures). The vote shares of these parties show a decline after 2002, hitting a bottom in 2007, in all clusters except cluster 5, where 2004 is the trough.

Looking at the overall voting patterns by clusters, we find that, compared to cluster 1, in cluster 2, the combined vote shares of left wing parties (CHP and DSP) are slightly less and the right wing parties (AKP, SP, MHP, DYP/DP, ANAP, and GP) are slightly more. The main difference between two clusters is in the distribution of votes among the right-wing parties. In cluster 2, the AKP and the SP vote shares are higher and those of all other right-wing parties are lower, whereas in region 1, the proportion Turkish-nationalist MHP voters is larger. If we consider the fact that the left-wing parties in Turkey also take a Turkish-nationalistic posture, we can say that cluster 1 shows a greater Turkish-nationalist bend than cluster 2. The rise in nationalism in this region can, at least in part, be attributed to the massive influx of internal migrants over the last two decades (as demonstrated by the net migration rate of 26 percent given in Table 2) especially from provinces with heavy Kurdish populations. Cultural disparities and economic struggles between the natives and the migrants have inevitably caused ethnic tensions and given rise to nationalist feelings as observed in parts of Western Europe where the influx of foreign migrants has led to the strengthening of ultra-nationalist movements.¹¹

Cluster 3 is overwhelmingly conservative of all shades. Right wing parties receive votes far above their national averages there, while left wing parties are far below theirs. Cluster 4 differentiates itself from its two neighboring clusters in that the Kurdish-nationalist votes are higher than in cluster 3, but are much lower than in cluster 5. However, the Turkish-nationalist and center-left votes are lower than in cluster 3 and higher than in cluster 5. Also, the religious-right and center-right votes tend to be slightly higher in cluster 4 relative to cluster 3, but substantially lower relative to cluster 5. Finally, the domination by the Kurdish-nationalist parties and the AKP, and the lack of a strong presence by other parties, characterize cluster 5.

The votes received by the Kurdish-nationalist parties in cluster 5, i.e. the Southeast of the country, although substantial, are hardly sufficient to surpass the 10 percent nationwide threshold applicable in national elections, as they receive very little vote in the

other parts of the country. This leads some ethnic-Kurds to vote for independent candidates, or for a party which is not their first choice, in order not to waste their vote. Furthermore, some block-voting occurs also when tribal leaders run, very often as independent candidates. These no doubt play some role in the emergence of this region's distinct voting pattern.¹²

Once the voting patterns in the 5-way partition are uncovered, those in the 3-way partition are easy to anticipate. As noted above, the voting patterns in clusters 1 and 2 of the 5-way partition differ only in nuance, and these are essentially the two halves of $k=3$'s first cluster. Consequently, the vote shares in cluster 1 of the 3-way partition are basically the averages of the first two clusters of the 5-way. There is also much overlap between the provincial make-up of the dark gray clusters of 3-way and 5-way partitions. Thus, it is not surprising that their voting patterns are also alike. Likewise, the light gray clusters of both partitions are almost identical, and exhibit similar voting patterns. In short, the 3-way partition identifies regions based on relative strengths of main political divisions in the country. Right-wing parties receive the majority of votes in all regions of the 3-way partition, but they receive a significant challenge from left-wing parties in cluster 1 and from the Kurdish-nationalist parties in cluster 3. The 5-way partition also picks out differences in the relative strength of the parties within each main division.

3. Conclusions

The purpose of our study was to explore the regional differences in voting patterns in Turkey, and present these differences along with some of the socio-economic characteristics on which they may be built. Unlike the earlier studies that deal with these themes, our findings are based upon an entire decade, covering five nationwide elections held between 1999 and 2009. We also analyzed each one of these elections with exactly the same procedure to discern areas with differing voting patterns more clearly, without the hindrance of noise generated by temporary or local factors, and to check the persistence of observed patterns over time.

Applying the k-means version of cluster analysis to province-level data from the five elections, we found that 3-way and 5-way partitions of the country yield maps which adequately capture the main political divisions in Turkey. More remarkably, we found that the provincial make-up of the clusters remains essentially unchanged during a decade when Turkish politics was going through a major realignment.¹³ It appears that even when they change their party allegiances, voters in each partition behave in a similar manner. It seems that cultural, ethnic, socio-economic and historical ties that bind people together have lasting effects and are the main determinants of the political patterns in the long-run. This finding inspired us to construct summative groupings which we termed "composite clusters". The fact that these clusters exhibit distinct variation in socio-economic and demographic characteristics as well indicates that they capture more than just voting patterns.

With the help of the clusters obtained, we were able to study the support given to various parties in Turkey, and the realignment that has taken place, both spatially and temporally. The vote share of the AKP, the conservative party in power, increases in all parts of the country until 2007, except in the very west, where it peaks in 2004. The strength of the party shows a tendency to increase going from west to east. However, the losses the party suffered in the 2009 election tend to rise going from west to east as well. Consequently, one can say that the relative strength of the party has evened out across various parts of the country. The combined vote share of the two left-wing parties, the CHP and the DSP, on the other hand, decreases going from west to east. Their support has been rising in the western and southern coastal provinces since hitting a bottom in 2002, but it has not yet reached its 1999 level. Their share in central and northern Anatolia does not change, but has been declining continuously towards negligible levels in the east. Therefore, in contrast to the AKP's evolution into a mass party, we can talk of a 'regionalization' of these parties.¹⁴ The same can be said of the Turkish-nationalist MHP. The party's already small presence in the central-eastern and south-eastern provinces has dwindled to almost nothing, while its vote share in western, southern and central parts of the country increased substantially after bottoming out in 2002. One distinctive pattern regarding this party is that its 2009 vote share exceeds its 1999 level only in the coastal areas of the Aegean and the Mediterranean regions.

The challenge posed by the MHP to the left-wing parties, right in their strongholds may explain why their platforms have become increasingly nationalistic. All of these parties exhibit a lack of enthusiasm for the reforms and compromises necessary for the European Union accession and the settlement of the Cyprus and Kurdish minority issues as well as the implementation of liberal economic policies that would promote Turkey's integration with the global economy. This strategy, however, cedes the ethnic-Kurdish votes to the AKP and to the Kurdish-nationalist BDP which explains the disappearance of the CHP and the DSP in the east. It also leaves the AKP as the sole party in the field to champion democracy (as witnessed in the constitutional reform debates of 2010) and globalization, and thus, the only alternative for those who support these reforms. Viewed from this perspective, the evolution of the electoral support for the AKP is also in line with the idea that growing pro-EU tendencies among the Turkish society have to do with the people's belief that EU membership will facilitate the consolidation of liberal democracy in Turkey (McLaren, 2000; Öniş, 2003). Büthe et al. (2009) argue that there are strong reasons to expect that EU membership will hold the same promise of democratic consolidation for Turkey as it previously did for Greece, Spain, Portugal, and the ex-Communist states in Eastern Europe. It seems safe to assume that such aspirations are one reason why the current government continues to receive the support of a major portion of the society.

In a rapidly transforming but highly-conservative society like Turkey, opposition parties are not likely to raise their support unless they drop their advocacy of the status-quo, or the AKP drops its pro-reform stand. Therefore, barring the emergence of such new rivals in the center-right, and in the center-left, it seems unlikely that the AKP will lose much more ground than it already has between 2007 and 2009.¹⁵ However, the recent change in the leadership of the CHP may pose a challenge for the AKP especially if it

leads to significant changes in the party's views on critical issues such as the democratic rights of the ethnic-Kurdish population. The new leader of the party, Kemal Kılıçdaroğlu, a popular politician of eastern origins, can have a considerable effect on the CHP votes in the East where it has performed poorly during the past decade. On a related point, another threat to the AKP can come from an escalation of ethnic tensions. The rising Turkish-nationalistic tendencies in the western provinces (as demonstrated here by the expansion of the cluster of provinces with a high Turkish-nationalistic tendency), coupled with the existing Kurdish-nationalistic ones in the east, pose a major challenge for the party: solving issues related to Kurdish minority in a manner satisfactory and palatable to both groups. Without concrete steps taken by the government toward a permanent solution, increased terrorist attacks by the separatist PKK, and the resulting response by the Turkish military, is bound to cost the AKP support in both the west and the east.¹⁶

From the perspective of temporal trends in electoral support during the past decade, the results of the current study can also shed some light on the ongoing debate on whether the rising support for the AKP during the 2000s was due to the party's pro-EU, pro-democratization agenda, or because of rising religiosity. Previous econometric work on inter-party vote movements in Turkey during the past decade based on micro (Akarca and Baslevant, 2009) and province level (Akarca, 2010) data have already shown that the AKP's rise mainly had to do with its ability to appeal to larger segments of the Turkish society by its determination and ability to carry out economic and democratic reforms. The findings of the current study corroborate this view by revealing that the party's substantial rise between 2002 and 2007 was the result of a nationwide success rather than being mainly limited to areas where conservative and nationalistic tendencies are the strongest.¹⁷ The AKP's decline from 2007 to 2009 also signifies the importance of economic factors, as this reversal could hardly be explained as resulting from a decline in the degree of religiosity in the society.¹⁸

In addition to facilitating the examination of the spatial aspects political tendencies, we believe that the provincial groupings obtained in this paper may also serve as a guide for those studying regional differences, for those conducting polls to capture the mood of the electorate, and for those analyzing the abovementioned realignment process in greater detail. They may also provide a reference point with which past and future elections results can be put in perspective. Indeed, the 3-way partition of the provinces suggested here has already been utilized by Köksal, Civan, and Genç (2010), and Akarca (2010), in studying regional variations in inter-party vote movements between the 2007 and 2009 elections. Finally, the clusters presented here and the regional political tendencies they imply may provide input for academicians and experts who may choose to interpret them under a completely different light.

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Table 1
Turkish political parties and their nationwide vote shares

POLITICAL PARTIES	1999	2002	2004	2007	2009
Virtue Party (FP) Felicity Party (SP)	15.41	2.49	4.02	2.34	5.20
Justice & Development Party (AKP)		34.28	41.67	46.58	38.39
Nationalist Action Party (MHP)	17.98	8.36	10.45	14.27	15.97
Republican People's Party (CHP)	8.71	19.39	18.23	20.88	23.08
Democratic Left Party (DSP)	22.19	1.22	2.12		2.85
True Path Party (DYP)/ Democrat Party (DP)	12.01	9.54	9.97	5.42	3.84
Motherland Party (ANAP)	13.22	5.13	2.50		0.76
Young Party (GP)		7.25	2.60	3.04	
People's Democracy Party (HADEP) Democratic People's Party (DEHAP) Social Democratic People's Party (SHP) Democratic Society Party (DTP)	4.75	6.22	5.15	3.84	5.70
Other Parties	4.86	5.12	2.56	2.23	3.78
Independents	0.87	1.00	0.73	1.40	0.43

Table 1 notes:

In parenthesis are the Turkish acronyms of political parties. The parties which are successors or predecessors of each other are put in the same cell to facilitate comparisons. The Democrat Party (DP) was named True Path Party (DYP) prior to the 2007 election. The Democratic Society Party (DTP) did not enter the 2007 election officially. Instead its candidates ran as independents to escape the nationwide 10 percent threshold the political parties are required to exceed to be represented in the parliament. The figure shown for the party is the vote share of the independent candidates supported by the party. The Democratic Left Party (DSP) entered the 2007 election in partnership and under the banner of the Republican People's Party (CHP). The 2002 election in Siirt was cancelled due to some irregularities and repeated later. We used the results of the initial election because only the parties which exceeded the 10 percent national threshold were allowed to enter the by election. Consequently, among others, the DEHAP which received a third of the votes and came first in the first election was barred from participating in the second election. Blank spots in the table indicate that the party in question did not enter the election. The 1999, 2002 and 2007 elections are for members of Turkish Grand National Assembly. The 2004 and 2009 elections are for members of Provincial General Councils.

Sources:

The vote shares of political parties are computed using the data provided by the State Institute of Statistics (Prime Ministry, the Republic of Turkey) for the 1999, 2002, 2004, and 2007 elections and the Supreme Board of Elections of the Republic of Turkey for the 2009 election. The vote shares of the independent candidates supported by the Democratic Society Party (DTP) in the 2007 election are obtained from Tuncer (2007).

FIGURE 1
VOTING CLUSTERS: K=3

A. THE 1999 ELECTION

B. THE 2002 ELECTION

C. THE 2004 ELECTION

D. THE 2007 ELECTION

E. THE 2009 ELECTION

Figure 1 notes:

In the determination of the clusters, the vote shares of the following parties are considered, in addition to the vote share of independent candidates:

The 1999 election: FP, ANAP, BBP (Grand Unity Party), CHP, HADEP, DSP, DYP, MHP.

The 2002 election: AKP, ANAP, BBP, CHP, DEHAP, DSP, DYP, GP, MHP, SP, YTP (New Turkey Party).

The 2004 election: AKP, ANAP, BBP, CHP, SHP, DSP, DYP, GP, MHP, SP.

The 2007 election: AKP, CHP, DP, DTP, GP, MHP, SP.

The 2009 election: AKP, ANAP, BBP, CHP, DP, DSP, DTP, MHP, SP.

FIGURE 2
VOTING CLUSTERS: K=5

A. THE 1999 ELECTION

B. THE 2002 ELECTION

C. THE 2004 ELECTION

D. THE 2007 ELECTION

E. THE 2009 ELECTION

Figure 2 notes:

Notes to Figure 1 apply here as well.

FIGURE 3
COMPOSITE VOTING CLUSTERS

A. K=3

B. K=5

Figure 3 notes:

The two composite maps above are obtained from the maps in Figures 1 and 2, respectively, by placing each province in the cluster in which it appears three or more times. For a few provinces, which appear twice each in two regions and once in another, the one of the former which is adjacent to the latter is chosen. In the case of 5-way partitions, Bartın and Kars take on four different colors. A weighted average is used to place these provinces, assuming that the regions rank from 1 to 5 in their closeness also.

The clusters in Figure 3A include the following provinces:

Cluster 1 (29 provinces, colored black): Adana, Amasya, Ankara, Antalya, Artvin, Aydın, Balıkesir, Bilecik, Burdur, Çanakkale, Denizli, Edirne, Eskişehir, Hatay, İçel, İstanbul, İzmir, Kırklareli, Kırşehir, Kocaeli, Manisa, Muğla, Sinop, Tekirdağ, Uşak, Zonguldak, Bartın, Ardahan and Yalova. Cluster 2 (38 provinces, colored dark gray): Adıyaman, Afyon, Bolu, Bursa, Çankırı, Çorum, Elazığ, Erzincan, Erzurum, Gaziantep, Giresun, Gümüşhane, Isparta, Kars, Kastamonu, Kayseri, Konya, Kütahya, Malatya, Kahramanmaraş, Nevşehir, Niğde, Ordu, Rize, Sakarya, Samsun, Sivas, Tokat, Trabzon, Yozgat, Aksaray, Bayburt, Karaman, Kırıkkale, Karabük, Kilis, Osmaniye and Düzce. Cluster 3 (14 provinces, colored light gray): Ağrı, Bingöl, Bitlis, Diyarbakır, Hakkari, Mardin, Muş, Siirt, Tunceli, Şanlıurfa, Van, Batman, Şırnak and Iğdır.

In 2007, 58.60 percent of all valid votes were cast in cluster 1, 34.09 percent in cluster 2, and 7.31 percent in cluster 3.

The clusters in Figure 3B include the following provinces:

Cluster 1 (15 provinces, shown in white-dotted black): Adana, Antalya, Aydın, Bilecik, Çanakkale, Denizli, Edirne, İçel, İzmir, Kırklareli, Manisa, Muğla, Tekirdağ, Uşak, and Ardahan. Cluster 2 (18 provinces, colored black in): Amasya, Ankara, Artvin, Balıkesir, Burdur, Bursa, Eskişehir, Gaziantep, Giresun, Hatay, İstanbul, Kırşehir, Kocaeli, Niğde, Sinop, Zonguldak, Bartın, and Yalova. Cluster 3 (29 provinces, colored dark gray): Afyon, Bolu, Çankırı, Çorum, Erzincan, Erzurum, Gümüşhane, Isparta, Kars, Kastamonu, Kayseri, Konya, Kütahya, Kahramanmaraş, Nevşehir, Ordu, Sakarya, Samsun, Sivas, Tokat, Trabzon, Yozgat, Aksaray, Karaman, Kırıkkale, Karabük, Kilis, Osmaniye and Düzce. Cluster 4 (7 provinces, shown in white-dotted dark gray): Adıyaman, Bingöl, Elazığ, Malatya, Rize, Şanlıurfa, and Bayburt. Cluster 5 (12 provinces, colored light gray): Ağrı, Bitlis, Diyarbakır, Hakkari, Mardin, Muş, Siirt, Tunceli, Van, Batman, Şırnak and Iğdır.

In 2007, 24.25 percent of all valid votes were cast in cluster 1, 40.84 percent in cluster 2, 24.46 percent in cluster 3, 4.73 percent in cluster 4, and 5.72 percent in cluster 5.

Table 2
The socio-economic and demographic characteristics of composite clusters:
Means of various indicators in 2000

	3-way partition			5-way partition					Turkey
	Cluster 1	Cluster 2	Cluster 3	Cluster 1	Cluster 2	Cluster 3	Cluster 4	Cluster 5	
Proportion of urban population (%)	72.0	57.7	55.3	62.9	77.3	54.5	57.4	54.9	64.9
Population density (persons per square km)	138.0	65.1	57.2	98.6	181.0	57.3	67.9	55.8	88.0
Proportion of non-agricultural employment (%)	66.2	39.6	32.7	52.7	72.7	36.2	31.7	34.2	52.7
Female share in non-agricultural employment (%)	19.3	12.0	6.8	18.9	18.9	11.1	9.0	7.1	15.2
Per Capita GDP in 2000 (thousand TL)	2.3	1.3	0.7	2.2	2.3	1.2	1.0	0.6	1.8
Net migration rate between 1995-2000 (per thousand)	22.8	-17.9	-41.6	25.9	20.7	-24.9	-37.6	-41.8	0.7
Proportion of population born in another province (%)	41.0	15.0	8.8	32.6	43.8	12.2	9.2	9.7	27.8
Average years of schooling	5.9	5.1	3.6	5.6	5.9	5.1	4.4	3.6	5.3
Median age (years)	27.1	24.6	17.3	27.7	26.5	24.7	20.8	17.2	25.1

Table 2 notes:

In the computation of mean years of schooling for each province, 15, 11, 8, and 5 years of schooling are attributed, respectively, to university, high school, middle school, and primary school graduates in the province. Two years worth of schooling is attributed to those who are literate but not a graduate of any school. Children under age six are omitted in computing the mean. The cluster means given are the averages of provincial means weighted with the 2000 population figures with the exception of population density which is weighted with the surface area of the province.

Source:

Authors' computations using the data provided by the State Institute of Statistics (Prime Ministry, the Republic of Turkey).

Notes

¹ Kalaycıoğlu (1999) and Öniş (2000) are two studies that elaborate on the rising and falling support for political parties in Turkey during the 1990s with an emphasis on the impact of global developments.

² Studies that deal with the transformation from pro-Islamist to moderate conservative policies following the formation of the AKP include Öniş (2006) and Özbudun (2006a and 2006b). Özbudun finds significant continuities between the worldview of the AKP and the former center-right parties which dominated Turkish politics since the beginning of the multi-party period and notes that the party's understanding of conservatism is open to changing the existing institutions and relationships while preserving traditional values (including religious ones).

³ In an in depth analysis of the November 2002 elections, Tosun (2003) argues that the outcome of this election alone constitutes a major realignment in Turkish politics. Akarca and Tansel (2006) estimate that 24.6 of the 38.7 percentage point drop in the vote share of the incumbent parties in that election can not be explained by the incumbency and economic conditions prevailing at that time, if the elections held since 1950 are any guide. Using micro data, Başlevent, Kirmanoğlu, and Şenatalar (2005) show that non-economic factors also played a significant role in the formation of party preferences in 2002.

⁴ The Kurdish nationalist banner was carried by the HADEP, DEHAP and SHP in the 1999, 2002, and 2004 elections, respectively, and by the DTP in the 2007 and 2009 elections. After closure of HADEP by the Constitutional Court, DEHAP, and after the closure of DEHAP, DTP was formed by the supporters of the banned party. Following the dissolution of the DTP by the Constitutional Court in December 2009, the rank and file of this party joined the Peace and Democracy Party (BDP), formed earlier in anticipation of the court ruling, to continue carrying the Kurdish-nationalist banner.

⁵ Detailed examinations of inter-party vote movements during 1999-2009 are carried out using micro data in Başlevent and Akarca (2009) and Akarca and Başlevent (2009) and, province-level data in Akarca (2010) and Akarca and Tansel (2009).

⁶ Among the studies from a recently growing literature on the examination of various social and economic patterns and outcomes pertaining to Turkey from a regional perspective are Dulupçu (2005), Özdemir and Darby (2009), Gedikli (2009), and Lagendijk, et al. (2009).

⁷ See, for example, Putnam (1993), Inglehart (1997), Inglehart and Baker (2000).

⁸ In Turkey, elections for all local administrations (mayors, city councils, and provincial councils) are held simultaneously and nationwide. Consequently, they are contested by all major parties, take place in a similar atmosphere as the parliamentary elections, and have similar participation rates. For example the participation rates for the 1999, 2002 and 2007 parliamentary elections were 87.1, 79.1 and 84.2 percent, respectively. The corresponding figures for the 2004 and 2009 elections for provincial councils were 76.3 and 85.2 percent, respectively. With the exception of the three most populous ones, each province constitutes a single election district both in parliamentary and provincial council elections, implying that the provinces are the ideal unit of analysis for our work.

⁹ Güvenç and Kirmanoğlu (2009) use cluster analysis jointly with correspondence analysis, which is an alternative data reduction technique, to examine the geographical voting patterns in Turkey since the 1950 elections. As in cluster analysis, provinces with similar political preferences are classified into the same group. Allowing for the possibility of a different number of groups in each election, the technique ends up dividing the country into 7-to-9 non-contagious regions depicting the strongholds of different parties.

¹⁰ Aside from presetting the number of clusters for all elections at 3 and 5, we use data from the same provinces (those with license plate numbers 1 to k) to serve as our "initial cluster centers". The purpose of

this approach is to ensure that the ultimate cluster memberships do not depend on the initial centers which - if chosen randomly - may lead to different outcomes in each run of the k-means algorithm. To measure the distances between the data points, we use the Euclidean distance which is the default option in STATA.

¹¹ The voting behavior of Turkey's internal migrants is studied by Akarca and Başlevent (2010b) who show that migrants vote quite differently than the natives.

¹² The ten percent threshold leads to some distortion in the party choices of Turkish voters, in that it causes some supporters of the minor parties to cast their ballots for parties or independent candidates which are not their first choices. However, since the threshold applies to nationwide, rather than provincial, vote shares, its impact can be assumed to be more or less uniform across the provinces and, therefore, too small to affect the provincial make-up of the clusters obtained from observed voting patterns. As we mention here, the southeast of the country constitutes an exception in this regard, but it is almost certain that the same provinces would have formed a cluster with or without the threshold. Furthermore, the similarity of the clusters obtained from the three parliamentary and the two local election results supports this argument since there is no threshold in local elections.

¹³ Only some provinces on the Black Sea and eastern Mediterranean coasts appear to have changed clusters permanently after 1999.

¹⁴ Çarkoğlu (2010) also uses the concept of 'regionalization' to describe this situation.

¹⁵ This argument is in line with the finding of Başlevent (2009) that the voter bases of the AKP and the CHP are quite distant from each other. The study suggests that there can be little vote movement between the two parties also because the majority of the supporters of one party cite the other one as the party they would never vote for.

¹⁶ According to Çarkoğlu (2010), part of the erosion in the AKP votes between 2007 and 2009 among ethnic-Kurdish voters is attributable to the military operations. Based on province level data from the 1990s, Kıbrıs (2010) finds a significant link between the number of casualties due to terrorism and the support for certain groups of parties.

¹⁷ Based on a 2002 survey, Çarkoğlu (2003) reports that the support for EU membership is the weakest in the cluster of provinces where conservative and nationalist votes are the highest. Apparently, the AKP has managed to push its pro-EU agenda without alienating its more conservative voters.

¹⁸ Akarca (2010) estimates that 4.2 of the AKP's 8.1 percentage point loss in 2009 can be attributed to the poor economic conditions prevailing in the wake of the global economic crisis of 2008-2009, and another 3.0 to 'strategic voting' typically observed in local elections.